

# Scoring Tech Talent

How Tech Labor Trends  
Inform Workforce Decisions  
& Influence Real Estate in 50  
U.S. & Canadian Markets

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# Tech Talent Job Growth Shows Economic Importance During Pandemic

Technology's importance during the COVID-19 pandemic will endure and act as an accelerator of economic transformation.

The opportunity to fulfill business and consumer demand for new and improved technology products and services resulted in U.S. tech talent employment growth of 0.8% in 2020, making it one of the most resilient professions during the pandemic. In contrast, total non-tech occupations fell by 5.5%, office-based administrative and sales occupations declined by 5.8% and finance occupations increased by half the rate of tech at 0.4%.

Tech talent workforce growth last year did slow significantly from its 4.1% rate in 2019 due to nearly 57,000 fewer jobs at non-tech industry employers, primarily in the third-party administrative services, retail and information industries. The tech industry accounted for 45% of the 99,200 tech talent jobs added. Other industries adding tech talent jobs included Financial Activities, Professional & Business Services and Government. By far, software

developers and programmers across all industries were the most in-demand workers: 85,000 of them were added in 2020, representing a 4.8% year-over-year growth rate.

Companies and tech talent professionals leading North America's innovation have a unique opportunity to drive economic growth and shape how and where we work. Technology will be critical to support a new hybrid approach to work, in which team members can work either in-person, remotely or from widely dispersed locations. Tech talent employers increased job postings that offer remote working arrangements to 12% for the 12 months ending in February 2021, up from only 5.5% in the previous 12-month period, according to EMSI data. This same approach shows promise to expand tech talent recruitment across all markets and increase workforce diversity—a subject that is included in our annual Scoring Tech Talent report for the first time this year.

Scoring Tech Talent is intended to serve as a resource for decision-making and success in building tech talent teams to fulfill critical business and innovation objectives in the years ahead.

# *Scoring Tech Talent*

is a comprehensive analysis of labor market conditions, cost and quality in North America for highly skilled tech workers. The top 50 markets in the U.S. and Canada were ranked according to their competitive advantages and appeal to both employers and tech talent employees. Twenty-five additional North American Tech Talent markets were analyzed, as well as 10 up-and-coming Latin American markets. The analysis provides further insight into the quality of tech workers, their demographics and diversity and how tech talent growth patterns are impacting cities and real estate markets.

- 08 **What is Tech Talent?**  
Tech talent is a group of highly skilled workers in more than 20 technology-oriented occupations driving innovation across all industry sectors.
- 12 **Which are the top-ranked Tech Talent markets?**  
A scorecard measuring 13 metrics to gauge the competitive advantages of markets and their ability to attract and grow tech talent pools determined the top 50 ranked tech talent markets.
- 20 **What defines a Tech Talent market?**  
Tech talent markets are characterized by high concentrations of college-educated workers, major universities producing tech graduates and large millennial populations.
- 36 **How diverse are Tech Talent markets?**  
Diversity demographics are broken down by race/ethnicity, sex and geography for the tech talent workforce and college tech degree graduates. Each are compared with benchmark groups.
- 52 **Which are the highest- and lowest-cost markets to operate in?**  
Employee wages and office rent for a typical 500-person tech company using 75,000 sq. ft. of office space provide insight into annual operating costs for the top 50 tech talent markets.
- 56 **How is Tech Talent quality vs. cost measured?**  
Plotting a quality assessment against the average software developer salary by market reveals the distribution of quality and cost across the top 50 tech talent markets.
- 60 **How does Tech Talent impact commercial real estate?**  
Markets with high concentrations or clusters of growing tech talent employers have created economic growth and changed office market dynamics.
- 64 **Where else is tech headed?**  
Lesser-known and underdeveloped markets could offer high-potential talent pools to employers seeking to expand their geographical reach, uncover opportunities and increase cost efficiency.
- 70 **Appendix**  
Local market profiles and full report data summary.

## #Score

This year's top-ranked tech talent markets are the San Francisco Bay Area, Seattle and Washington, D.C. Markets that climbed the most in the rankings are Greater Los Angeles/Orange County, Detroit and Calgary.

## Brain Gain

Toronto, Seattle, Montreal, Vancouver and Charlotte produced more jobs than graduates and were the biggest "brain gain" markets, while New York Metro, Boston, Chicago and Washington, D.C. produced more graduates than jobs and were the biggest "brain drain" markets. The number of tech degree graduates was compared with tech talent job creation in each market to determine brain gains or brain drains.

# Key Takeaways

## 3 Diversity

Tech talent across all industries was predominantly White, Asian and male relative to total employment and office-using employment in 2020. Hispanics, Blacks and females were underrepresented in both tech talent occupations and the tech industry. Relative to an office-using employment benchmark, Pittsburgh, Charlotte and Nashville have the most diverse tech talent workforces, while San Antonio, Greater Los Angeles/ Orange County and Austin have the least diverse. Washington, D.C. had the highest relative share of females and Cleveland had the lowest share. Underrepresented race/ethnic groups accounted for 23.5% of 2019 tech degree graduates, moderately less than their share of all degree graduates (29%). Females accounted for only 24.9% of tech degree graduates, significantly lower than their share of all degree graduates (58%).

## 4 \$Cost

The total annual labor and real estate costs ranged from \$31 million in Waterloo, Canada to \$68 million in the San Francisco Bay Area for the typical 500-person tech company using 75,000 sq. ft. of office space.

## 5 Opportunity Markets

Fostering talent development in lesser-known and underdeveloped markets could offer additional talent pools to employers seeking to expand their geographical reach, uncover opportunities and increase cost efficiency. These markets include Dayton, Huntsville and Colorado Springs in the U.S. and Sao Paulo, Mexico City and Santiago in Latin America.

# What is Tech Talent?

Highly skilled North American tech talent workers total 6.4 million and comprise 20 occupations—from software developers who enable the devices we depend on, to systems and data managers who ensure the functionality of our tech ecosystems.<sup>1</sup> Although these positions are concentrated within the high-tech industry, they are spread across all industry sectors (Figure 1). Through this occupational lens, a software developer who works for a logistics or health-care company is considered tech talent.

The 5.4 million tech talent workers in the U.S. and 1.0 million in Canada account for a respective 3.9% and 6.5% of the total workforce in each country. This relatively small share of the total workforce has an outsized impact on real estate markets and the economy. The number of U.S. tech talent workers has increased by 640,700 over the past five years for a growth rate of 13%—more than double the overall national job growth rate. They are fueling innovation and adapting technology within nontraditional tech sectors to increase productivity and strengthen the national economy.

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<sup>1</sup>Tech talent includes the following occupation categories: software developers and programmers; computer support, database and systems; technology- and engineering-related; and computer and information system managers.

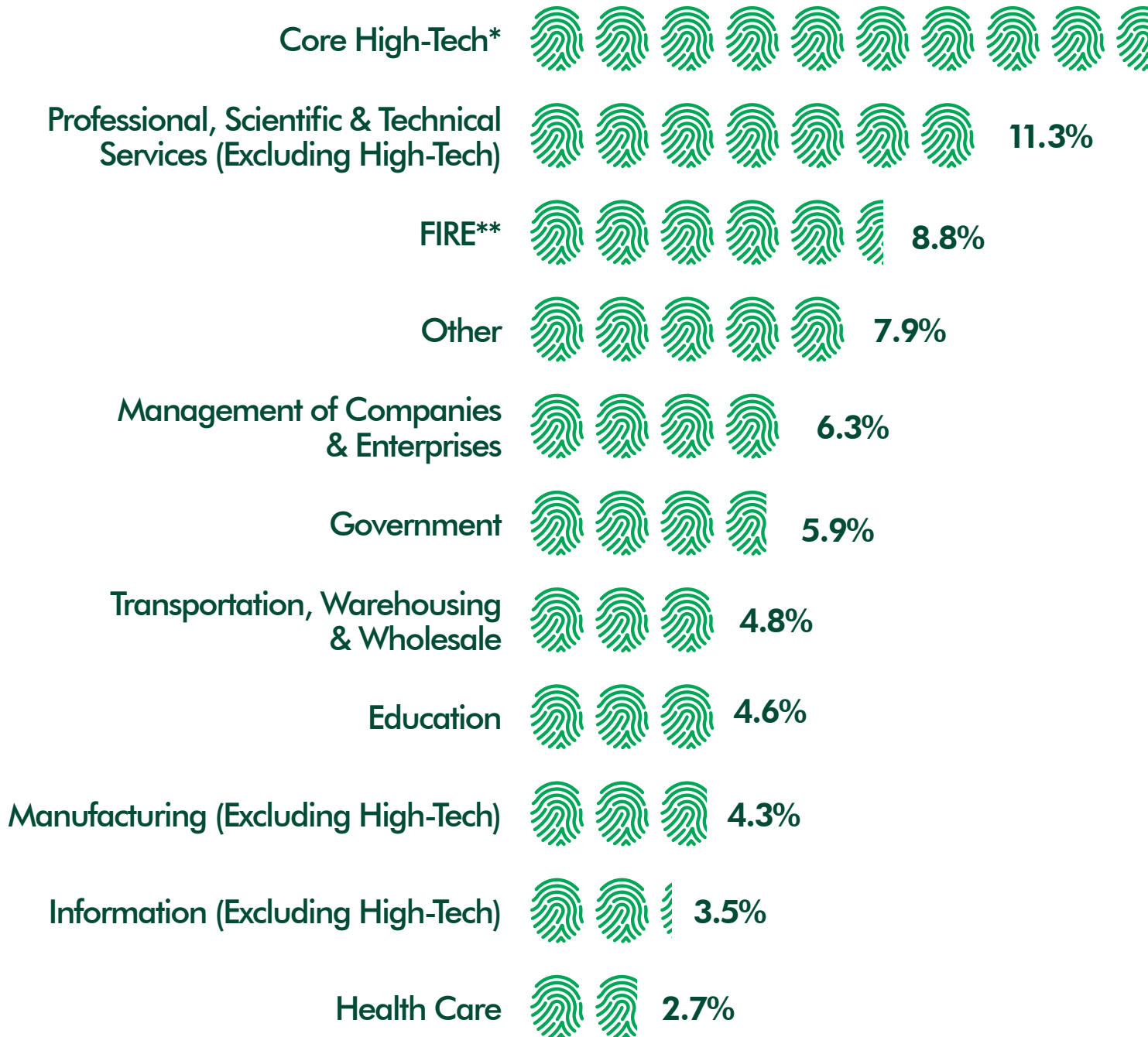


A man with short dark hair, wearing a dark blue or black button-down shirt, is sitting at a desk. He is looking down at a laptop screen, with his right hand resting on his chin in a thoughtful pose. The background is a soft-focus bokeh of light spots, suggesting an indoor setting with a window. A hanging lamp with a metal cage is visible in the upper right corner. A green horizontal line is positioned above the text.

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Figure 1

# U.S. Tech Talent Labor by Industry (2020)





Source: U.S. Bureau of Labor Statistics (National), April 2021.  
\*Includes computer software and services and computer product manufacturing  
\*\*Finance, Insurance and Real Estate

# Which are the top- ranked Tech Talent markets?



During the pandemic-induced economic slowdown, businesses pivoted, innovated and relied even more on tech talent workers to meet challenges. This kept the tech talent labor market highly competitive and supply-constrained last year as hiring expanded beyond major tech hubs. Tech talent occupations that kept companies productive in a remote working environment led the charge, with software developers drawing the most demand. Smaller markets benefitted from remote work as some urban workers left densely populated major markets amid pandemic concerns.

Fifty of the largest markets by number of tech talent professionals in the U.S. and Canada were analyzed to create a scorecard ranking them comparatively (Figure 2). The scorecard uses 13 metrics to measure each market's depth, vitality and attractiveness to companies seeking tech talent and to tech workers seeking employment. Each metric is weighted by its relative

importance to job creation and innovation. Tech talent concentration metrics have the highest weights because they signify clustering of tech workers. Labor costs for tech talent are weighted more heavily than office rents because companies allocate more capital to labor than to real estate.

The San Francisco Bay Area retained the top spot, while Seattle and Washington, D. C. switched positions from 2020 to second and third, respectively. Data changes by the Bureau of Labor Statistics led to three less individual markets this year: Newark and Long Island were merged into the New York Metro and Orange County was merged with Greater Los Angeles. This allowed three Canadian markets to enter the top 50 tech talent markets this year: Waterloo Region (21), Quebec City (37) and Edmonton (38). The biggest movers were Greater Los Angeles/ Orange County, rising by eight spots, and Detroit and Calgary, both rising by six spots.

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**Figure 2**

# Tech Talent Scorecard Ranking

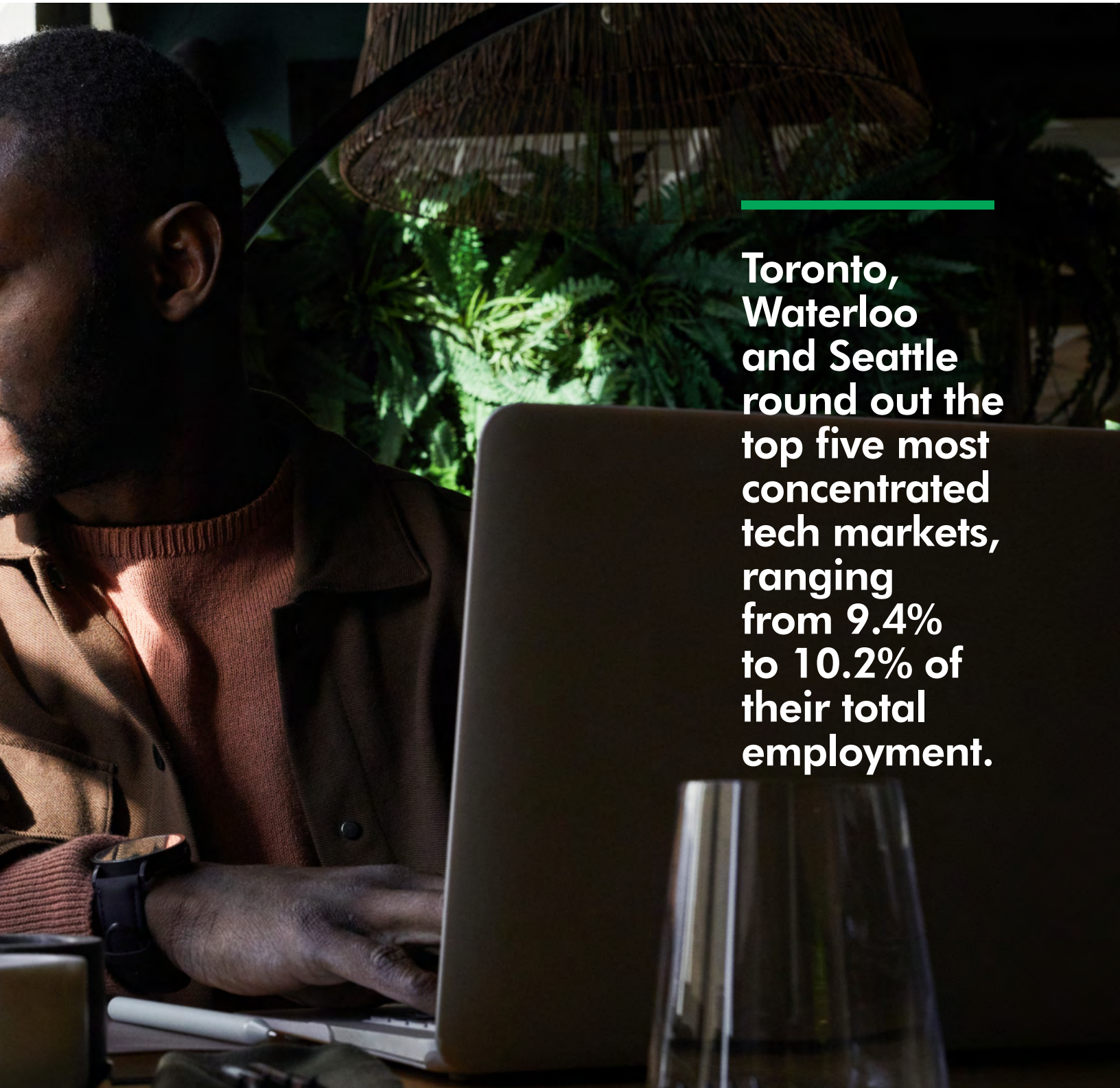


As companies across all industries expand their technology services, there is high demand for tech talent in both large and small markets. Major gateway markets such as New York Metro, Toronto and the San Francisco Bay Area dominate overall tech talent growth because of their size. These and other markets with tech talent labor pools of more than 50,000 workers are categorized as “large,” while those below this threshold are categorized as “small.” Both large and small markets have their advantages: While large markets generally have a deeper pool of talent, small markets typically offer business and cost-of-living savings.

Tech talent concentration—the percentage of total employment—is a barometer of how “tech” the market is and in its growth potential. Tech talent comprises 11.6% of total employment in Ottawa and 10.9% in the San Francisco Bay Area—the highest concentrations and more than double the 50-market average of 5.5% tech talent density. Toronto, Waterloo and Seattle round out the top five most concentrated tech markets, ranging from 9.4% to 10.2% of their total employment. This sizeable concentration of highly skilled workers offers an environment conducive to innovation.







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**Figure 3**  
**Tech Talent Labor Pools (2020)**

**Large Tech Talent Markets (> 50,000 Labor Pool)**

| Market                 | Tech Talent Total | Percent Change <sup>1</sup> | by Volume <sup>2</sup> | Concentration <sup>3</sup> |
|------------------------|-------------------|-----------------------------|------------------------|----------------------------|
| SF Bay Area            | 373,430           | 16.4%                       | 52,670                 | 10.9%                      |
| New York Metro         | 348,330           | 6.7%                        | 21,930                 | 3.9%                       |
| Toronto                | 270,400           | 42.8%                       | 81,100                 | 10.2%                      |
| Washington, D.C.       | 265,370           | 10.0%                       | 24,080                 | 8.8%                       |
| Los Angeles/Orange Co. | 228,720           | 18.6%                       | 35,870                 | 3.7%                       |
| Dallas/Ft. Worth       | 189,200           | 16.3%                       | 26,570                 | 5.3%                       |
| Seattle                | 184,660           | 35.4%                       | 48,300                 | 9.4%                       |
| Boston                 | 168,090           | 7.2%                        | 11,360                 | 6.5%                       |
| Chicago                | 167,380           | 4.6%                        | 7,330                  | 3.8%                       |
| Montreal               | 160,700           | 31.4%                       | 38,400                 | 8.6%                       |
| Atlanta                | 143,780           | 15.2%                       | 18,960                 | 5.5%                       |
| Denver                 | 114,900           | 31.1%                       | 27,290                 | 7.0%                       |
| Philadelphia           | 112,740           | 9.3%                        | 9,630                  | 4.2%                       |
| Phoenix                | 98,220            | 14.2%                       | 12,180                 | 4.7%                       |
| Minneapolis/St. Paul   | 97,470            | 5.3%                        | 4,940                  | 5.3%                       |
| Houston                | 96,420            | -5.9%                       | -6,030                 | 3.2%                       |
| Vancouver              | 91,200            | 36.1%                       | 24,200                 | 8.1%                       |
| Detroit                | 89,680            | 4.5%                        | 3,870                  | 4.5%                       |
| Baltimore              | 81,770            | 16.2%                       | 11,430                 | 6.4%                       |
| Austin                 | 79,230            | 10.0%                       | 7,200                  | 7.5%                       |
| Ottawa                 | 74,000            | 22.5%                       | 13,600                 | 11.6%                      |
| San Diego              | 70,350            | 4.1%                        | 2,760                  | 5.0%                       |
| South Florida          | 67,500            | 18.0%                       | 10,280                 | 2.7%                       |
| Raleigh-Durham         | 67,050            | 20.2%                       | 11,260                 | 7.2%                       |
| Charlotte              | 62,110            | 31.3%                       | 14,810                 | 5.1%                       |
| Portland               | 60,330            | 27.7%                       | 13,090                 | 5.3%                       |
| St. Louis              | 55,080            | 9.9%                        | 4,950                  | 4.2%                       |
| Tampa                  | 53,960            | 23.5%                       | 10,250                 | 4.1%                       |
| Kansas City            | 52,630            | 8.5%                        | 4,120                  | 5.1%                       |
| Salt Lake City         | 50,070            | 33.9%                       | 12,680                 | 5.1%                       |

### Small Tech Talent Markets (<50,000 Labor Pool)

| Market          | Tech Talent Total | Percent Change <sup>1</sup> | by Volume <sup>2</sup> | Concentration <sup>3</sup> |
|-----------------|-------------------|-----------------------------|------------------------|----------------------------|
| Columbus        | 47,940            | 5.1%                        | 2,310                  | 4.7%                       |
| Calgary         | 46,700            | 17.9%                       | 7,100                  | 7.1%                       |
| Orlando         | 43,340            | 30.0%                       | 10,000                 | 3.6%                       |
| Pittsburgh      | 43,080            | 10.7%                       | 4,150                  | 4.0%                       |
| Sacramento      | 40,160            | 10.7%                       | 3,890                  | 4.1%                       |
| Indianapolis    | 39,990            | 23.2%                       | 7,520                  | 3.9%                       |
| Cincinnati      | 39,080            | 9.6%                        | 3,420                  | 3.8%                       |
| Cleveland       | 36,320            | 14.6%                       | 4,620                  | 3.7%                       |
| Nashville       | 35,190            | 36.1%                       | 9,330                  | 3.6%                       |
| Edmonton        | 34,500            | 53.3%                       | 12,000                 | 5.7%                       |
| San Antonio     | 33,080            | 8.9%                        | 2,690                  | 3.3%                       |
| Milwaukee       | 29,810            | -4.2%                       | -1,320                 | 3.7%                       |
| Virginia Beach  | 29,420            | 2.8%                        | 810                    | 4.1%                       |
| Quebec City     | 29,400            | 18.1%                       | 4,500                  | 7.8%                       |
| Hartford        | 26,440            | 11.9%                       | 2,820                  | 4.8%                       |
| Waterloo Region | 25,900            | 47.2%                       | 8,300                  | 9.6%                       |
| Madison         | 24,580            | 31.9%                       | 5,940                  | 6.4%                       |
| Richmond        | 24,520            | 7.9%                        | 1,800                  | 3.9%                       |
| Jacksonville    | 21,840            | 20.4%                       | 3,700                  | 3.2%                       |
| Rochester       | 20,840            | -0.8%                       | -170                   | 4.4%                       |

Source: U.S. Bureau of Labor Statistics (Metro) April 2021, Statistics Canada (Metro), 2021.  
 (1) 2015-2020; (2) 2015-2020; (3) 2020.

# What defines a Tech Talent market?





Two key aspects that top tech talent markets share are high educational attainment and tech workers' preference to live in urban areas. Four-fifths of the top 50 tech talent markets have a metro-level educational attainment rate above the U.S. average (33.1%). The top 10 markets have 43% or more of residents over 25 years old with a bachelor's degree or higher (Figure 4). The San Francisco Bay Area and Washington, D.C. have rates of 51% or more.

Education, particularly with a focus on technology,<sup>2</sup> is best analyzed through degrees issued by higher educational institutions. Metro areas that produced the largest number of tech graduates last year with bachelor's or higher degrees

were New York Metro, Greater Los Angeles/Orange County, Washington, D.C., Boston and the San Francisco Bay Area (Figure 5). Large tech talent markets dominate the top 10 degree-granting regions. Demand is high for tech-related classes and degrees, and tech-related degree completions have grown by an average 52% since 2015. Although these figures do not account for tech bootcamps or shorter certifications, they provide insight into which markets produce the highest amount of tech talent entering the labor pool each year.

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<sup>2</sup>Tech degree fields include computer engineering and information sciences; mathematics and statistics; electrical and electronics engineering; mechanical and industrial engineering; other engineering.

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**Tech-related degree completions have grown by an average 52% since 2015.**

## Figure 4 Top 10 Markets for Educational Attainment

25+ years old, Bachelor's Degree or higher  
U.S. Average = 33.1%

|            |                             |       |
|------------|-----------------------------|-------|
| <b>#1</b>  | <b>SF Bay Area</b>          | 51.7% |
| <b>#2</b>  | <b>Washington, D.C.</b>     | 51.4% |
| <b>#3</b>  | <b>Boston</b>               | 49.3% |
| <b>#4</b>  | <b>Madison, WI</b>          | 48.6% |
| <b>#5</b>  | <b>Raleigh-Durham</b>       | 47.4% |
| <b>#6</b>  | <b>Austin</b>               | 46.2% |
| <b>#7</b>  | <b>Denver</b>               | 45.8% |
| <b>#8</b>  | <b>Ottawa</b>               | 45.7% |
| <b>#9</b>  | <b>Seattle</b>              | 44.1% |
| <b>#10</b> | <b>Minneapolis/St. Paul</b> | 43.2% |

Source: U.S. Census Bureau and Statistics Canada (Metro) 2021.





## Figure 5 Top 10 Markets for Tech Degree Completions

Tech Degree Completions (2019) and  
% Growth (2014-2019)

|            |                         |        |       |
|------------|-------------------------|--------|-------|
| <b>#1</b>  | <b>New York Metro</b>   | 20,576 | 69.4% |
| <b>#2</b>  | <b>LA/Orange Co.</b>    | 13,923 | 56.9% |
| <b>#3</b>  | <b>Washington, D.C.</b> | 12,623 | 42.3% |
| <b>#4</b>  | <b>Boston</b>           | 12,183 | 80.0% |
| <b>#5</b>  | <b>SF Bay Area</b>      | 10,965 | 65.2% |
| <b>#6</b>  | <b>Chicago</b>          | 8,548  | 48.3% |
| <b>#7</b>  | <b>Atlanta</b>          | 8,361  | 90.5% |
| <b>#8</b>  | <b>Detroit</b>          | 6,790  | 45.5% |
| <b>#9</b>  | <b>Dallas/Ft. Worth</b> | 6,672  | 71.5% |
| <b>#10</b> | <b>Philadelphia</b>     | 6,277  | 41.1% |

Source: The National Center for Education Statistics (Region),  
Canadian Universities, July 2021.

Note: Bachelor's Degree or Higher.



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**The increase in tech-degree graduates is beginning to better supply the labor market for tech talent.**





Graduates do not always remain in the labor market where they earn their degrees; they often migrate to locations that offer the most job opportunities or have the best pay. Analyzing tech-related graduation data and tech-related employment growth, Figure 6 presents the difference between where tech talent workers are employed and where they were educated. Tech degrees cover the most recent five-year period available (2015-2019) and tech talent jobs added cover the period when most graduates would be counted in employment figures (2016-2020). Toronto is an outlier for tech talent job creation, adding 54,862 more tech talent jobs than graduates. Other top tech talent job creators are Seattle, Montreal, Vancouver and Charlotte. On the other end of the spectrum, New York Metro, Boston, Chicago and Washington, D.C posted the deepest deficits in employing their tech-degree graduates locally and thus experienced the biggest talent drain.

Reflected in the brain gain/drain calculation, the increase in tech-degree graduates is beginning to better supply the labor market for tech talent. In 2020, 16 markets posted a five-year brain gain, the same number of markets as in 2019, but at a lower total gain volume. This still indicates a high level of demand and inadequate supply for the most sought-after tech skills and locations.

**Figure 6**

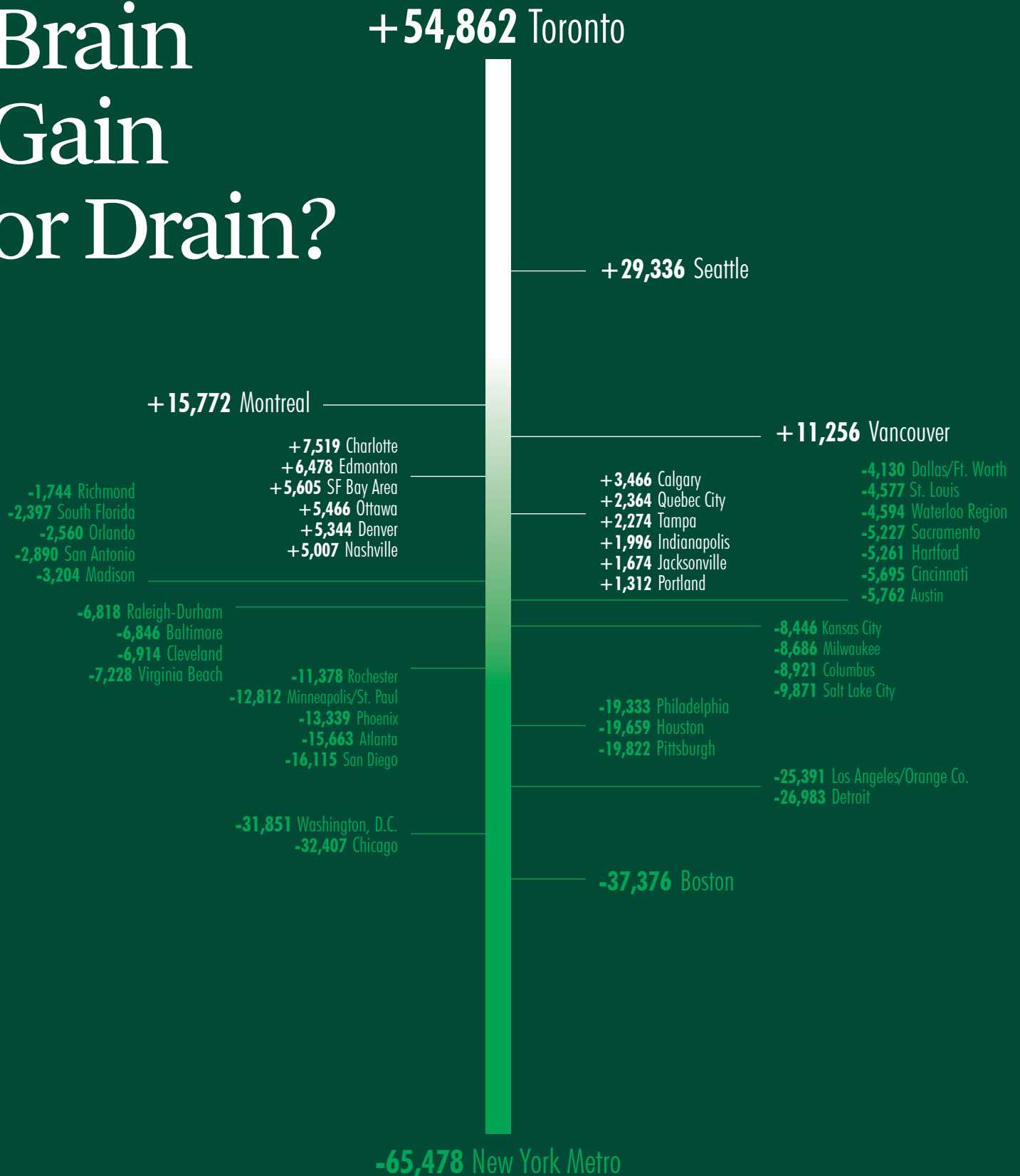
**Where are Tech Talent Workers Coming From and Where are They Headed?**

| Market           | Tech Degrees (2015-2019)* | Tech Jobs Added (2016-2020)* | Brain Gain or Drain? | Market                 | Tech Degrees (2015-2019)* | Tech Jobs Added (2016-2020)* | Brain Gain or Drain? |
|------------------|---------------------------|------------------------------|----------------------|------------------------|---------------------------|------------------------------|----------------------|
| Toronto          | 26,338                    | 81,200                       | 54,862               | Hartford               | 8,081                     | 2,820                        | -5,261               |
| Seattle          | 18,964                    | 48,300                       | 29,336               | Cincinnati             | 9,115                     | 3,420                        | -5,695               |
| Montreal         | 22,628                    | 38,400                       | 15,772               | Austin                 | 12,962                    | 7,200                        | -5,762               |
| Vancouver        | 12,944                    | 24,200                       | 11,256               | Raleigh-Durham         | 18,078                    | 11,260                       | -6,818               |
| Charlotte        | 7,291                     | 14,810                       | 7,519                | Baltimore              | 18,276                    | 11,430                       | -6,846               |
| Edmonton         | 5,522                     | 12,000                       | 6,478                | Cleveland              | 11,534                    | 4,620                        | -6,914               |
| SF Bay Area      | 47,065                    | 52,670                       | 5,605                | Virginia Beach         | 8,038                     | 810                          | -7,228               |
| Ottawa           | 8,134                     | 13,600                       | 5,466                | Kansas City            | 12,566                    | 4,120                        | -8,446               |
| Denver           | 21,946                    | 27,290                       | 5,344                | Milwaukee              | 7,366                     | -1,320                       | -8,686               |
| Nashville        | 4,323                     | 9,330                        | 5,007                | Columbus               | 11,231                    | 2,310                        | -8,921               |
| Calgary          | 3,634                     | 7,100                        | 3,466                | Salt Lake City         | 22,551                    | 12,680                       | -9,871               |
| Quebec City      | 2,136                     | 4,500                        | 2,364                | Rochester              | 11,208                    | -170                         | -11,378              |
| Tampa            | 7,976                     | 10,250                       | 2,274                | Minneapolis/St. Paul   | 17,752                    | 4,940                        | -12,812              |
| Indianapolis     | 5,524                     | 7,520                        | 1,996                | Phoenix                | 25,519                    | 12,180                       | -13,339              |
| Jacksonville     | 2,026                     | 3,700                        | 1,674                | Atlanta                | 34,623                    | 18,960                       | -15,663              |
| Portland         | 11,778                    | 13,090                       | 1,312                | San Diego              | 18,875                    | 2,760                        | -16,115              |
| Richmond         | 3,544                     | 1,800                        | -1,744               | Philadelphia           | 28,963                    | 9,630                        | -19,333              |
| South Florida    | 12,677                    | 10,280                       | -2,397               | Houston                | 13,629                    | -6,030                       | -19,659              |
| Orlando          | 12,560                    | 10,000                       | -2,560               | Pittsburgh             | 23,972                    | 4,150                        | -19,822              |
| San Antonio      | 5,580                     | 2,690                        | -2,890               | Los Angeles/Orange Co. | 61,261                    | 35,870                       | -25,391              |
| Madison          | 9,144                     | 5,940                        | -3,204               | Detroit                | 30,853                    | 3,870                        | -26,983              |
| Dallas/Ft. Worth | 30,700                    | 26,570                       | -4,130               | Washington, D.C.       | 55,931                    | 24,080                       | -31,851              |
| St. Louis        | 9,527                     | 4,950                        | -4,577               | Chicago                | 39,737                    | 7,330                        | -32,407              |
| Waterloo Region  | 12,894                    | 8,300                        | -4,594               | Boston                 | 48,736                    | 11,360                       | -37,376              |
| Sacramento       | 9,117                     | 3,890                        | -5,227               | New York Metro         | 87,408                    | 21,930                       | -65,478              |

Source: CBRE Research, U.S. Bureau of Labor Statistics, Statistics Canada, National Center for Education Statistics (Metro), Canadian Universities, 2021.

\*Tech degrees cover the most recent five-year period available (2015-2019) and tech jobs added cover the time period reflecting when most graduates would be counted in employment figures (2016-2020).

# Brain Gain or Drain?



Tech degree graduates not employed in the market where they were educated tend to migrate to markets with high volumes of tech talent job creation and consistent brain gain. According to an analysis of LinkedIn data, the San Francisco Bay Area (37%) and Seattle (40%) had the lowest proportions of tech talent workers who were educated there, which means more than 60% educated elsewhere work in these markets (Figure 7). The next highest migration markets were Dallas/Ft. Worth and Toronto, with 36% and 33% of their tech talent workforces educated elsewhere, respectively. Overwhelmingly, tech talent in most markets we analyzed was sourced locally, suggesting employers with

workplace locations near tech degree-producing universities tend to absorb that local talent. Furthermore, analysis of LinkedIn data for software engineers found that approximately 21% left their employers for another job in the 12 months ending February 2021, reinforcing the need to have proximity to sources of tech talent.





**Figure 7**  
**Tech Talent Employment & University Degree by Market**

| Market                              | Total Number Employed <sup>1</sup> | Top 25 Degree Producing Universities <sup>2</sup> (% of Total Employed) | Share of Top 25 from within Market <sup>2</sup> (Locally Employed and Educated) |
|-------------------------------------|------------------------------------|---|---|
| San Francisco Bay Area              | 373,430                            | 41%   | 37%   |
| New York Metro                      | 348,330                            | 31%   | 75%   |
| Toronto                             | 270,400                            | 54%   | 67%   |
| Washington, D.C.                    | 265,370                            | 43%   | 70%   |
| Los Angeles/Orange Co.              | 228,720                            | 43%   | 73%   |
| Dallas/Ft. Worth                    | 189,200                            | 41%   | 64%   |
| Seattle                             | 184,660                            | 35%   | 40%   |
| Boston                              | 168,090                            | 48%   | 73%   |
| Chicago                             | 167,380                            | 47%   | 80%   |
| Montreal                            | 160,700                            | 66%   | 93%   |
| 10 Largest "Large" Market Aggregate | 2,356,280                          | 41%   | 61%   |
| Columbus                            | 47,940                             | 54%   | 75%   |
| Calgary                             | 46,700                             | 71%   | 82%   |
| Orlando                             | 43,340                             | 55%   | 76%   |
| Pittsburgh                          | 43,080                             | 59%   | 79%   |
| Sacramento                          | 40,160                             | 42%   | 70%   |
| 5 Largest "Small" Market Aggregate  | 221,220                            | 57%   | 77%   |

Source: (1) U.S. Bureau of Labor Statistics (Metro), April 2021, Statistics Canada (Metro), 2021. (2) LinkedIn Talent Insights (LTI) and analysis by CBRE Research, May 2021. Tech Talent figures from LTI were defined by CBRE Research as software engineers, data engineers, cyber security analysts, system engineers, data scientists, information security analysts, infrastructure engineers, and database administrators.

LinkedIn Disclaimer: LinkedIn Talent Insights data is derived by aggregating profile data voluntarily submitted by LinkedIn members. As such, LinkedIn cannot guarantee the accuracy of LinkedIn Talent Insights data.

Another notable characteristic of tech talent markets is the number of millennials<sup>3</sup> in the workforce. The younger part of this generation has grown up in the internet-connected world and expect an integrated and a more tech-enabled working environment. Generally, this well-educated cohort prefers urban living, which has contributed to many revitalized downtown neighborhoods.

As the largest demographic cohort, millennials' presence and maturity within the labor pool has fueled the growth of tech talent across all 50 markets (Figure 8). Seventeen large tech markets have increased their millennial populations by more than 10% since 2014. Seattle's grew the fastest at 22%. During the same period, seven of the smaller tech markets increased their millennial populations by more than 10%, with Nashville growing the fastest in the U.S. and Waterloo the fastest in Canada. Austin, Seattle and Denver are the most concentrated millennial markets with about one-third of their population in this cohort. The 10 most concentrated tech markets for millennials are well above the U.S. national population concentration of 22% (Figure 9).

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<sup>3</sup>Analysis conducted in this report includes millennials aged 23-38 years.





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**Millennials' presence and maturity within the labor pool has fueled the growth of tech talent across all 50 markets.**

**Figure 8**  
**Millennial Population\* Change by Market Since 2014**

**Large Tech Talent Markets  
(> 50,000 Labor Pool)**

| Geography              | % Change |
|------------------------|----------|
| Seattle                | 21.5%    |
| Toronto                | 21.2%    |
| Denver                 | 20.1%    |
| Austin                 | 20.1%    |
| Vancouver              | 19.8%    |
| Ottawa                 | 19.6%    |
| Portland               | 18.0%    |
| Charlotte              | 17.1%    |
| Dallas/Ft. Worth       | 14.7%    |
| Tampa                  | 14.5%    |
| SF Bay Area            | 14.4%    |
| Kansas City            | 12.5%    |
| Phoenix                | 11.9%    |
| Montreal               | 11.9%    |
| Salt Lake City         | 11.6%    |
| Atlanta                | 11.6%    |
| Raleigh-Durham         | 11.0%    |
| Houston                | 10.4%    |
| Minneapolis/St. Paul   | 9.3%     |
| Washington, D.C.       | 7.3%     |
| South Florida          | 5.7%     |
| Detroit                | 2.3%     |
| New York Metro         | 2.2%     |
| Boston                 | 2.0%     |
| Philadelphia           | 1.8%     |
| St. Louis              | 1.8%     |
| Baltimore              | 1.3%     |
| Los Angeles/Orange Co. | 1.3%     |
| San Diego              | 0.7%     |
| Chicago                | 0.0%     |

**Small Tech Talent Markets  
(< 50,000 Labor Pool)**

| Geography       | % Change |
|-----------------|----------|
| Waterloo Region | 26.3%    |
| Nashville       | 14.8%    |
| Edmonton        | 13.8%    |
| Orlando         | 13.0%    |
| Jacksonville    | 12.2%    |
| Indianapolis    | 10.4%    |
| San Antonio     | 9.4%     |
| Columbus        | 9.1%     |
| Calgary         | 8.5%     |
| Richmond        | 7.6%     |
| Quebec City     | 7.0%     |
| Sacramento      | 5.6%     |
| Cincinnati      | 2.1%     |
| Milwaukee       | 0.4%     |
| Madison         | 0.1%     |
| Cleveland       | -0.1%    |
| Pittsburgh      | -0.2%    |
| Virginia Beach  | -3.9%    |
| Hartford        | -4.7%    |
| Rochester       | -7.5%    |

Source: U.S. Census Bureau (Metro), Statistics Canada (Metro), 2021.

\*Millennials aged 23-38 years.



## Figure 9

### Top 10 Most Concentrated Millennial\* Markets (2019)

U.S. Average = 22.0%

|     |                               |       |
|-----|-------------------------------|-------|
| #1  | <b>Austin</b>                 | 34.6% |
| #2  | <b>Seattle</b>                | 33.3% |
| #3  | <b>Denver</b>                 | 32.4% |
| #4  | <b>SF Bay Area</b>            | 32.0% |
| #5  | <b>San Diego</b>              | 31.7% |
| #6  | <b>Los Angeles/Orange Co.</b> | 31.2% |
| #7  | <b>Portland</b>               | 30.9% |
| #8  | <b>Salt Lake City</b>         | 30.6% |
| #9  | <b>Nashville</b>              | 30.4% |
| #10 | <b>Columbus</b>               | 30.4% |

Source: U.S. Census Bureau (Metro), 2021.

\*Millennials aged 23-38 years.





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## Tech talent clusters tend to form in markets with a strong concentration of high-tech companies.

Similar traits among markets cause many of them to appear equivalent, but top tech markets distinguish themselves from the rest with tech clusters and higher concentrations of tech talent. These clusters typically form around preeminent universities that tend to invest the most in innovation and provide a constant flow of new talent for local companies. Tech clusters also form around leading companies that draw other companies to a region and support an innovative

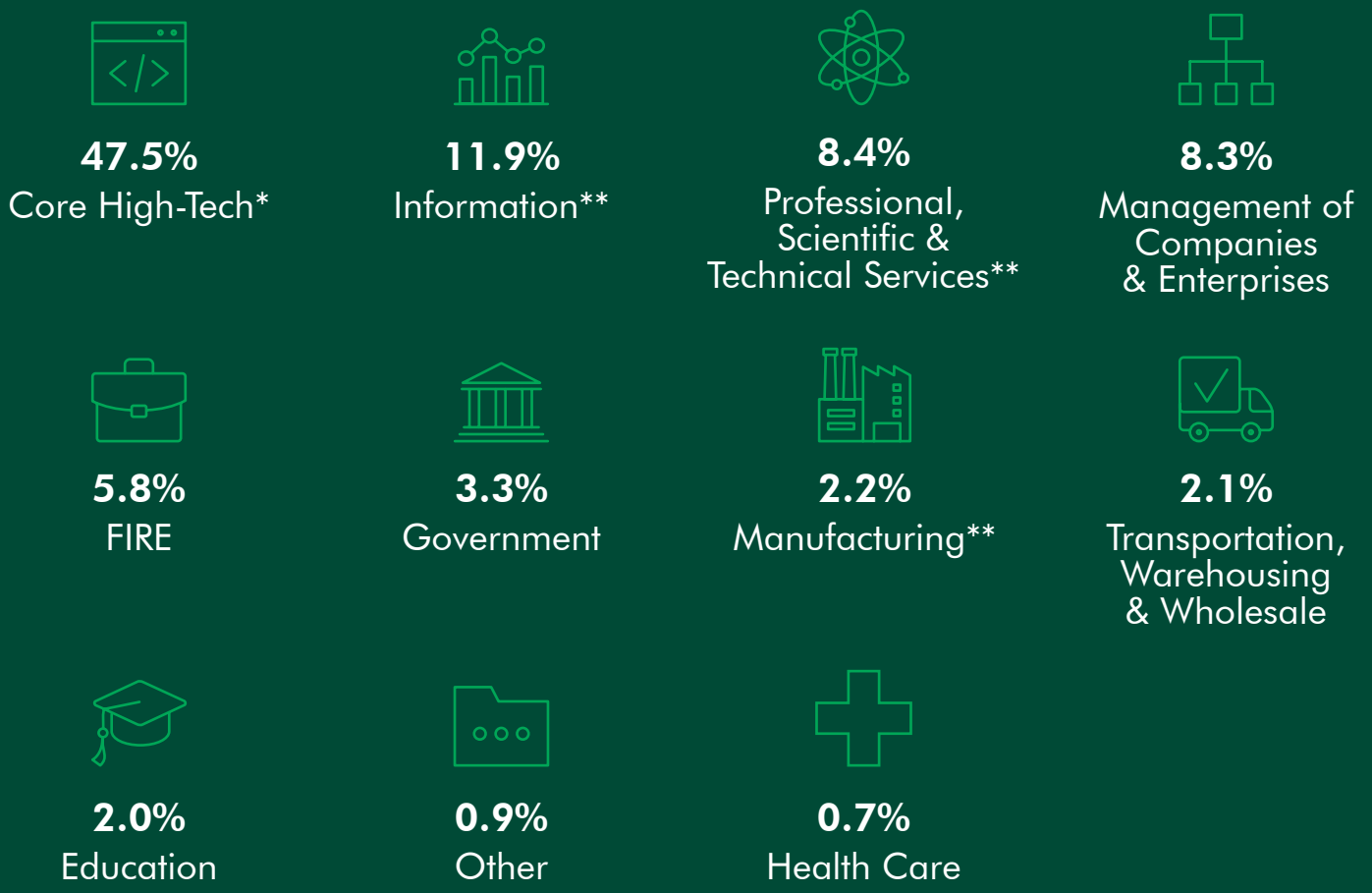
ecosystem that spawns new entrepreneurs. Tech companies use these clusters for synergy and competition, thereby accelerating the innovation process. These companies in the core high-tech industry are heavily concentrated, with about half of their workers doing tech-related jobs (Figure 10). Consequently, tech talent clusters tend to form in markets with a strong concentration of high-tech companies.

**Figure 10**

**U.S. Tech Talent Labor Concentration by Industry (2020)**

Tech Talent As % Of Total Industry Occupations

Total U.S. Employment = 3.9%



Source: U.S. Bureau of Labor Statistics (National), April 2021.

\*Includes computer software and services and computer product manufacturing.

\*\*Excluding High-Tech



# How diverse are Tech Talent markets?



Tech talent diversity by race/ethnicity and sex has occurred slowly. The COVID-19 pandemic has created an opportunity to accelerate the process via expanded remote work and workforce analytics. Strategic approaches to diverse team building can be enhanced by greater use of

data and benchmarking analytics that identify where diverse talent is located and being developed. Our analysis details workforce race/ethnicity and sex by geography, industry and job classification; and college tech degree graduates' race/ethnicity and sex by geography.

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**The COVID-19 pandemic has created an opportunity to accelerate the process via expanded remote work and workforce analytics.**



## INDUSTRY DIVERSITY

Tech talent across all industries was little changed over the past five years and remains predominantly White, Asian and male relative to total employment and office-using employment.<sup>4</sup> According to 2019 data from the U.S. Census Bureau, Hispanics, Blacks and females were underrepresented (Figure 11). The tech industry, which accounts for 40% of tech talent in the U.S.,

had demographics similar to tech talent across all industries. The tech industry overall, which includes a 47% to 53% split between tech and non-tech occupations, also was underrepresented by Hispanics, Blacks and females.

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<sup>4</sup>Race/Ethnicity as reported herein is based in standards from the U.S. Office of Management and Budget, Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Reporting. Office-using employment includes industries that heavily use office space for their operations including information, professional & business services and financial activities.

**Figure 11**  
**U.S. Workforce by Race/Ethnicity for Selected Industries (2019)**

White Asian Hispanic Black Other

Tech Talent Workforce (All Industries)



Tech Talent Workforce (Tech Industry)



Tech Industry Workforce (All Occupations, Tech & Non-Tech)



Office-Using Industry Workforce (All Occupations)



Total Workforce (All Industries and Occupations)



Source: U.S. Census, IPUMS and CBRE Research, May 2021.

Note: Office-using industries include information, financial activities and professional & business services (excluding tech industry within these categories).

Females were significantly underrepresented within tech talent occupations across all industries (Figure 12). Within the tech industry, females were more underrepresented in tech occupations at 22% compared with 27% across all industries. Females accounted for 43% of non-tech occupations within the tech industry, below the 46% share for total employment and 51% share for office-using

industries. Females within underrepresented race/ethnicity groups (Hispanic, Black and Other) had a higher share of jobs than White and Asian females in four of the five workforce categories, with all employment being the exception. Black females had the highest share of jobs for all race/ethnicity groups and workforce categories.

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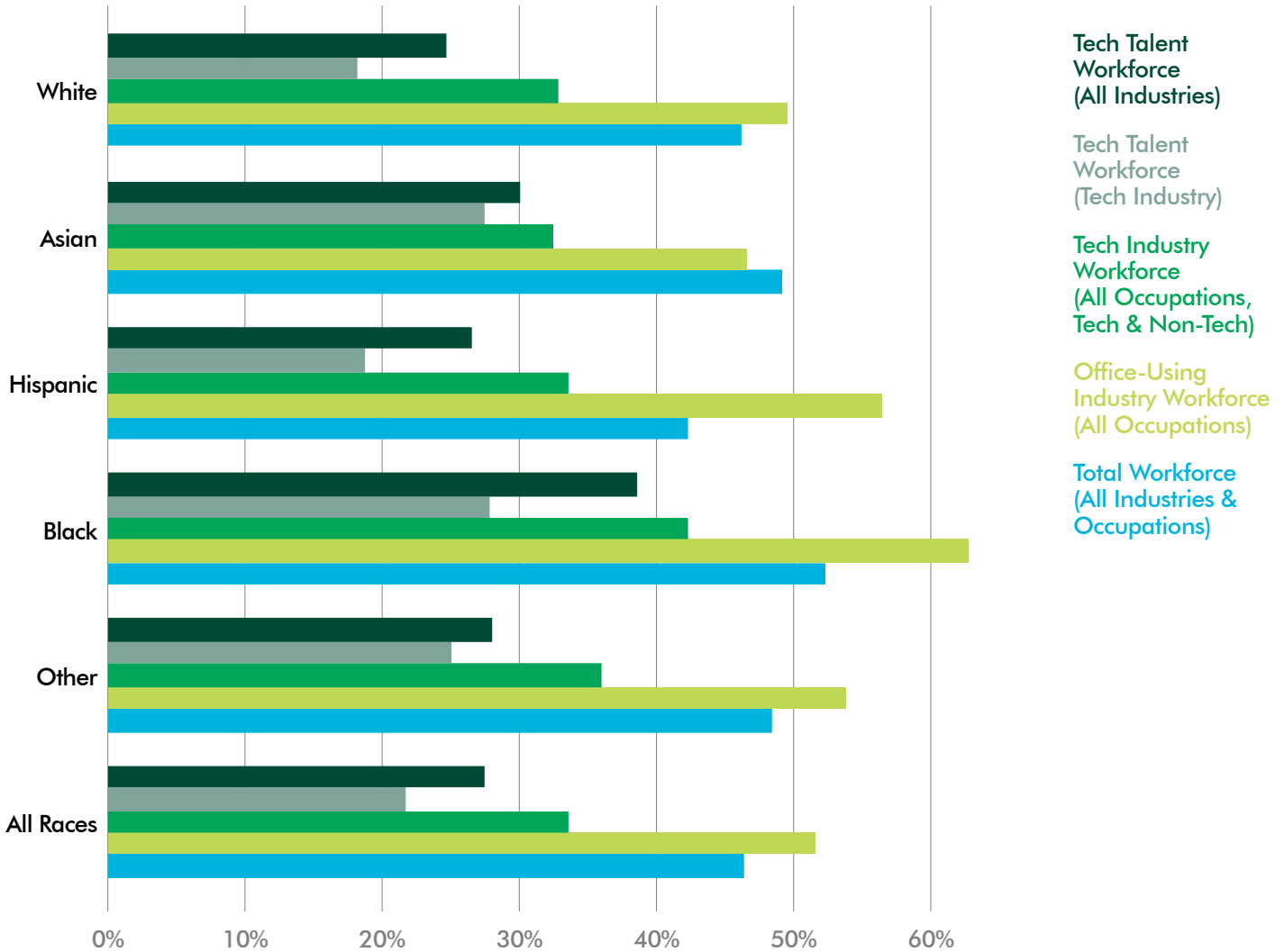
**Black females  
had the  
highest share  
of jobs for all  
race/ethnicity  
groups and  
workforce  
categories.**





## Figure 12 U.S. Workforce by Sex for Selected Industries (2019)

% Female of Total Workforce (Male and Female)



Source: U.S. Census, IPUMS and CBRE Research, May 2021.

Note: Office-using industries include information, financial activities and professional & business services (excluding tech industry within these categories).



## OCCUPATION DIVERSITY

Segmenting tech talent occupations across all industries in two broad categories showed that female workers were concentrated within Computer Support, Database & Systems occupations at 69%. The other 31% of female workers were

Software Developers, Programmers & Engineers (Figure 13). By race/ethnicity within these same occupations, females were less underrepresented than males in the Black and Other categories.

**Figure 13**  
**U.S. Tech Talent Occupation Category by Race/Ethnicity & Sex (2019)**

| Tech Talent Occupation Category                                     | Share of Occupations | RACE/ETHNICITY SHARE OF OCCUPATIONS BY SEX |              |              |              |             |
|---|----------------------|--|--------------|--------------|--------------|-------------|
|   |                      | White                                      | Asian        | Hispanic     | Black        | Other       |
| <b>Software Developers, Programmers &amp; Engineers (2.2M Jobs)</b> |                      |  |              |              |              |             |
| Female  | 20.5%                | 43.4%                                      | 41.4%        | 5.7%         | 6.6%         | 2.8%        |
| Male  | 79.5%                | 57.0%                                      | 29.4%        | 6.6%         | 4.2%         | 2.8%        |
| <b>Total (Both Sexes)</b>   | <b>100.0%</b>        | <b>54.2%</b>                               | <b>31.9%</b> | <b>6.4%</b>  | <b>4.7%</b>  | <b>2.8%</b> |
| <b>Computer Support, Database &amp; Systems (3.2M Jobs)</b>         |                      |  |              |              |              |             |
| Female  | 32.0%                | 55.8%                                      | 17.1%        | 9.8%         | 14.2%        | 3.1%        |
| Male  | 68.0%                | 61.4%                                      | 15.1%        | 10.7%        | 9.6%         | 3.1%        |
| <b>Total (Both Sexes)</b>   | <b>100.0%</b>        | <b>59.6%</b>                               | <b>15.8%</b> | <b>10.4%</b> | <b>11.1%</b> | <b>3.1%</b> |
| <b>Total Tech Talent (5.4M Jobs)</b>                                |                      |  |              |              |              |             |
| Female  | 27.2%                | 51.9%                                      | 24.8%        | 8.5%         | 11.8%        | 3.0%        |
| Male  | 72.8%                | 59.4%                                      | 21.7%        | 8.8%         | 7.1%         | 3.0%        |
| <b>Total (Both Sexes)</b>   | <b>100.0%</b>        | <b>57.4%</b>                               | <b>22.5%</b> | <b>8.7%</b>  | <b>8.4%</b>  | <b>3.0%</b> |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

**Female workers were concentrated within Computer Support, Database & Systems occupations at 69%.**

## GEOGRAPHIC/MARKET DIVERSITY

Demographics should be benchmarked by the representative workforce within a geographical or market area. For tech talent markets, there was variability in underrepresented race/ethnic groups and females when benchmarked by office-using industries. If the difference between tech talent and the office-using benchmark was a positive number, it means there was no underrepresentation using this metric. For underrepresented race/ethnic groups, the most diverse tech talent markets were

Pittsburgh, Charlotte, Nashville, Atlanta and Rochester (Figure 14). The least diverse markets were San Antonio, Greater Los Angeles/Orange County, Austin, San Francisco Bay Area and San Diego.

For females, the most diverse tech talent markets were Washington, D.C., Sacramento, Kansas City, Boston and Hartford (Figure 15). The least diverse markets were Cleveland, South Florida, Richmond, Orlando and St. Louis.

**Figure 14**  
**Underrepresented Race/Ethnic Groups in U.S. Tech Talent Workforce by Market (2019)**

| Market                 | Difference* | Tech Talent Share of Underrepresented Groups** | Office-Using Share of Underrepresented Groups** |
|------------------------|-------------|--|---|
| <b>Most Diverse</b>    |             |  |   |
| Pittsburgh             | 3.5%        | 12.2%  | 8.7%  |
| Charlotte              | 0.8%        | 25.5%  | 24.7%   |
| Nashville              | 0.4%        | 17.1%  | 16.7%   |
| Atlanta                | 0.2%        | 36.1%  | 35.9%   |
| Rochester              | -0.6%       | 11.9%  | 12.6%   |
| <b>Least Diverse</b>   |             |  |   |
| San Antonio            | -14.7%      | 39.8%  | 54.5%   |
| Los Angeles/Orange Co. | -12.6%      | 24.3%  | 36.9%   |
| Austin                 | -10.5%      | 18.4%  | 28.9%   |
| San Francisco Bay Area | -9.6%       | 10.7%  | 20.3%   |
| San Diego              | -9.1%       | 20.1%  | 29.2%   |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

\*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark

\*\*Hispanic, Black, Other Non-White/Non-Asian





**Figure 15**  
**Females in U.S. Tech Talent Workforce by Market (2019)**

| Market               | Difference* | Tech Talent Share of Females | Office-Using Share of Females |
|----------------------|-------------|------------------------------|-------------------------------|
| <b>Most Diverse</b>  |             |                              |                               |
| Washington, D.C.     | -17.4%      | 32.3%                        | 49.7%                         |
| Sacramento           | -17.6%      | 35.6%                        | 53.3%                         |
| Kansas City          | -17.9%      | 33.2%                        | 51.2%                         |
| Boston               | -18.4%      | 30.3%                        | 48.6%                         |
| Hartford             | -19.5%      | 30.1%                        | 49.6%                         |
| <b>Least Diverse</b> |             |                              |                               |
| Cleveland            | -29.7%      | 24.6%                        | 54.2%                         |
| South Florida        | -29.1%      | 23.2%                        | 52.3%                         |
| Richmond             | -28.5%      | 26.2%                        | 54.6%                         |
| Orlando              | -28.0%      | 25.0%                        | 53.0%                         |
| St. Louis            | -27.8%      | 24.9%                        | 52.7%                         |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

\*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark

## TECH DEGREE GRADUATE DIVERSITY & CURRENT ENROLLMENT

The pipeline of recent tech degree graduates offers opportunities to build the next generation of talent and use analytics to measure success. These graduates, like the existing tech talent workforce, were predominantly White, Asian and male. Of the 318,000 U.S. tech degree graduates in 2019, 23.5% were from underrepresented race/ethnicity groups and 24.9% were female (Figure 16). Underrepresented race/ethnicity groups accounted for 29.1% of total college

graduates in 2019 and females accounted for 58.3%. Asian, Hispanic and other race/ethnicity groups have materially increased their shares of tech degrees since 2010, while the shares of Whites have declined, Blacks have remained about the same and females have increased slightly.

For underrepresented race/ethnicity groups, the most diverse markets for tech degree graduates were South Florida, San Antonio,



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**The U.S. has a future tech degree graduate pipeline of about 1 million for students enrolled in bachelor's or higher programs as of Fall 2020.**

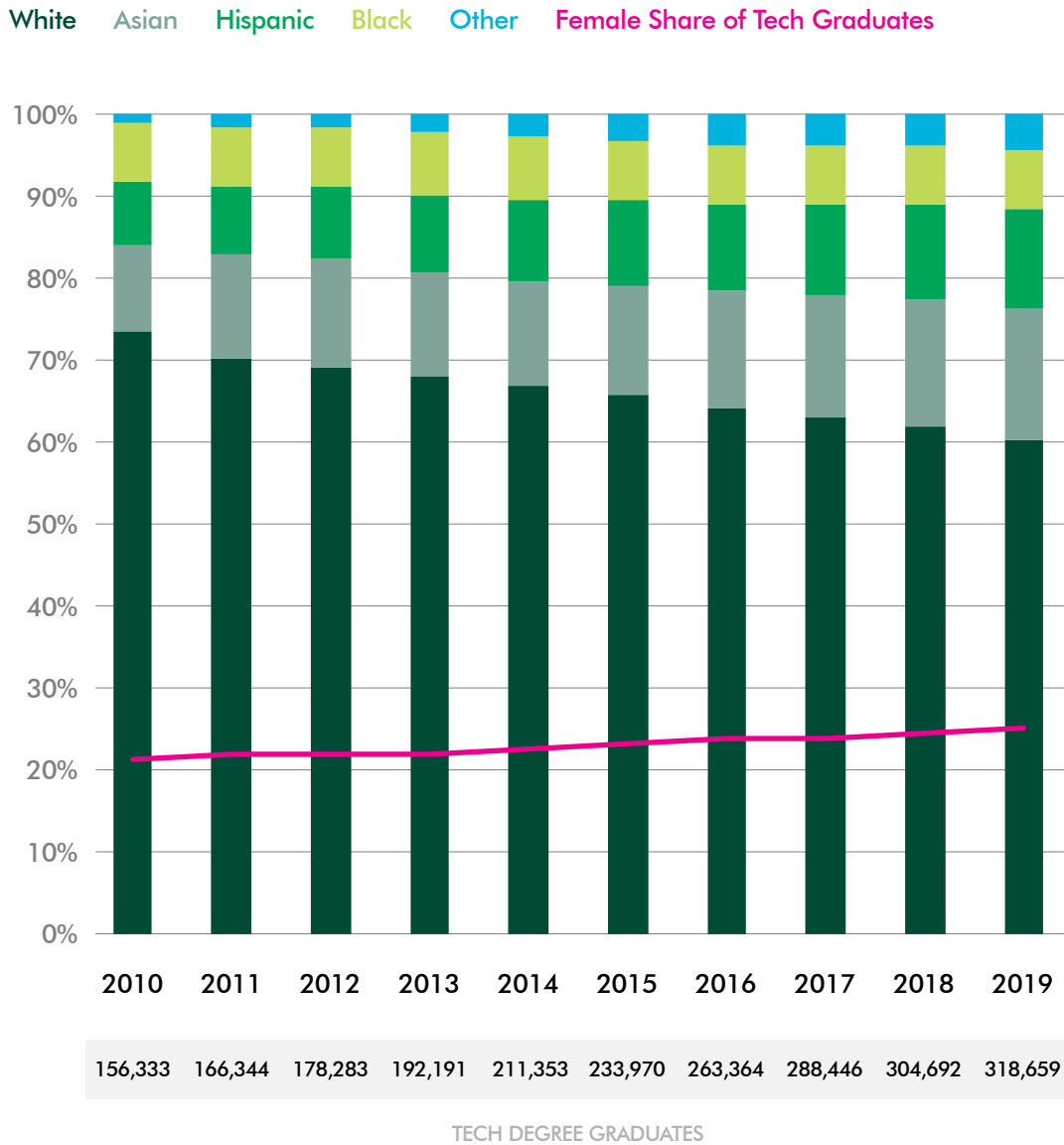
Houston, Washington, D.C. and Tampa (Figure 17). The least diverse markets were Madison, Cincinnati, Milwaukee, Rochester and Detroit.

For females, the most diverse markets for tech degree graduates were Pittsburgh, Seattle, New York Metro, Boston and Houston (Figure 17). The least diverse markets were Salt Lake City, Orlando, Milwaukee, South Florida and Portland.

The U.S. has a future tech degree graduate pipeline of about 1 million, according to the National Student Clearinghouse Research Center and estimates by CBRE Research for students enrolled in bachelor's or higher programs as of Fall 2020. While diversity breakdowns for these students were not available, trends suggest they will represent greater tech talent workforce diversity than exists today.



**Figure 16**  
**U.S. Tech Degree Graduates' Race/Ethnicity & Sex (2019)**  
 Bachelor's Degree or Higher



Source: IPEDS.

Note: Total tech degree graduates and sex breakdown includes U.S. resident and foreigners. Race/ethnicity breakdown excludes unknown races and foreigners.



**Figure 17**  
**U.S. Tech Degree Graduates' Race/Ethnicity & Sex by Market (2019)**  
 Bachelor's Degree or Higher

| Market   | Total Graduates | RACE/ETHNICITY** |       |                    |          |       |       |
|--|-----------------|------------------|-------|--------------------|----------|-------|-------|
|  |                 | White            | Asian | Under-represented* | Hispanic | Black | Other |
| <b>Most Diverse (Highest % Underrepresented Groups*)</b> |                 |                  |       |                    |          |       |       |
| South Florida  | 2,770           | 25.8%            | 6.1%  | 68.1%              | 49.9%    | 15.1% | 3.1%  |
| San Antonio  | 1,328           | 32.2%            | 9.9%  | 57.8%              | 47.1%    | 6.5%  | 4.2%  |
| Houston  | 3,054           | 34.2%            | 25.3% | 40.5%              | 24.6%    | 14.0% | 1.9%  |
| Washington, D.C.   | 12,623          | 48.2%            | 16.8% | 35.0%              | 8.7%     | 21.5% | 4.7%  |
| Tampa  | 1,868           | 56.1%            | 9.1%  | 34.7%              | 18.7%    | 12.8% | 3.3%  |
| <b>Least Diverse (Lowest % Underrepresented Groups*)</b> |                 |                  |       |                    |          |       |       |
| Madison  | 2,214           | 81.9%            | 9.5%  | 8.5%               | 3.9%     | 1.5%  | 3.1%  |
| Cincinnati   | 2,310           | 78.7%            | 11.9% | 9.4%               | 3.1%     | 3.6%  | 2.7%  |
| Milwaukee  | 1,594           | 81.2%            | 7.5%  | 11.2%              | 5.0%     | 3.4%  | 2.8%  |
| Rochester  | 2,467           | 76.6%            | 11.4% | 12.0%              | 6.3%     | 2.5%  | 3.3%  |
| Detroit  | 6,790           | 71.2%            | 16.5% | 12.3%              | 4.5%     | 4.1%  | 3.7%  |

| Market                                 | Total Graduates | SEX   |        | Market                                | Total Graduates | SEX   |        |
|--|-----------------|-------|--------|---------------------------------------|-----------------|-------|--------|
|  |                 | Male  | Female |                                       |                 | Male  | Female |
| <b>Most Diverse (Highest % Female)</b> |                 |       |        | <b>Least Diverse (Highest % Male)</b> |                 |       |        |
| Pittsburgh                             | 5,414           | 69.1% | 30.9%  | Salt Lake City                        | 5,844           | 86.8% | 13.2%  |
| Seattle                                | 4,847           | 69.5% | 30.5%  | Orlando                               | 2,793           | 83.7% | 16.3%  |
| New York Metro                         | 20,576          | 69.7% | 30.3%  | Milwaukee                             | 1,594           | 79.8% | 20.2%  |
| Boston                                 | 12,183          | 69.9% | 30.1%  | South Florida                         | 2,770           | 79.3% | 20.7%  |
| Houston                                | 3,054           | 70.4% | 29.6%  | Portland                              | 2,931           | 77.9% | 22.1%  |

Source: IPEDS and CBRE Research, May 2021.

Total tech degree graduates and sex breakdown includes U.S. resident and foreigners. Race/ethnicity breakdown excludes unknown races and foreigners.

\*Aggregate of Hispanic, Black, Other Non-White/Non-Asian \*\*Race/ethnicity breakdown excludes unknown races and foreigners.

## TECH TALENT DIVERSITY PROGRESS

Greater diversity of the tech talent workforce should continue to slowly progress. Our review of U.S. Equal Employment Opportunity Commission diversity data and publicly released data from private tech companies confirms this. Changing the pace of workforce diversity is both a challenge and opportunity.

Technology will be critical to support a new hybrid approach to work, in which team members can work either in-person, remotely or from widely dispersed locations. Tech talent employers increased job postings that offer remote working arrangements to 12% for the 12 months ending in February 2021, up from only 5.5% in the previous 12-month period, according to EMSI data. This hybrid approach shows promise to expand tech talent recruitment across all markets and increase workforce diversity.





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**Technology will be critical to support a new hybrid approach to work, in which team members can work either in-person, remotely or from widely dispersed locations.**

Which  
are the  
highest- and  
lowest-cost  
markets to  
operate in?



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## Employee wages are the greatest cost for companies in tech talent markets.

Employee wages are the greatest cost for companies in tech talent markets. These highly skilled and educated workers command a premium that often is more than double the average non-tech salary. The San Francisco Bay Area ranked highest for average tech talent worker salary at \$144,000 per year, about \$20,000 more than the next highest market (Seattle). The average tech worker salary in 13 of the 50 top tech talent markets was at or above the U.S. tech talent worker average.

Office rent is the second-highest cost for most companies. Even as remote work becomes more common, companies understand the benefits of tech clustering and often place a higher value on specific submarkets and even specific streets convenient to tech talent. Manhattan has the highest average office rents, followed by the San Francisco Bay Area, Greater Los Angeles/Orange County and Boston.

Combining wage and real estate costs provides insight into what a tech company might pay to operate in any of the top 50 tech talent markets. For this comparison, U.S. occupational averages were analyzed to determine the makeup of a typical 500-person tech company using 75,000 sq. ft. of office space. This occupational breakdown provides interesting insight into each market's relative costs (Figure 18).

Local market wages were applied to the various occupations to determine total annual wage costs by market, while local market rents were used to estimate the annual cost of renting a 75,000-sq.-ft. office to house 500 employees.<sup>5</sup> The San Francisco Bay Area topped the list with the highest estimated annual cost at more than \$68

million, followed distantly by the other major tech markets of New York Metro, Seattle and Washington, D.C. (Figure 19).

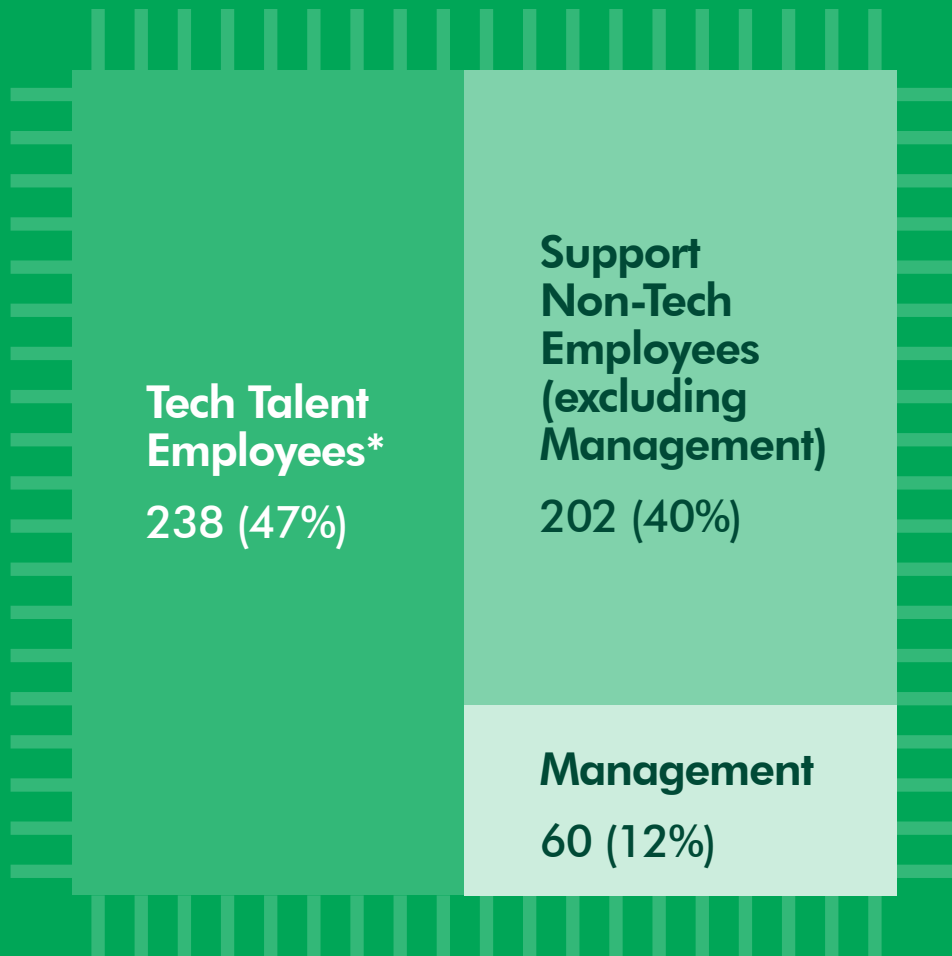
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<sup>5</sup>The COVID-19 outbreak may have lasting effects on office use and density.

## Figure 18

### Average U.S. Tech Company Occupation Pools

Typical 500-Person Tech Company



Source: U.S. Bureau of Labor Statistics (National), April 2021.

\*Tech Talent includes the following occupation categories: software developers and programmers; computer support, database and systems; technology and engineering related; and computer information system managers.

**Figure 19**

**Estimated One-Year Company Costs by Market (500 Employees; 75,000 SF)**

| Market                 | Rent Cost<br>(avg rent x 75,000 sf) | Tech Talent Wages<br>(avg wage x 238 people) | Support<br>Non-Tech Wages<br>(avg wage x 202 people) | Management Wages<br>(avg wage x 60 people) | Total        |
|------------------------|-------------------------------------|--|--|--|--------------|
| SF Bay Area            | \$5,253,336                         | \$34,360,103                                 | \$15,694,420   | \$13,303,186                               | \$68,611,046 |
| New York Metro         | \$5,793,750                         | \$28,119,799                                 | \$13,218,948   | \$12,079,200                               | \$59,211,697 |
| Seattle                | \$3,001,500                         | \$30,161,857                                 | \$13,299,959   | \$10,273,800                               | \$56,737,116 |
| Washington, D.C.       | \$3,084,750                         | \$27,900,741                                 | \$14,129,507   | \$10,670,400                               | \$55,785,397 |
| Boston                 | \$3,148,500                         | \$27,154,520                                 | \$13,221,127   | \$10,050,000                               | \$53,574,148 |
| Los Angeles/Orange Co. | \$3,388,831                         | \$26,180,345                                 | \$11,448,430   | \$11,050,200                               | \$52,067,806 |
| Denver                 | \$2,183,250                         | \$25,580,375                                 | \$12,952,469   | \$10,716,304                               | \$51,432,398 |
| San Diego              | \$2,866,500                         | \$26,176,882                                 | \$11,542,894   | \$10,174,200                               | \$50,760,476 |
| Baltimore              | \$1,770,000                         | \$26,252,880                                 | \$11,251,684   | \$9,516,600                                | \$48,791,163 |
| Philadelphia           | \$2,132,250                         | \$24,389,860                                 | \$11,273,558   | \$9,677,400                                | \$47,473,068 |
| Minneapolis/St. Paul   | \$1,960,500                         | \$24,369,018                                 | \$11,571,166   | \$9,358,200                                | \$47,258,884 |
| Sacramento             | \$1,890,000                         | \$24,369,838                                 | \$10,857,432   | \$9,600,000                                | \$46,717,270 |
| Chicago                | \$2,426,250                         | \$23,931,175                                 | \$10,807,378   | \$9,417,600                                | \$46,582,403 |
| Houston                | \$2,224,500                         | \$24,220,443                                 | \$10,428,254   | \$9,690,000                                | \$46,563,197 |
| Dallas/Ft. Worth       | \$1,931,250                         | \$24,371,839                                 | \$10,363,358   | \$9,730,800                                | \$46,397,248 |
| Charlotte              | \$2,312,250                         | \$23,790,169                                 | \$10,901,353   | \$9,175,200                                | \$46,178,972 |
| Raleigh-Durham         | \$2,229,750                         | \$23,953,048                                 | \$11,259,793   | \$8,705,915                                | \$46,148,506 |
| Atlanta                | \$2,215,500                         | \$23,737,874                                 | \$10,617,225   | \$9,123,600                                | \$45,694,199 |
| Portland               | \$2,341,500                         | \$23,653,419                                 | \$11,133,274   | \$8,557,800                                | \$45,685,993 |
| Austin                 | \$2,954,250                         | \$23,022,375                                 | \$10,350,230   | \$9,325,200                                | \$45,652,055 |
| Richmond               | \$1,593,750                         | \$23,484,266                                 | \$10,825,808   | \$9,583,200                                | \$45,487,023 |
| Hartford               | \$1,466,250                         | \$23,902,569                                 | \$11,323,251   | \$8,704,200                                | \$45,396,270 |
| South Florida          | \$3,047,299                         | \$21,918,770                                 | \$9,677,489  | \$9,507,000                                | \$44,150,558 |
| Phoenix                | \$2,108,250                         | \$22,289,794                                 | \$10,052,516   | \$8,789,400                                | \$43,239,960 |
| Columbus               | \$1,479,750                         | \$22,058,820                                 | \$10,310,880   | \$8,644,800                                | \$42,494,249 |
| Detroit                | \$1,452,000                         | \$21,806,161                                 | \$10,662,772   | \$8,535,876                                | \$42,456,808 |
| St. Louis              | \$1,578,293                         | \$21,872,253                                 | \$10,177,794   | \$8,622,600                                | \$42,250,940 |
| Madison                | \$1,559,250                         | \$21,982,411                                 | \$10,395,305   | \$8,118,600                                | \$42,055,566 |
| Tampa                  | \$2,063,989                         | \$21,544,833                                 | \$9,413,474  | \$9,009,000                                | \$42,031,296 |
| Cincinnati             | \$1,459,500                         | \$21,799,883                                 | \$10,201,132   | \$8,527,200                                | \$41,987,715 |
| Cleveland              | \$1,402,500                         | \$21,913,476                                 | \$10,190,782   | \$8,240,400                                | \$41,747,158 |
| San Antonio            | \$1,629,750                         | \$21,797,565                                 | \$9,051,310  | \$9,022,800                                | \$41,501,424 |
| Virginia Beach         | \$1,520,250                         | \$21,577,743                                 | \$9,313,768  | \$9,067,800                                | \$41,479,561 |
| Milwaukee              | \$1,512,750                         | \$21,185,787                                 | \$10,319,091   | \$8,355,600                                | \$41,373,228 |
| Orlando                | \$1,857,000                         | \$21,224,752                                 | \$9,145,449  | \$8,854,800                                | \$41,082,002 |
| Salt Lake City         | \$1,870,500                         | \$21,225,684                                 | \$9,588,092  | \$8,359,260                                | \$41,043,536 |
| Pittsburgh             | \$1,730,250                         | \$21,106,981                                 | \$9,466,876  | \$8,556,600                                | \$40,860,707 |
| Rochester              | \$1,462,500                         | \$20,290,958                                 | \$10,146,031   | \$8,813,400                                | \$40,712,889 |
| Indianapolis           | \$1,605,750                         | \$20,553,891                                 | \$10,302,026   | \$7,854,000                                | \$40,315,666 |
| Kansas City            | \$1,594,500                         | \$20,651,272                                 | \$10,314,941   | \$7,584,000                                | \$40,144,713 |
| Nashville              | \$2,130,000                         | \$20,138,320                                 | \$9,974,898  | \$7,691,400                                | \$39,934,617 |
| Jacksonville           | \$1,600,500                         | \$19,991,529                                 | \$9,129,482  | \$8,182,800                                | \$38,904,311 |
| Calgary                | \$2,251,500                         | \$17,000,811                                 | \$11,161,282   | \$5,454,342                                | \$35,867,935 |
| Ottawa                 | \$1,885,762                         | \$16,262,772                                 | \$10,537,009   | \$5,308,312                                | \$33,993,855 |
| Edmonton               | \$1,858,927                         | \$16,458,281                                 | \$10,374,124   | \$5,166,888                                | \$33,858,219 |
| Toronto                | \$1,985,837                         | \$15,904,751                                 | \$9,743,196  | \$5,135,266                                | \$32,769,051 |
| Vancouver              | \$2,683,563                         | \$15,823,496                                 | \$9,330,227  | \$4,858,949                                | \$32,696,235 |
| Quebec City            | \$1,440,179                         | \$15,096,634                                 | \$9,228,907  | \$6,730,734                                | \$32,496,454 |
| Montreal               | \$1,918,748                         | \$14,945,300                                 | \$9,159,593  | \$5,571,569                                | \$31,595,210 |
| Waterloo Region        | \$1,475,401                         | \$15,598,536                                 | \$9,177,296  | \$5,112,009                                | \$31,363,242 |

Source: U.S. Bureau of Labor Statistics, April 2021, Canada Statistics 2021, CBRE Research (Metro), Q4 2020.

\*in US\$

# How is Tech Talent quality vs. cost measured?





Assessing the quality of a labor market is challenging because there are no standard metrics to measure. Since salaries are the largest expense for most companies seeking tech talent, the quality of that tech talent is becoming one of their most important considerations. Figure 20 plots a quality assessment for software engineers (developers & programmers) against their average salary by market to illustrate this trade-off across the top 50 tech talent markets.

Labor quality was measured by the number and concentration of software engineers with three or more years of experience and who graduated from one of the top 25 computer science programs in North America, including the top three in Canada, as determined by U.S. News & World Report. The highest-cost markets (San Francisco Bay Area and Seattle) also have the highest concentration of quality tech talent. Nevertheless, good, high and very high concentrations

of quality tech talent are available in moderate and low-cost markets, providing a range of options. Due in part to exchange rates, Toronto, Vancouver, Montreal, Ottawa and Waterloo provide the best value when it comes to cost and quality, followed by Madison, Pittsburgh, Detroit, Indianapolis and Milwaukee.

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**Good, high and very high concentrations of quality tech talent are available in moderate and low-cost markets, providing a range of options.**





The skills of the available labor pool are rising, but still not keeping pace with available jobs, causing a structural barrier to growth for companies across North America and slowing job creation. Jobs that require specific skills, such as software development and machine learning, remain in high demand, while the pool of available talent to

fill them is limited. Only 40% of all tech talent workers are employed in the high-tech industry (Figure 1), meaning tech companies must compete with all other industries that employ the remaining 60% of tech workers. The COVID-19 pandemic has altered overall labor market dynamics as the unemployment rate for college-

educated workers increased from 2.0% in 2019 to 8.7% in April 2020 before dropping to 3.4% by April 2021. Tech talent employment is more resilient and demand for tech skills remains high, which keeps labor costs rising across all markets even as remote work becomes more prevalent.

How does  
Tech Talent  
impact  
commercial  
real estate?

U.S. tech talent growth, primarily in the high-tech industry, has totaled 640,700 jobs over the past five years and been the top driver of U.S. office leasing activity during that time. While the high-tech industry's share of major leasing activity<sup>6</sup> nationwide fell to 17% in 2020 from a high of 21% in 2019, it remains the largest single share of any industry. Many tech talent markets, especially those with high concentrations or clusters of tech companies, have seen rising rents and declining vacancies as a result. Significant demand for office space in top markets that have added tens of thousands of workers over the past five years raised rents to their highest levels and pushed down vacancy rates to their lowest levels.

Office rent growth is highest in up-and-coming tech markets like Charlotte, Nashville and Atlanta—all 35% to 38% higher than they were five years ago. The pandemic has caused vacancy rate spikes in some of the larger tech markets like the San Francisco Bay Area and New York Metro. The largest increases have been in energy markets like Calgary, Dallas/Ft. Worth, Houston and Edmonton. Vacancy rates in Vancouver, Madison, Quebec City and Waterloo are the lowest of the top 50 tech talent markets (Figure 21).

The in-migration of talent to these tech markets also has a sizeable impact on residential real estate. New York Metro remains the most expensive market in which to rent an apartment. Apartment costs have increased in all markets except Calgary and Houston. Comparing the annual average apartment rent with the annual average tech-worker salary shows that tech salaries generally can cover the cost of living in even the most expensive markets (Figure 23), based on the affordability standard of 30% of income to housing.

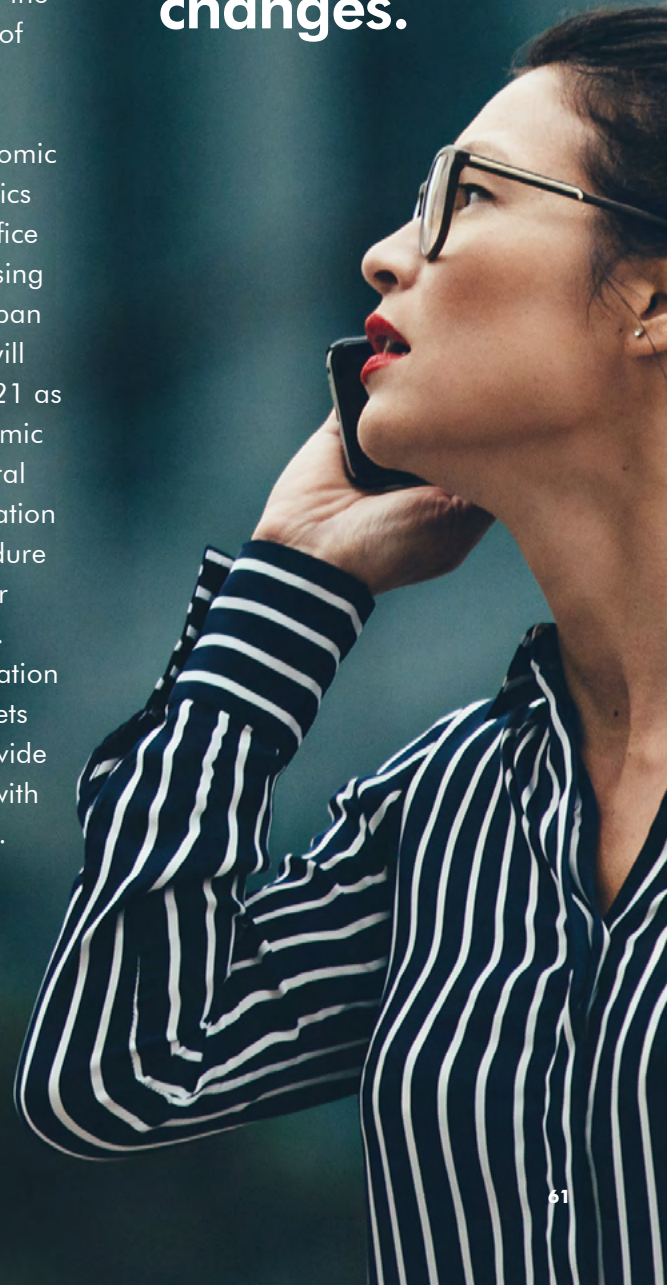
COVID-19 has changed economic and real estate market dynamics across North America, with office demand lower and some housing demand shifted away from urban centers. Real estate demand will likely remain bifurcated in 2021 as the economy adjusts to pandemic changes. The ongoing structural impact of technological innovation on the economic cycle will endure and rise once again at a faster rate than the overall economy. Disruption is part of the innovation process, and tech talent markets across North America will provide both occupiers and investors with good real estate opportunities.

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**Real estate demand will likely remain bifurcated in 2021 as the economy adjusts to pandemic changes.**

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<sup>6</sup>Includes transactions 10,000 sq. ft. or larger each quarter for the 50+ markets tracked by CBRE Research.



**Figure 21**  
**Office Asking Rent by Market**  
**(Q4 2020)**

| Market               | Annual Gross Direct Asking Rent Per SF | Vacancy Rate |
|----------------------|--|--------------|
| Manhattan            | \$77.25                                | 11.3%        |
| SF Bay Area          | \$70.04                                | 12.2%        |
| Los Angeles          | \$45.18                                | 16.3%        |
| Boston               | \$41.98                                | 13.2%        |
| Washington, D.C.     | \$41.13                                | 17.7%        |
| South Florida        | \$40.63                                | 15.5%        |
| Seattle              | \$40.02                                | 12.3%        |
| Austin               | \$39.39                                | 16.7%        |
| San Diego            | \$38.22                                | 14.0%        |
| Vancouver*           | \$35.78                                | 6.2%         |
| Chicago              | \$32.35                                | 20.4%        |
| Portland             | \$31.22                                | 14.4%        |
| Charlotte            | \$30.83                                | 12.3%        |
| Calgary*             | \$30.02                                | 27.0%        |
| Raleigh-Durham       | \$29.73                                | 11.3%        |
| Houston              | \$29.66                                | 22.3%        |
| Atlanta              | \$29.54                                | 19.1%        |
| Denver               | \$29.11                                | 15.6%        |
| Philadelphia         | \$29.07                                | 16.2%        |
| Nashville            | \$28.40                                | 15.5%        |
| Phoenix              | \$28.11                                | 17.4%        |
| Tampa                | \$27.84                                | 13.9%        |
| Toronto*             | \$26.48                                | 10.9%        |
| Minneapolis/St. Paul | \$26.14                                | 18.6%        |
| Dallas/Ft. Worth     | \$25.75                                | 23.4%        |
| Montreal*            | \$25.58                                | 12.3%        |
| Sacramento           | \$25.20                                | 11.2%        |
| Ottawa*              | \$25.14                                | 8.7%         |
| Salt Lake City       | \$24.94                                | 15.6%        |
| Edmonton*            | \$24.79                                | 20.6%        |
| Orlando              | \$24.76                                | 11.7%        |
| Baltimore            | \$23.60                                | 15.7%        |
| Pittsburgh           | \$23.07                                | 16.3%        |
| San Antonio          | \$21.73                                | 15.2%        |
| Indianapolis         | \$21.41                                | 19.6%        |
| Jacksonville         | \$21.34                                | 15.9%        |
| Kansas City          | \$21.26                                | 14.6%        |
| St. Louis            | \$21.04                                | 12.9%        |
| Madison              | \$20.79                                | 6.6%         |
| Richmond             | \$20.66                                | 8.5%         |
| Virginia Beach       | \$20.27                                | 10.0%        |
| Milwaukee            | \$20.17                                | 16.0%        |
| Columbus             | \$19.73                                | 19.4%        |
| Waterloo Region*     | \$19.67                                | 7.7%         |
| Hartford             | \$19.55                                | 20.1%        |
| Rochester            | \$19.50                                | 12.8%        |
| Cincinnati           | \$19.46                                | 18.4%        |
| Detroit              | \$19.36                                | 14.6%        |
| Quebec City*         | \$19.20                                | 7.3%         |
| Cleveland            | \$18.70                                | 16.4%        |

Source: CBRE Research (Office Market), Q4 2020.

\*in US\$

Note: New York represents Manhattan only.

**Figure 22**  
**Average Monthly Apartment Rent**  
**by Market (Q4 2020)**

| Market                 | Average Monthly Apartment Rent | Apt Rent 5 Yr. Growth |
|------------------------|--------------------------------|-----------------------|
| New York Metro         | \$2,589                        | -4%                   |
| SF Bay Area            | \$2,504                        | -8%                   |
| Los Angeles/Orange Co. | \$2,222                        | 8%                    |
| Boston                 | \$2,120                        | 6%                    |
| San Diego              | \$2,072                        | 17%                   |
| Seattle                | \$1,744                        | 13%                   |
| Washington, D.C.       | \$1,735                        | 3%                    |
| South Florida          | \$1,712                        | 8%                    |
| Sacramento             | \$1,602                        | 37%                   |
| Denver                 | \$1,518                        | 9%                    |
| Chicago                | \$1,473                        | 2%                    |
| Philadelphia           | \$1,458                        | 14%                   |
| Portland               | \$1,429                        | 11%                   |
| Hartford               | \$1,413                        | 10%                   |
| Baltimore              | \$1,391                        | 10%                   |
| Minneapolis/St. Paul   | \$1,340                        | 14%                   |
| Virginia Beach         | \$1,314                        | 15%                   |
| Atlanta                | \$1,302                        | 20%                   |
| Tampa                  | \$1,292                        | 19%                   |
| Austin                 | \$1,259                        | 5%                    |
| Orlando                | \$1,253                        | 14%                   |
| Phoenix                | \$1,250                        | 33%                   |
| Nashville              | \$1,244                        | 9%                    |
| Madison                | \$1,220                        | 9%                    |
| Milwaukee              | \$1,212                        | 11%                   |
| Dallas/Ft. Worth       | \$1,210                        | 11%                   |
| Salt Lake City         | \$1,204                        | 20%                   |
| Charlotte              | \$1,200                        | 16%                   |
| Pittsburgh             | \$1,182                        | 5%                    |
| Richmond               | \$1,182                        | 20%                   |
| Raleigh-Durham         | \$1,181                        | 16%                   |
| Jacksonville           | \$1,142                        | 20%                   |
| Toronto*               | \$1,139                        | 27%                   |
| Vancouver*             | \$1,124                        | 32%                   |
| Rochester              | \$1,114                        | 25%                   |
| Houston                | \$1,092                        | -1%                   |
| Detroit                | \$1,070                        | 19%                   |
| Cincinnati             | \$1,033                        | 16%                   |
| Columbus               | \$1,028                        | 17%                   |
| Ottawa*                | \$1,012                        | 29%                   |
| San Antonio            | \$1,010                        | 8%                    |
| Kansas City            | \$1,004                        | 12%                   |
| St. Louis              | \$992                          | 10%                   |
| Cleveland              | \$973                          | 11%                   |
| Indianapolis           | \$951                          | 17%                   |
| Waterloo Region*       | \$910                          | 29%                   |
| Calgary*               | \$891                          | -1%                   |
| Edmonton*              | \$859                          | 1%                    |
| Montreal*              | \$664                          | 20%                   |
| Quebec City*           | \$652                          | 15%                   |

Source: CBRE Econometric Advisors (Metro), Axiometrics, CMHC, Q4 2020.

\*in US\$

**Figure 23**  
**Tech Wage to Apartment Rent Ratio**  
**(Q4 2020)**

| Market                 | Annualized Apartment Rent (2020) | Average Annual Tech Wage (2020) | Rent-to-Tech Wage Ratio |
|------------------------|----------------------------------|---------------------------------|-------------------------|
| New York Metro         | \$31,070                         | \$118,150                       | 26.3%                   |
| Los Angeles/Orange Co. | \$26,669                         | \$110,001                       | 24.2%                   |
| San Diego              | \$24,869                         | \$109,987                       | 22.6%                   |
| South Florida          | \$20,544                         | \$92,096                        | 22.3%                   |
| Boston                 | \$25,444                         | \$114,095                       | 22.3%                   |
| SF Bay Area            | \$30,049                         | \$144,370                       | 20.8%                   |
| Toronto*               | \$13,668                         | \$66,827                        | 20.5%                   |
| Vancouver*             | \$13,489                         | \$66,485                        | 20.3%                   |
| Sacramento             | \$19,221                         | \$102,394                       | 18.8%                   |
| Ottawa*                | \$12,148                         | \$68,331                        | 17.8%                   |
| Washington, D.C.       | \$20,825                         | \$117,230                       | 17.8%                   |
| Nashville              | \$14,929                         | \$84,615                        | 17.6%                   |
| Chicago                | \$17,670                         | \$100,551                       | 17.6%                   |
| Virginia Beach         | \$15,768                         | \$90,663                        | 17.4%                   |
| Portland               | \$17,148                         | \$99,384                        | 17.3%                   |
| Tampa                  | \$15,508                         | \$90,525                        | 17.1%                   |
| Philadelphia           | \$17,497                         | \$102,478                       | 17.1%                   |
| Denver                 | \$18,217                         | \$107,481                       | 16.9%                   |
| Hartford               | \$16,960                         | \$100,431                       | 16.9%                   |
| Orlando                | \$15,033                         | \$89,180                        | 16.9%                   |
| Waterloo Region*       | \$10,922                         | \$65,540                        | 16.7%                   |
| Seattle                | \$20,923                         | \$126,730                       | 16.5%                   |
| Milwaukee              | \$14,544                         | \$89,016                        | 16.3%                   |
| Jacksonville           | \$13,710                         | \$83,998                        | 16.3%                   |
| Salt Lake City         | \$14,452                         | \$89,184                        | 16.2%                   |
| Phoenix                | \$14,995                         | \$93,655                        | 16.0%                   |
| Pittsburgh             | \$14,190                         | \$88,685                        | 16.0%                   |
| Madison                | \$14,640                         | \$92,363                        | 15.9%                   |
| Minneapolis/St. Paul   | \$16,075                         | \$102,391                       | 15.7%                   |
| Rochester              | \$13,368                         | \$85,256                        | 15.7%                   |
| Atlanta                | \$15,627                         | \$99,739                        | 15.7%                   |
| Austin                 | \$15,111                         | \$96,733                        | 15.6%                   |
| Baltimore              | \$16,688                         | \$110,306                       | 15.1%                   |
| Calgary*               | \$10,690                         | \$71,432                        | 15.0%                   |
| Edmonton*              | \$10,314                         | \$69,152                        | 14.9%                   |
| Charlotte              | \$14,397                         | \$99,959                        | 14.4%                   |
| Richmond               | \$14,184                         | \$98,673                        | 14.4%                   |
| Dallas/Ft. Worth       | \$14,521                         | \$102,403                       | 14.2%                   |
| Raleigh-Durham         | \$14,176                         | \$100,643                       | 14.1%                   |
| Detroit                | \$12,845                         | \$91,623                        | 14.0%                   |
| Kansas City            | \$12,043                         | \$86,770                        | 13.9%                   |
| Cincinnati             | \$12,391                         | \$91,596                        | 13.5%                   |
| Columbus               | \$12,338                         | \$92,684                        | 13.3%                   |
| San Antonio            | \$12,120                         | \$91,586                        | 13.2%                   |
| Indianapolis           | \$11,407                         | \$86,361                        | 13.2%                   |
| St. Louis              | \$11,905                         | \$91,900                        | 13.0%                   |
| Houston                | \$13,107                         | \$101,767                       | 12.9%                   |
| Montreal*              | \$7,970                          | \$62,795                        | 12.7%                   |
| Cleveland              | \$11,677                         | \$92,073                        | 12.7%                   |
| Quebec City*           | \$7,818                          | \$63,431                        | 12.3%                   |

Source: U.S. Bureau of Labor Statistics April 2021, Statistics Canada May 2021, CBRE Econometric Advisors, Axiometrics, CMHC Q4 2020.

\*in US\$

# Where else is tech headed?







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**The rising importance of technology in business and society has caused a global expansion of tech talent labor pools and implementation of more distributed labor strategies by tech talent employers seeking innovation potential and efficiency.**



## LATIN AMERICA'S TOP 10 MARKETS

The rising importance of technology in business and society has caused a global expansion of tech talent labor pools and implementation of more distributed labor strategies by tech talent employers seeking innovation potential and efficiency.

Latin America has long been an important source of tech talent in North America, initially focused on manufacturing and business services. During the most

recent economic growth cycle, Latin America's tech talent has increasingly focused on software development and innovation. This has attracted many multinational technology companies to the region, as well as further developed Latin America's own technology industry.

Over the past five years, Latin America's tech talent workforce has grown about twice as fast as that of the U.S. While costs have risen with

rapid growth, average wages in Latin America remain about one-third of those in the U.S. The three largest Latin American tech talent markets are Sao Paulo, Mexico City and Santiago, while the fastest growing by far is Bogota.

Real estate costs are also relatively low, making Latin America an even more attractive option for tech talent employers.

**Figure 24**  
**Latin America's Top 10 Markets**

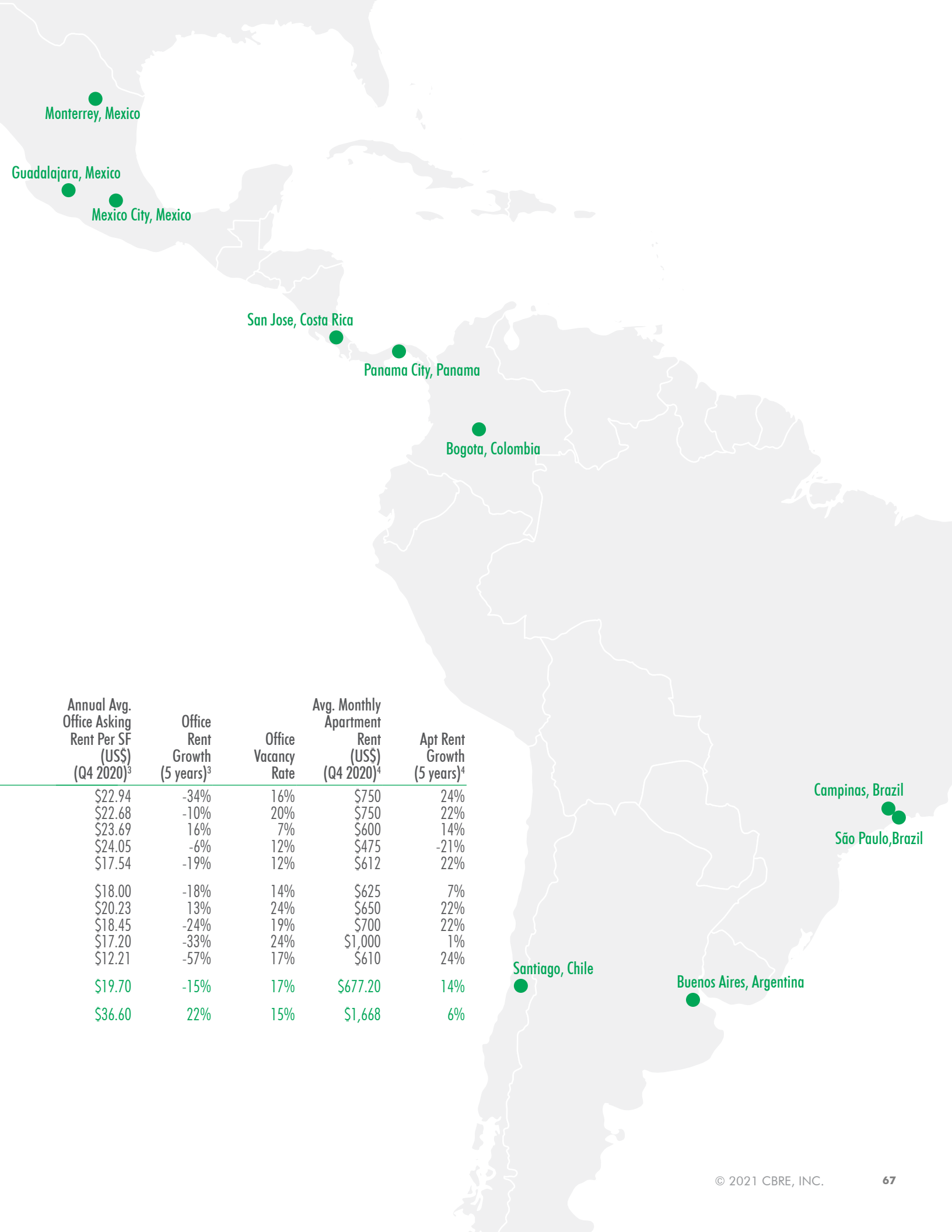
| Market                       | Total Tech Employment (2020) <sup>1</sup> | Total Tech Growth (5 years) <sup>1</sup> | Total Tech Wages (US\$) (2020) <sup>2</sup> | Total Tech Wage Growth (local currency) (5 years) <sup>2</sup> | Software Developer Wages (US\$) (2020) <sup>2</sup> | Software Developer Wage Growth (local currency) (5 years) <sup>2</sup> | Total Tech Degree Graduates (2020) | Total Tech Degree Growth (5 years) |
|------------------------------|---|--|---|--|---|--|------------------------------------|------------------------------------|
| São Paulo, Brazil            | 201,000                                   | 6%                                       | \$54,661                                    | 39%  | \$56,157  | 30%  | 12,093                             | 0                                  |
| Mexico City, Mexico          | 171,000                                   | 20%                                      | \$28,737                                    | 25%  | \$35,314  | 18%  | 19,100                             | 4%                                 |
| Santiago, Chile              | 112,806                                   | 13%                                      | \$39,818                                    | 8%   | \$45,958  | 20%  | 6,677                              | -2%                                |
| Buenos Aires, Argentina      | 86,722                                    | 20%                                      | \$18,785                                    | -39%   | \$29,888  | -34%   | 4,285                              | 8%                                 |
| Bogota, Colombia             | 88,500                                    | 174%                                     | \$16,441                                    | 16%  | \$27,605  | 5%   | 6,666                              | 84%                                |
| San Jose, Costa Rica         | 50,016                                    | 54%                                      | \$22,690                                    | 12%  | \$40,366  | 16%  | 2,670                              | 9%                                 |
| Guadalajara, Mexico          | 43,000                                    | 54%                                      | \$24,161                                    | 26%  | \$40,778  | 22%  | 4,970                              | 21%                                |
| Monterrey, Mexico            | 28,000                                    | 84%                                      | \$29,053                                    | 22%  | \$35,606  | 17%  | 2,770                              | 39%                                |
| Panama City, Panama          | 14,997                                    | 0%                                       | \$23,998                                    | 6%   | \$27,391  | 1%   | 940                                | 27%                                |
| Campinas, Brazil             | 17,500                                    | 37%                                      | \$40,893                                    | 35%  | \$50,052  | 28%  | 2,254                              | 0                                  |
| <b>10-Market Averages</b>    | <b>813,541</b>                            | <b>38%</b>                               | <b>\$33,851</b>                             | <b>17%</b>   | <b>\$41,303</b>                                     | <b>14%</b>   | <b>62,425</b>                      | <b>18%</b>                         |
| <b>U.S. Overall Averages</b> | <b>5,408,660</b>                          | <b>13%</b>                               | <b>\$102,423</b>                            | <b>13%</b>   | <b>\$109,763</b>                                    | <b>12%</b>   | <b>251,582</b>                     | <b>51%</b>                         |

(1) Jobs related to the development, operation, monitoring and support of the digitized information transmission processes.

(2) Based on 2020 annual average exchange rates.

(3) Submarkets where tech firms are predominantly located.

(4) Submarkets where tech employees predominantly live.



| Annual Avg. Office Asking Rent Per SF (US\$) (Q4 2020) <sup>3</sup> | Office Rent Growth (5 years) <sup>3</sup> | Office Vacancy Rate | Avg. Monthly Apartment Rent (US\$) (Q4 2020) <sup>4</sup> | Apt Rent Growth (5 years) <sup>4</sup> |
|---|---|---------------------|---|--|
| \$22.94   | -34%                                      | 16%                 | \$750   | 24%                                    |
| \$22.68   | -10%                                      | 20%                 | \$750   | 22%                                    |
| \$23.69   | 16%                                       | 7%                  | \$600   | 14%                                    |
| \$24.05   | -6%                                       | 12%                 | \$475   | -21%                                   |
| \$17.54   | -19%                                      | 12%                 | \$612   | 22%                                    |
| \$18.00   | -18%                                      | 14%                 | \$625   | 7%                                     |
| \$20.23   | 13%                                       | 24%                 | \$650   | 22%                                    |
| \$18.45   | -24%                                      | 19%                 | \$700   | 22%                                    |
| \$17.20   | -33%                                      | 24%                 | \$1,000   | 1%                                     |
| \$12.21   | -57%                                      | 17%                 | \$610   | 24%                                    |
| \$19.70   | -15%                                      | 17%                 | \$677.20  | 14%                                    |
| \$36.60   | 22%                                       | 15%                 | \$1,668   | 6%                                     |

## NORTH AMERICA'S NEXT 25

Fostering talent development in lesser-known and underdeveloped U.S. and Canadian markets could offer additional talent pools to employers seeking to expand their geographical reach and uncover opportunities. These 25 smaller markets represent potential and in the U.S. are concentrated in the Midwest and South. They have been separately ranked from the top 50 markets according to their relative strength.

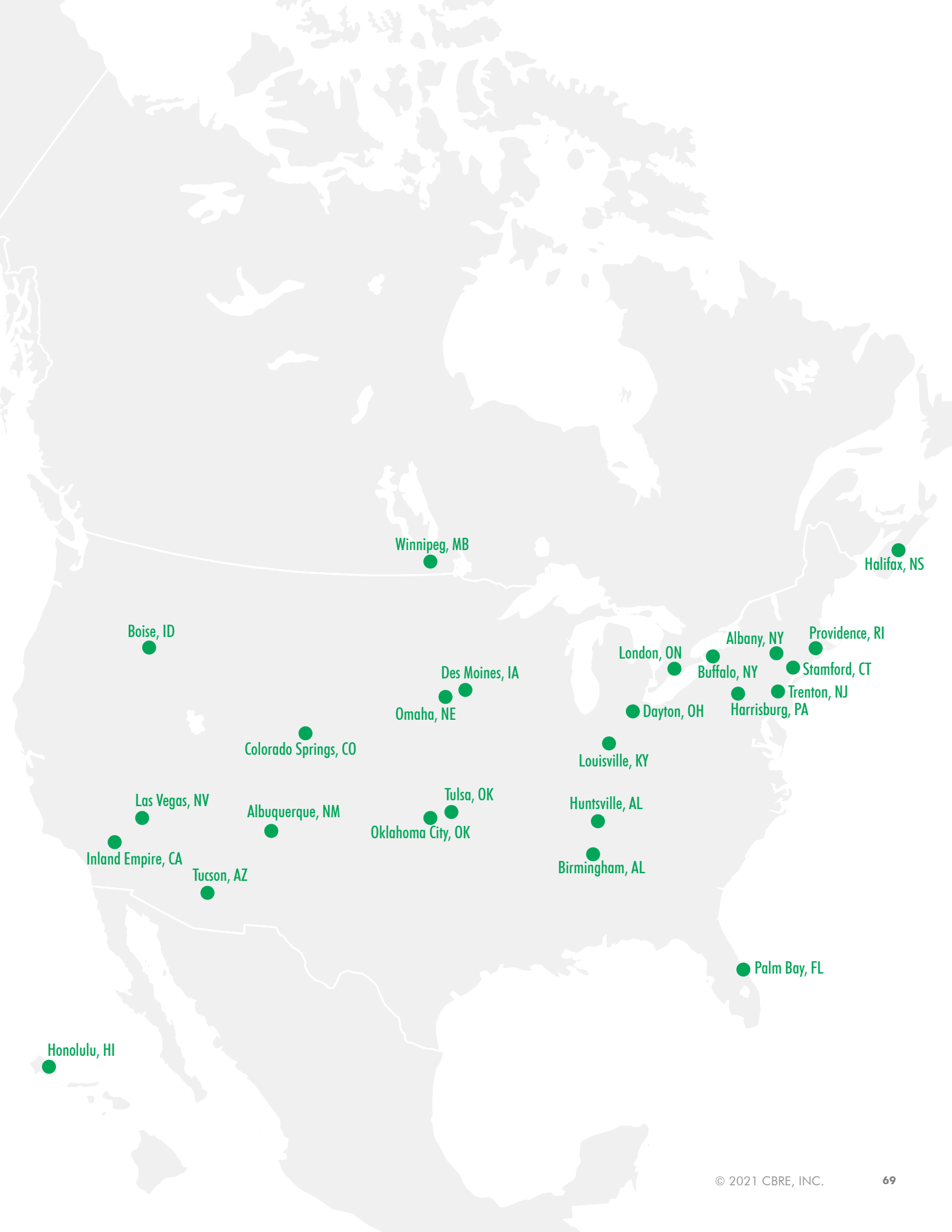
**Figure 25**  
**The Next 25 Markets**

| Market              | Total Tech Employment (2020) | Total Tech Growth (5 years) | Total Tech Wages (2020) | Total Tech Wage Growth (5 years) | Software Developer Wages (2020) | Software Developer Wage Growth (5 years) | Tech Talent Degree Graduates (2019) |
|---------------------|------------------------------|-----------------------------|-------------------------|----------------------------------|---------------------------------|--|-------------------------------------|
| 1. Dayton           | 18,930                       | 31%                         | \$90,125                | 11%                              | \$92,548                        | 19.2%                                    | 1,655                               |
| 2. Huntsville       | 20,540                       | 9%                          | \$101,129               | 7%                               | \$108,089                       | 5.3%                                     | 819                                 |
| 3. Colorado Springs | 19,380                       | 21%                         | \$102,630               | 11%                              | \$107,859                       | 4.4%                                     | 1,449                               |
| 4. Omaha            | 22,600                       | 17%                         | \$88,613                | 13%                              | \$92,255                        | 13.3%                                    | 876                                 |
| 5. Des Moines       | 18,320                       | 43%                         | \$90,630                | 12%                              | \$92,321                        | 9.3%                                     | 2,243                               |
| 6. Albany           | 18,840                       | 3%                          | \$89,321                | 11%                              | \$90,886                        | 12.7%                                    | 1,914                               |
| 7. Halifax          | 14,700                       | 24%                         | \$55,241                | 9%                               | \$59,643                        | 15.6%                                    | 834                                 |
| 8. Providence       | 17,160                       | -3%                         | \$100,137               | 15%                              | \$104,860                       | 14.8%                                    | 1,924                               |
| 9. Tucson           | 15,850                       | 47%                         | \$85,786                | 13%                              | \$96,868                        | 20.5%                                    | 1,238                               |
| 10. London, Ontario | 13,500                       | 67%                         | \$52,767                | 13%                              | \$51,851                        | 19.2%                                    | 761                                 |
| 11. Trenton         | 12,850                       | -5%                         | \$104,718               | 8%                               | \$104,180                       | 3.1%                                     | 693                                 |
| 12. Inland Empire   | 22,910                       | 37%                         | \$91,585                | 18%                              | \$96,085                        | 5.3%                                     | 1,476                               |
| 13. Louisville      | 19,290                       | 31%                         | \$83,934                | 16%                              | \$90,113                        | 22.2%                                    | 641                                 |
| 14. Stamford        | 14,590                       | -4%                         | \$116,918               | 18%                              | \$115,390                       | 17.8%                                    | 496                                 |
| 15. Tulsa           | 12,460                       | 19%                         | \$82,815                | 13%                              | \$86,092                        | 9.7%                                     | 304                                 |
| 16. Las Vegas       | 18,430                       | 29%                         | \$81,821                | 2%                               | \$89,151                        | 9.1%                                     | 365                                 |
| 17. Buffalo         | 13,990                       | 3%                          | \$83,990                | 19%                              | \$85,528                        | 9.9%                                     | 1,867                               |
| 18. Harrisburg      | 12,960                       | 1%                          | \$87,266                | 15%                              | \$85,111                        | 10.8%                                    | 866                                 |
| 19. Palm Bay, FL    | 13,170                       | 11%                         | \$97,633                | 14%                              | \$107,925                       | 15.5%                                    | 477                                 |
| 20. Boise           | 12,680                       | 41%                         | \$80,476                | 10%                              | \$89,977                        | 31.3%                                    | 690                                 |
| 21. Winnipeg        | 18,800                       | 37%                         | \$58,682                | 6%                               | \$57,731                        | 12.8%                                    | 538                                 |
| 22. Honolulu        | 12,050                       | 18%                         | \$87,783                | 13%                              | \$95,708                        | 29.4%                                    | 471                                 |
| 23. Albuquerque     | 12,500                       | -7%                         | \$88,012                | 10%                              | \$92,424                        | -0.2%                                    | 503                                 |
| 24. Oklahoma City   | 19,410                       | 3%                          | \$83,054                | 17%                              | \$85,405                        | 12.9%                                    | 1,166                               |
| 25. Birmingham      | 15,550                       | 1%                          | \$90,249                | 13%                              | \$93,238                        | 13.1%                                    | 527                                 |

Source: U.S. Bureau of Labor Statistics, Statistics Canada, CBRE Research, 2021.

\* Wages in US\$

Note: Markets were separately ranked according to their relative strength based on eight of the 13 metrics used for the top 50.



Winnipeg, MB

Halifax, NS

Boise, ID

Providence, RI

London, ON

Albany, NY

Buffalo, NY

Stamford, CT

Des Moines, IA

Omaha, NE

Dayton, OH

Harrisburg, PA

Colorado Springs, CO

Louisville, KY

Las Vegas, NV

Albuquerque, NM

Tulsa, OK

Huntsville, AL

Inland Empire, CA

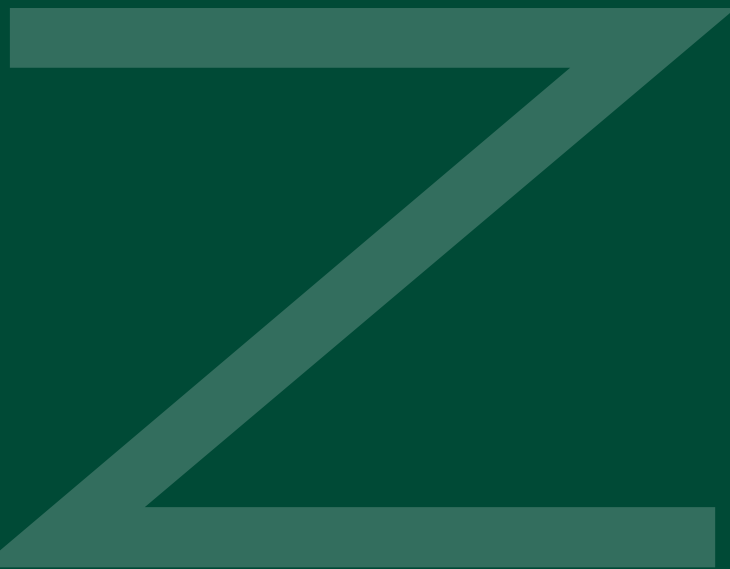
Oklahoma City, OK

Birmingham, AL

Tucson, AZ

Palm Bay, FL

Honolulu, HI



|  |            |
|--|------------|
| <b>Appendix A: Local Market Profiles</b>                             | <b>A1</b>  |
| <b>Appendix B: Full Report Data Summary</b>                          | <b>B1</b>  |
| <b>What is tech talent?</b>  | <b>B3</b>  |
| <b>Which are the top-ranked tech-talent markets?</b>                 | <b>B4</b>  |
| <b>How to find tech-talent momentum markets?</b>                     | <b>B5</b>  |
| <b>What defines a tech talent market?</b>                            | <b>B8</b>  |
| <b>Tech talent has unique concentrations across markets</b>          | <b>B16</b> |
| <b>How does tech talent impact commercial real estate?</b>           | <b>B21</b> |
| <b>Which are the highest- and lowest-cost markets to operate in?</b> | <b>B23</b> |

# 1 SF Bay Area

SCORE  
86.40

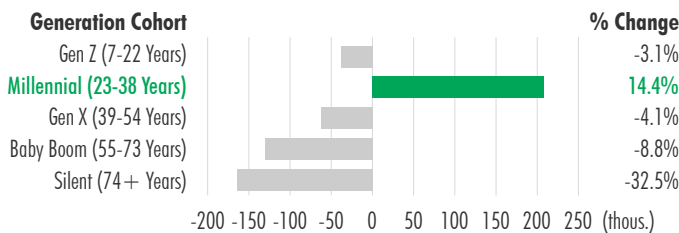
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>373,430</b> | <b>16.4%</b>   | <b>\$144,370</b> | <b>16.6%</b>   |
| Software Developers & Programmers       | 166,020        | 14.6%          | \$147,747        | 13.9%          |
| Computer Support, Database & Systems    | 130,600        | 27.6%          | \$120,342        | 15.8%          |
| Computer & Information Systems Managers | 40,360         | 62.0%          | \$221,720        | 20.9%          |
| Technology Engineering-Related          | 36,450         | -24.9%         | \$129,434        | 10.3%          |
| <b>Total Non-Tech Occupations</b>       | <b>407,650</b> | <b>0.4%</b>    | <b>\$77,695</b>  | <b>15.6%</b>   |
| Sales                                   | 63,540         | 11.0%          | \$112,113        | 17.4%          |
| Administrative & Office Support         | 202,710        | -11.0%         | \$50,751         | 13.7%          |
| Business Operations & Finance           | 92,570         | 17.1%          | \$102,187        | 5.0%           |
| Marketing                               | 48,830         | 15.8%          | \$98,333         | 4.4%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

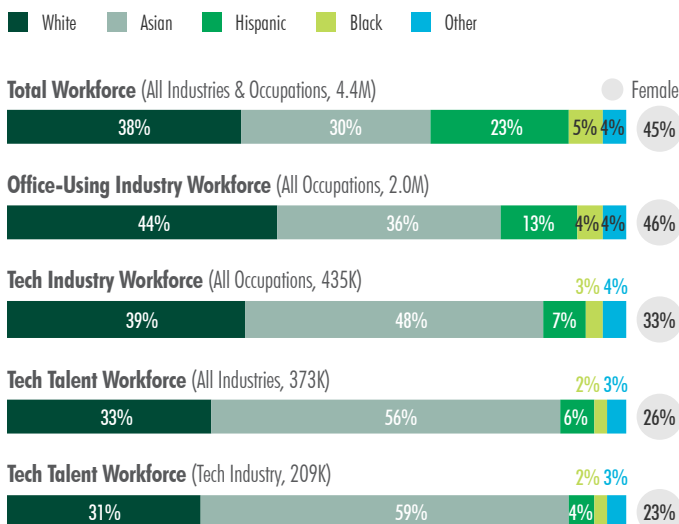
## POPULATION TRENDS

The population of millennials grew by 211,414 (14.4%) since 2014.



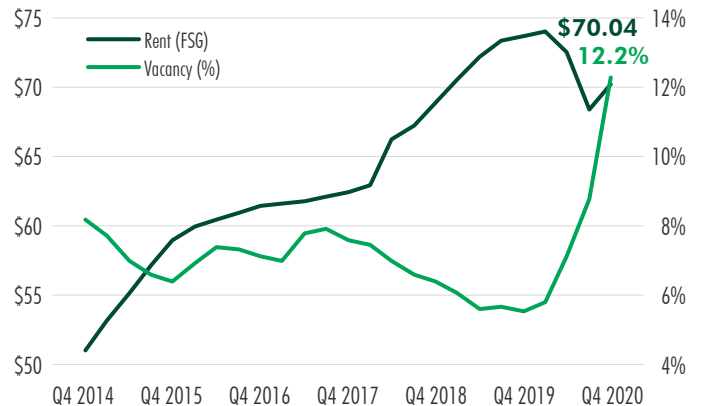
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$2,504**  
PER UNIT/MO.

**-7.9%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#1** RANK | **\$63M** TALENT + **\$5M** OFFICE RENT = **\$68.6M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 7,195         | 89%            | 71%        | 29%        |
| Math/Statistics           | 1,642         | 35%            | 66%        | 34%        |
| Other Tech Engineering    | 2,128         | 32%            | 74%        | 26%        |
| <b>Totals</b>             | <b>10,965</b> | <b>65%</b>     | <b>71%</b> | <b>29%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 7,195         | 30%        | 50%        | 12%        | 2%        | 6%        |
| Math/Statistics           | 1,642         | 37%        | 38%        | 17%        | 1%        | 7%        |
| Other Tech Engineering    | 2,128         | 40%        | 31%        | 18%        | 2%        | 9%        |
| <b>Totals</b>             | <b>10,965</b> | <b>33%</b> | <b>44%</b> | <b>14%</b> | <b>2%</b> | <b>7%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 2 Seattle

SCORE  
73.16

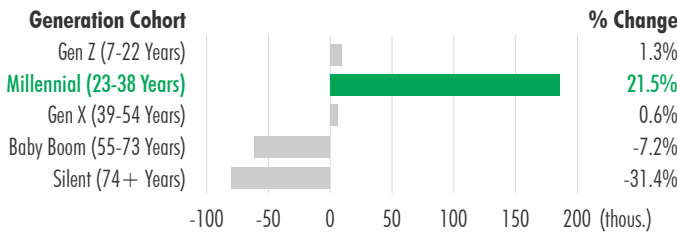
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>184,660</b> | <b>35.4%</b>   | <b>\$126,730</b> | <b>15.3%</b>   |
| Software Developers & Programmers       | 114,800        | 56.3%          | \$134,430        | 12.2%          |
| Computer Support, Database & Systems    | 47,770         | 7.8%           | \$100,410        | 14.6%          |
| Computer & Information Systems Managers | 10,560         | 26.9%          | \$171,230        | 12.9%          |
| Technology Engineering-Related          | 11,530         | 12.2%          | \$118,356        | 16.4%          |
| <b>Total Non-Tech Occupations</b>       | <b>235,720</b> | <b>14.0%</b>   | <b>\$65,841</b>  | <b>27.8%</b>   |
| Sales                                   | 23,350         | 26.5%          | \$87,088         | 27.9%          |
| Administrative & Office Support         | 130,460        | -1.5%          | \$46,878         | 21.1%          |
| Business Operations & Finance           | 49,330         | 35.0%          | \$87,165         | 14.0%          |
| Marketing                               | 32,580         | 68.3%          | \$94,262         | 23.5%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

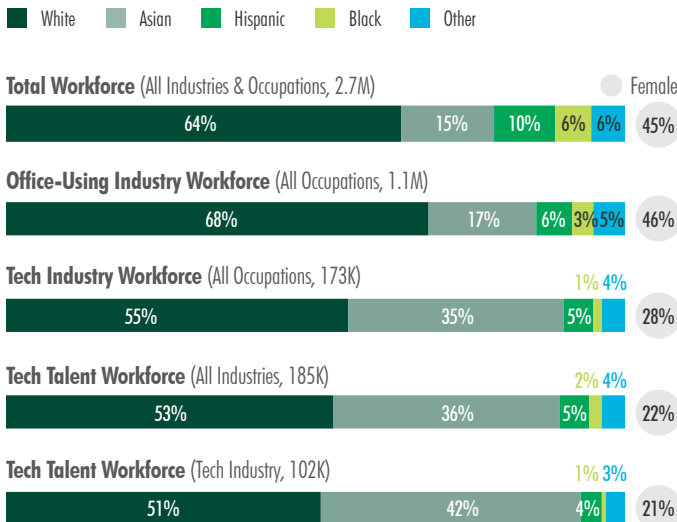
## POPULATION TRENDS

The population of millennials grew by 184,646 (21.5%) since 2014.



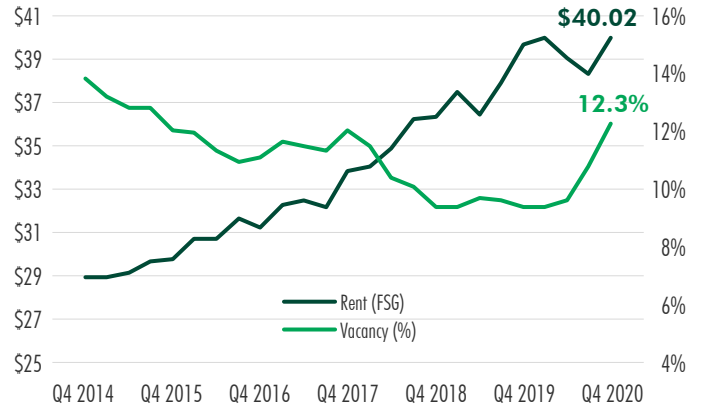
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,744** PER UNIT/MO. **13.2%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#3** RANK | **\$53M** TALENT + **\$3M** OFFICE RENT = **\$56.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 3,365         | 110%           | 70%        | 30%        |
| Math/Statistics           | 668           | 28%            | 63%        | 37%        |
| Other Tech Engineering    | 814           | 44%            | 74%        | 26%        |
| <b>Totals</b>             | <b>4,847</b>  | <b>80%</b>     | <b>69%</b> | <b>31%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 3,365         | 47%        | 33%        | 6%        | 5%        | 8%        |
| Math/Statistics           | 668           | 62%        | 26%        | 6%        | 1%        | 5%        |
| Other Tech Engineering    | 814           | 61%        | 21%        | 8%        | 2%        | 9%        |
| <b>Totals</b>             | <b>4,847</b>  | <b>51%</b> | <b>30%</b> | <b>6%</b> | <b>4%</b> | <b>8%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 3 Washington, D.C.

SCORE  
65.60

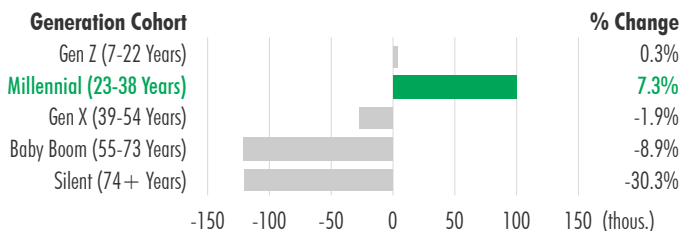
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>265,370</b> | <b>10.0%</b>   | <b>\$117,230</b> | <b>10.5%</b>   |
| Software Developers & Programmers       | 91,690         | 20.9%          | \$116,402        | 6.1%           |
| Computer Support, Database & Systems    | 138,270        | 4.8%           | \$109,307        | 12.5%          |
| Computer & Information Systems Managers | 19,130         | 11.4%          | \$177,840        | 10.7%          |
| Technology Engineering-Related          | 16,280         | -0.2%          | \$117,966        | 14.0%          |
| <b>Total Non-Tech Occupations</b>       | <b>404,060</b> | <b>4.3%</b>    | <b>\$69,948</b>  | <b>15.7%</b>   |
| Sales                                   | 41,910         | 20.8%          | \$94,450         | 12.2%          |
| Administrative & Office Support         | 204,370        | -5.5%          | \$46,028         | 14.5%          |
| Business Operations & Finance           | 104,030        | 11.9%          | \$96,113         | 8.9%           |
| Marketing                               | 53,750         | 23.8%          | \$91,151         | 9.6%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

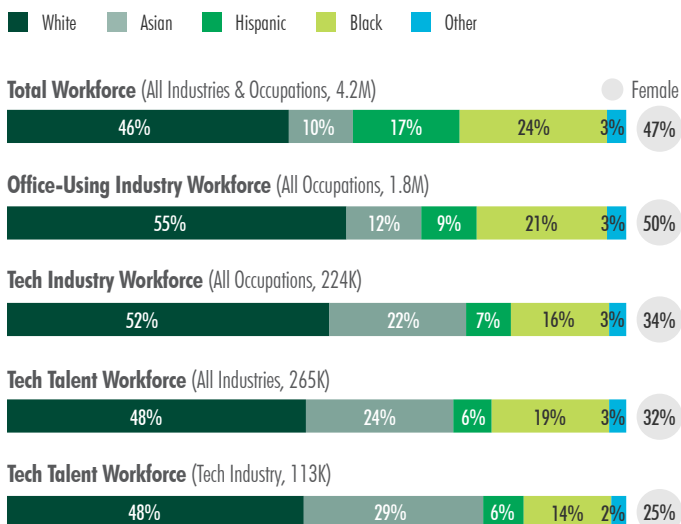
## POPULATION TRENDS

The population of millennials grew by 99,663 (7.3%) since 2014.



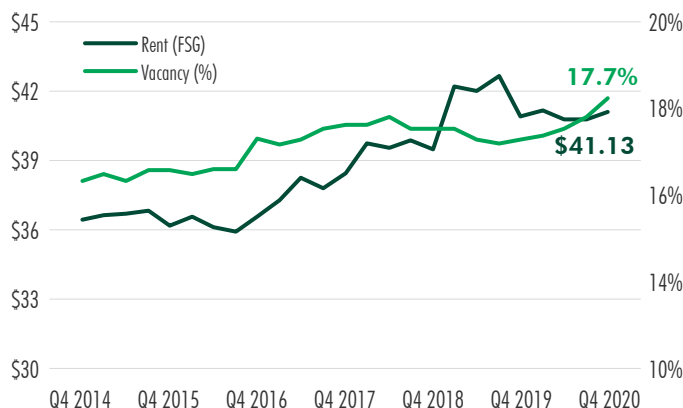
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,735** PER UNIT/MO. **2.9%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#4** RANK | **\$53M** TALENT + **\$3M** OFFICE RENT = **\$55.8M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 10,126        | 50%            | 74%        | 26%        |
| Math/Statistics           | 985           | 37%            | 56%        | 44%        |
| Other Tech Engineering    | 1,512         | 6%             | 81%        | 19%        |
| <b>Totals</b>             | <b>12,623</b> | <b>42%</b>     | <b>74%</b> | <b>26%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 10,126        | 46%        | 16%        | 9%        | 24%        | 5%        |
| Math/Statistics           | 985           | 57%        | 23%        | 7%        | 9%         | 4%        |
| Other Tech Engineering    | 1,512         | 63%        | 16%        | 8%        | 9%         | 4%        |
| <b>Totals</b>             | <b>12,623</b> | <b>48%</b> | <b>17%</b> | <b>9%</b> | <b>22%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 4 Toronto

SCORE  
64.78

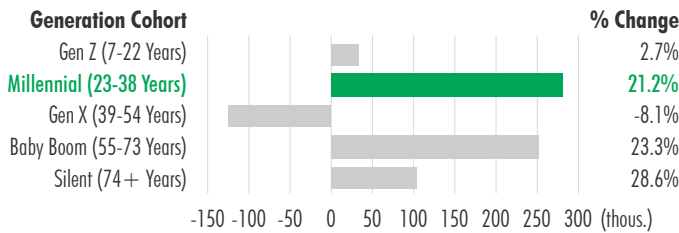
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>270,400</b> | <b>42.8%</b>   | <b>\$89,648</b> | <b>12.6%</b>   |
| Software Developers & Programmers       | 75,900         | 31.3%          | \$89,690        | 13.8%          |
| Computer Support, Database & Systems    | 114,900        | 74.4%          | \$84,219        | 8.5%           |
| Computer & Information Systems Managers | 32,000         | 77.8%          | \$114,816       | 11.0%          |
| Technology Engineering-Related          | 47,500         | -0.2%          | \$85,717        | 15.5%          |
| <b>Total Non-Tech Occupations</b>       | <b>380,000</b> | <b>10.9%</b>   | <b>\$64,705</b> | <b>9.7%</b>    |
| Sales                                   | 27,900         | 3.3%           | \$59,322        | -4.8%          |
| Administrative & Office Support         | 170,600        | 5.0%           | \$50,440        | 16.8%          |
| Business Operations & Finance           | 124,900        | 21.9%          | \$83,054        | 7.5%           |
| Marketing                               | 56,600         | 11.4%          | \$69,867        | -1.2%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in C\$

## POPULATION TRENDS

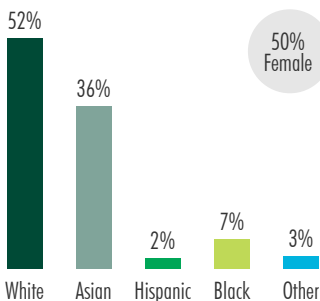
The population of millennials grew by 277,938 (21.2%) since 2014.



Source: Statistics Canada, April 2021.

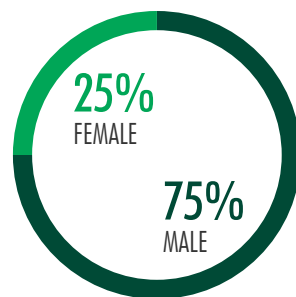
## WORKFORCE DIVERSITY

**Total Workforce by Race/Ethnicity**  
(All Industries & Occupations)



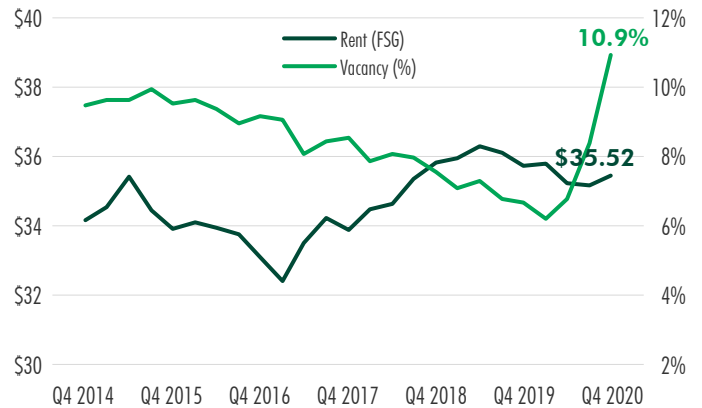
Source: Statistics Canada Census, 2016.

**Tech Talent by Sex**



Source: Statistics Canada, April 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in C\$

## AVERAGE APARTMENT RENT

**\$1,139\***  
PER UNIT/MO.

**27.1%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,528 in C\$)

## AVERAGE ANNUAL OPERATING COSTS

**#46** RANK | **\$31M** TALENT + **\$2M** OFFICE RENT = **\$32.8M** TOTAL

Source: Statistics Canada (Metro Area), CBRE Research, 2021.  
US\$

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 1,896         | 84%            |
| Math/Statistics           | 1,311         | 120%           |
| Other Tech Engineering    | 3,010         | 29%            |
| <b>Totals</b>             | <b>6,217</b>  | <b>57%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 5 New York Metro

SCORE  
63.44

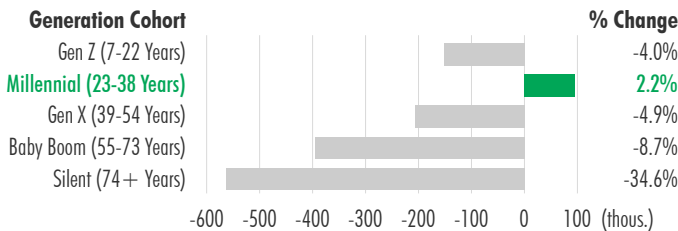
## EMPLOYMENT BREAKDOWN

|   | Employed 2020    | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|------------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>348,330</b>   | <b>6.7%</b>    | <b>\$118,150</b> | <b>13.3%</b>   |
| Software Developers & Programmers       | 136,120          | 9.1%           | \$117,902        | 12.3%          |
| Computer Support, Database & Systems    | 157,230          | 7.5%           | \$100,258        | 10.9%          |
| Computer & Information Systems Managers | 37,080           | 16.1%          | \$201,320        | 16.2%          |
| Technology Engineering-Related          | 17,900           | -23.4%         | \$104,922        | 13.0%          |
| <b>Total Non-Tech Occupations</b>       | <b>1,211,660</b> | <b>-4.3%</b>   | <b>\$65,440</b>  | <b>18.8%</b>   |
| Sales                                   | 107,570          | -1.3%          | \$92,247         | 9.8%           |
| Administrative & Office Support         | 719,620          | -13.3%         | \$43,521         | 13.5%          |
| Business Operations & Finance           | 262,710          | 16.1%          | \$105,625        | 12.6%          |
| Marketing                               | 121,760          | 20.7%          | \$84,601         | 13.4%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

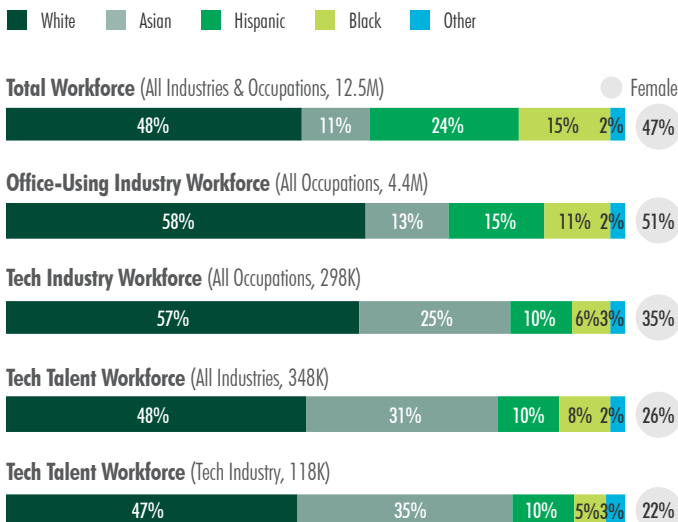
## POPULATION TRENDS

The population of millennials grew by 96,136 (2.2%) since 2014.



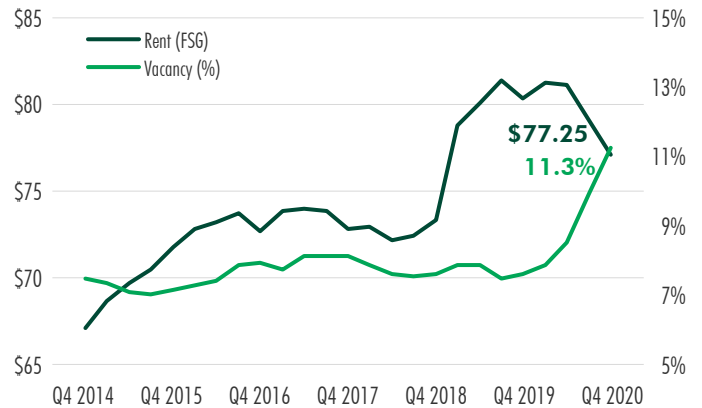
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Manhattan only), Q4 2020.

## AVERAGE APARTMENT RENT

**\$2,589**  
PER UNIT/MO.

**-3.7%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#2** RANK

**\$53M** TALENT + **\$6M** OFFICE RENT = **\$59.2M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 13,616        | 96%            | 71%        | 29%        |
| Math/Statistics           | 3,776         | 44%            | 58%        | 42%        |
| Other Tech Engineering    | 3,184         | 24%            | 77%        | 23%        |
| <b>Totals</b>             | <b>20,576</b> | <b>69%</b>     | <b>70%</b> | <b>30%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 13,616        | 35%        | 35%        | 17%        | 11%       | 3%        |
| Math/Statistics           | 3,776         | 48%        | 28%        | 15%        | 7%        | 2%        |
| Other Tech Engineering    | 3,184         | 55%        | 24%        | 13%        | 5%        | 3%        |
| <b>Totals</b>             | <b>20,576</b> | <b>41%</b> | <b>32%</b> | <b>16%</b> | <b>9%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 6 Boston

SCORE  
62.60

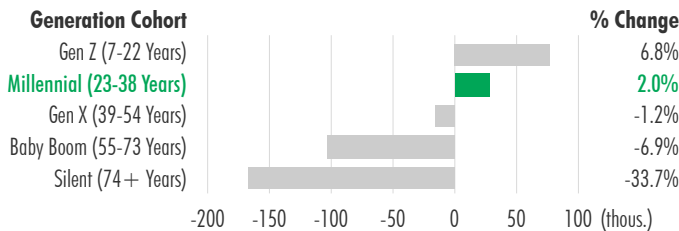
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>168,090</b> | <b>7.2%</b>    | <b>\$114,095</b> | <b>11.5%</b>   |
| Software Developers & Programmers       | 68,590         | 5.9%           | \$116,838        | 7.7%           |
| Computer Support, Database & Systems    | 63,530         | 15.3%          | \$95,781         | 11.5%          |
| Computer & Information Systems Managers | 19,320         | 36.3%          | \$167,500        | 13.1%          |
| Technology Engineering-Related          | 16,650         | -26.6%         | \$110,704        | 15.2%          |
| <b>Total Non-Tech Occupations</b>       | <b>321,710</b> | <b>11.8%</b>   | <b>\$65,451</b>  | <b>18.2%</b>   |
| Sales                                   | 37,660         | 0.8%           | \$94,641         | -6.3%          |
| Administrative & Office Support         | 180,320        | -5.0%          | \$47,288         | 14.4%          |
| Business Operations & Finance           | 73,610         | 13.2%          | \$90,878         | 6.1%           |
| Marketing                               | 30,120         | 10.8%          | \$75,549         | 5.4%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

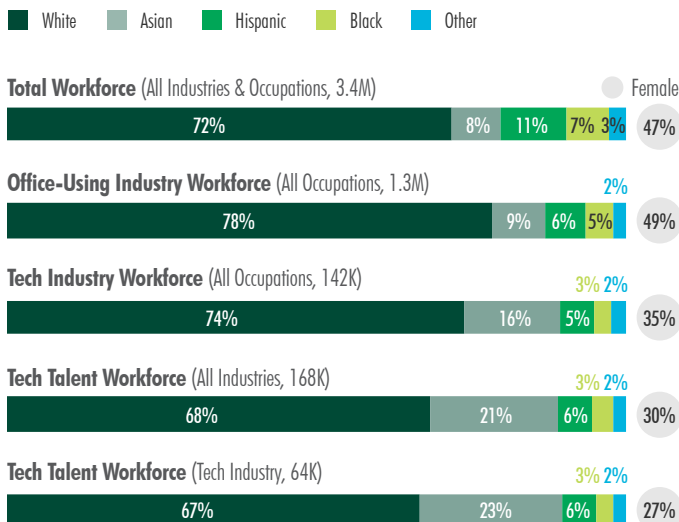
## POPULATION TRENDS

The population of millennials grew by 28,538 (2.0%) since 2014.



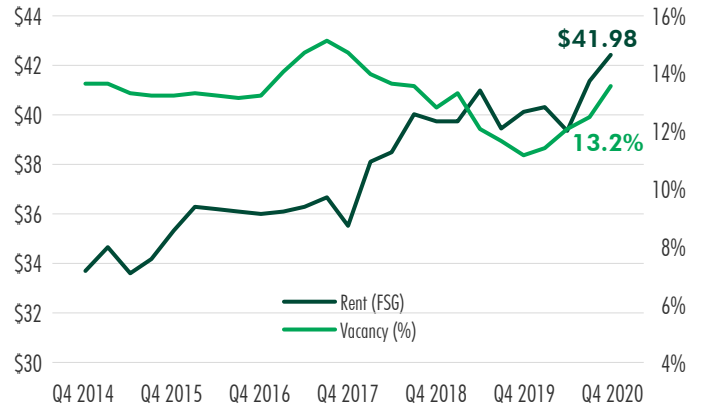
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$2,120** PER UNIT/MO. **5.7%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#5** RANK | **\$50M** TALENT + **\$3M** OFFICE RENT = **\$53.6M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 7,173         | 92%            | 72%        | 28%        |
| Math/Statistics           | 1,852         | 98%            | 57%        | 43%        |
| Other Tech Engineering    | 3,158         | 51%            | 72%        | 28%        |
| <b>Totals</b>             | <b>12,183</b> | <b>80%</b>     | <b>70%</b> | <b>30%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 7,173         | 55%        | 26%        | 9%        | 5%        | 4%        |
| Math/Statistics           | 1,852         | 60%        | 25%        | 9%        | 2%        | 4%        |
| Other Tech Engineering    | 3,158         | 66%        | 15%        | 10%       | 4%        | 6%        |
| <b>Totals</b>             | <b>12,183</b> | <b>59%</b> | <b>23%</b> | <b>9%</b> | <b>4%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 7 Austin

SCORE  
58.87

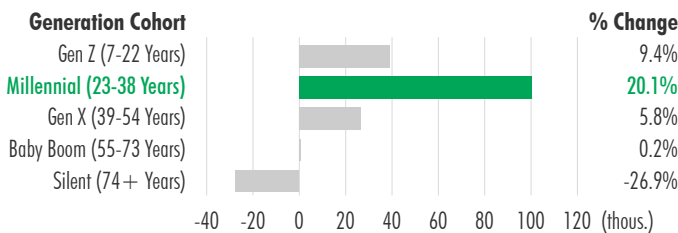
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>79,230</b>  | <b>10.0%</b>   | <b>\$96,733</b> | <b>7.8%</b>    |
| Software Developers & Programmers       | 30,670         | 23.2%          | \$105,404       | 11.0%          |
| Computer Support, Database & Systems    | 38,470         | 15.6%          | \$83,655        | 8.2%           |
| Computer & Information Systems Managers | 3,330          | 7.8%           | \$155,420       | 0.7%           |
| Technology Engineering-Related          | 6,760          | -37.2%         | \$102,905       | 5.8%           |
| <b>Total Non-Tech Occupations</b>       | <b>154,070</b> | <b>4.8%</b>    | <b>\$51,239</b> | <b>7.1%</b>    |
| Sales                                   | 18,610         | -4.9%          | \$71,678        | 1.8%           |
| Administrative & Office Support         | 98,100         | 6.4%           | \$38,726        | 13.3%          |
| Business Operations & Finance           | 25,070         | 3.2%           | \$75,764        | 6.3%           |
| Marketing                               | 12,290         | 12.0%          | \$70,139        | -0.2%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

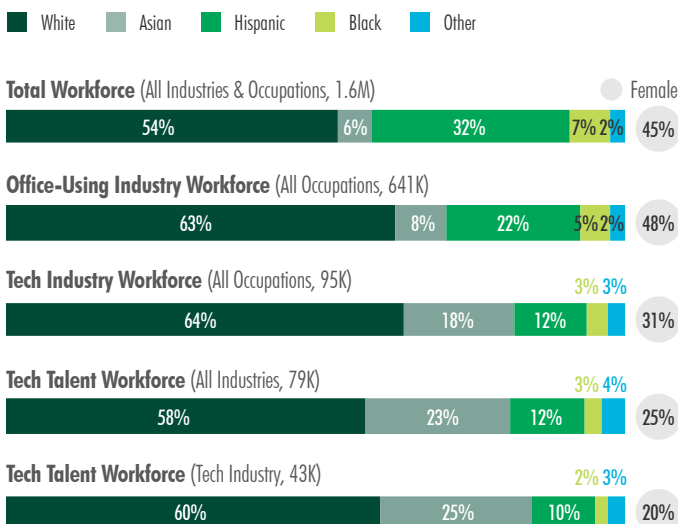
## POPULATION TRENDS

The population of millennials grew by 100,952 (20.1%) since 2014.



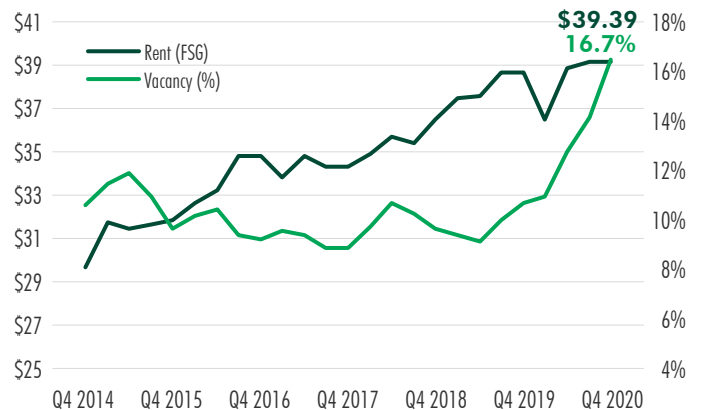
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,259** PER UNIT/MO. **5.1%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#22** RANK | **\$42M** TALENT + **\$3M** OFFICE RENT = **\$45.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,691         | 50%            | 76%        | 24%        |
| Math/Statistics           | 491           | 23%            | 66%        | 34%        |
| Other Tech Engineering    | 659           | 19%            | 79%        | 21%        |
| <b>Totals</b>             | <b>2,841</b>  | <b>37%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 1,691         | 43%        | 28%        | 20%        | 6%        | 4%        |
| Math/Statistics           | 491           | 49%        | 22%        | 21%        | 4%        | 4%        |
| Other Tech Engineering    | 659           | 53%        | 23%        | 16%        | 4%        | 4%        |
| <b>Totals</b>             | <b>2,841</b>  | <b>46%</b> | <b>26%</b> | <b>19%</b> | <b>5%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 8 Atlanta

SCORE  
57.78

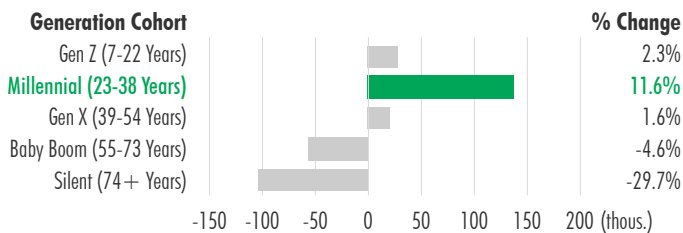
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>143,780</b> | <b>15.2%</b>   | <b>\$99,739</b> | <b>13.7%</b>   |
| Software Developers & Programmers       | 49,900         | 17.7%          | \$103,217       | 11.1%          |
| Computer Support, Database & Systems    | 71,350         | 15.3%          | \$88,786        | 14.3%          |
| Computer & Information Systems Managers | 12,560         | 28.8%          | \$152,060       | 11.8%          |
| Technology Engineering-Related          | 9,970          | -7.9%          | \$94,802        | 16.7%          |
| <b>Total Non-Tech Occupations</b>       | <b>338,720</b> | <b>0.7%</b>    | <b>\$52,561</b> | <b>11.7%</b>   |
| Sales                                   | 40,380         | 11.4%          | \$76,007        | 7.7%           |
| Administrative & Office Support         | 209,220        | -4.4%          | \$37,962        | 9.0%           |
| Business Operations & Finance           | 63,740         | 9.4%           | \$80,099        | 9.8%           |
| Marketing                               | 25,380         | 9.8%           | \$66,439        | 9.6%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

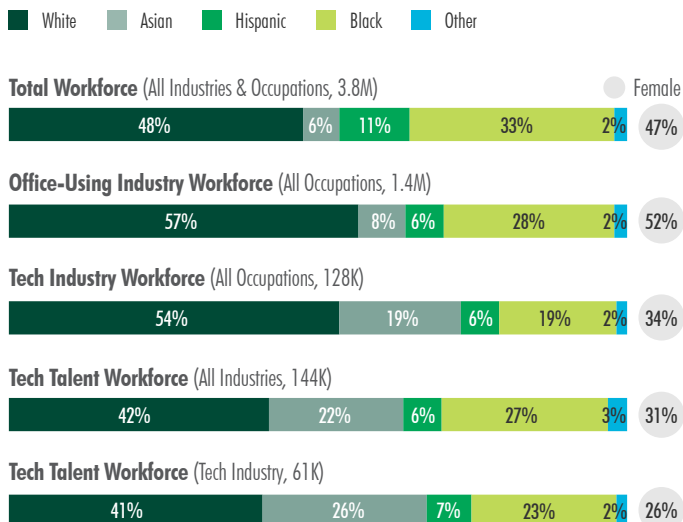
## POPULATION TRENDS

The population of millennials grew by 140,948 (11.6%) since 2014.



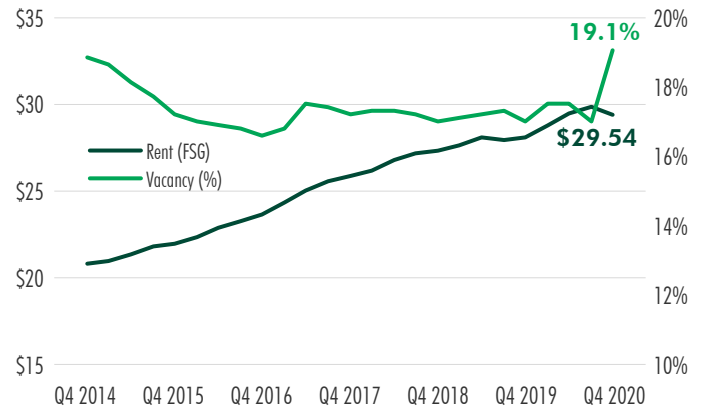
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,302** PER UNIT/MO.  
**19.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#18** RANK  
**\$43M** TALENT  
**\$2M** OFFICE RENT  
**\$45.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 5,384         | 136%           | 77%        | 23%        |
| Math/Statistics           | 725           | 51%            | 57%        | 43%        |
| Other Tech Engineering    | 2,252         | 38%            | 77%        | 23%        |
| <b>Totals</b>             | <b>8,361</b>  | <b>90%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 5,384         | 46%        | 25%        | 7%        | 18%        | 4%        |
| Math/Statistics           | 725           | 56%        | 17%        | 7%        | 16%        | 4%        |
| Other Tech Engineering    | 2,252         | 62%        | 18%        | 9%        | 7%         | 4%        |
| <b>Totals</b>             | <b>8,361</b>  | <b>51%</b> | <b>22%</b> | <b>8%</b> | <b>15%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 9 Los Angeles/Orange Co.

SCORE  
57.62

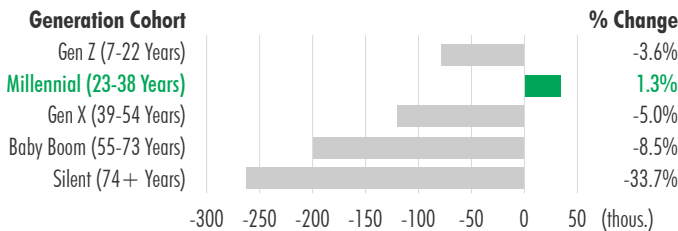
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>228,720</b> | <b>18.6%</b>   | <b>\$110,001</b> | <b>13.6%</b>   |
| Software Developers & Programmers       | 80,440         | 23.3%          | \$113,528        | 9.5%           |
| Computer Support, Database & Systems    | 97,100         | 16.9%          | \$90,565         | 11.0%          |
| Computer & Information Systems Managers | 22,790         | 60.8%          | \$184,170        | 24.8%          |
| Technology Engineering-Related          | 28,390         | -6.6%          | \$106,948        | 6.9%           |
| <b>Total Non-Tech Occupations</b>       | <b>706,490</b> | <b>-4.6%</b>   | <b>\$56,675</b>  | <b>13.6%</b>   |
| Sales                                   | 66,260         | -16.1%         | \$76,622         | 5.8%           |
| Administrative & Office Support         | 450,400        | -8.7%          | \$44,035         | 17.0%          |
| Business Operations & Finance           | 129,520        | 14.0%          | \$83,517         | 7.1%           |
| Marketing                               | 60,310         | 10.7%          | \$71,512         | 3.2%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

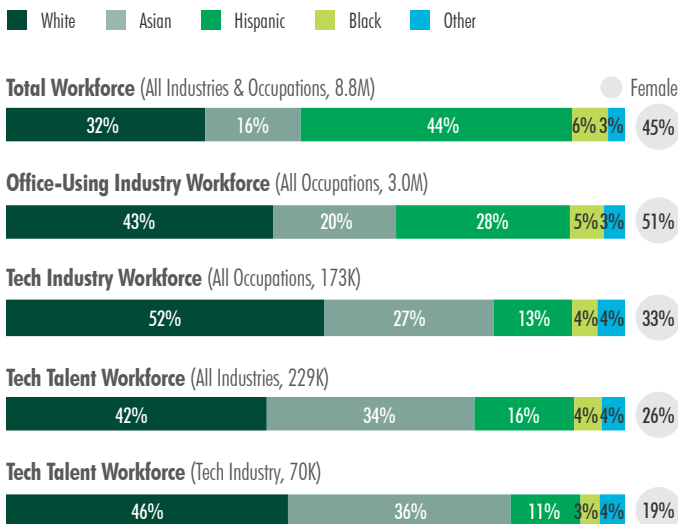
## POPULATION TRENDS

The population of millennials grew by 33,452 (1.3%) since 2014.



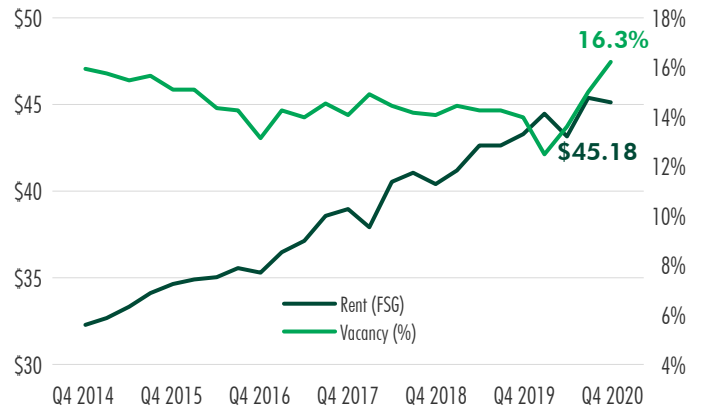
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Los Angeles only), Q4 2020.

## AVERAGE APARTMENT RENT

**\$2,222**  
PER UNIT/MO.

**7.6%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#6** RANK | **\$49M** TALENT + **\$3M** OFFICE RENT = **\$52.1M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 8,264         | 74%            | 77%        | 23%        |
| Math/Statistics           | 2,292         | 51%            | 56%        | 44%        |
| Other Tech Engineering    | 3,367         | 29%            | 79%        | 21%        |
| <b>Totals</b>             | <b>13,923</b> | <b>57%</b>     | <b>74%</b> | <b>26%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 8,264         | 26%        | 42%        | 24%        | 3%        | 5%        |
| Math/Statistics           | 2,292         | 34%        | 33%        | 26%        | 2%        | 5%        |
| Other Tech Engineering    | 3,367         | 36%        | 26%        | 30%        | 2%        | 5%        |
| <b>Totals</b>             | <b>13,923</b> | <b>30%</b> | <b>36%</b> | <b>26%</b> | <b>3%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 10 Ottawa

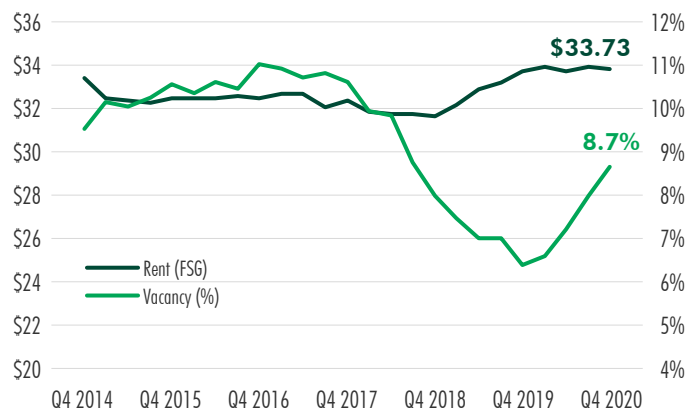
SCORE  
57.34

## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>74,000</b> | <b>22.5%</b>   | <b>\$91,666</b> | <b>10.5%</b>   |
| Software Developers & Programmers       | 21,900        | 43.1%          | \$92,144        | 16.3%          |
| Computer Support, Database & Systems    | 32,500        | 27.0%          | \$86,632        | 7.0%           |
| Computer & Information Systems Managers | 6,000         | 11.1%          | \$118,685       | 19.8%          |
| Technology Engineering-Related          | 13,600        | -3.5%          | \$91,042        | 7.9%           |
| <b>Total Non-Tech Occupations</b>       | <b>79,000</b> | <b>5.9%</b>    | <b>\$69,977</b> | <b>13.9%</b>   |
| Sales                                   | 3,700         | -19.6%         | \$60,466        | 2.8%           |
| Administrative & Office Support         | 37,100        | 3.6%           | \$55,973        | 21.4%          |
| Business Operations & Finance           | 26,800        | 11.2%          | \$88,379        | 10.2%          |
| Marketing                               | 11,400        | 12.9%          | \$75,379        | 4.4%           |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

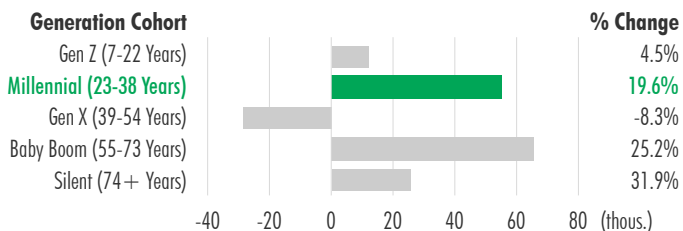
## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## POPULATION TRENDS

The population of millennials grew by 53,842 (19.6%) since 2014.



Source: Statistics Canada, April 2021.

## AVERAGE APARTMENT RENT

**\$1,012\***  
PER UNIT/MO.

**28.6%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,358 in CS)

## AVERAGE ANNUAL OPERATING COSTS

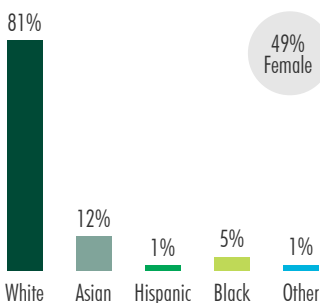
**#45** RANK

**\$32M** TALENT + **\$2M** OFFICE RENT = **\$34M** TOTAL

Source: Statistics Canada (Metro Area), CBRE Research, 2021.  
US\$

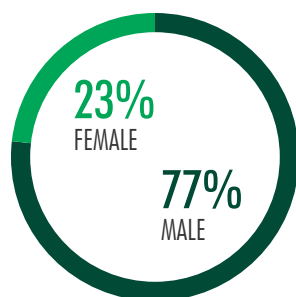
## WORKFORCE DIVERSITY

**Total Workforce by Race/Ethnicity**  
(All Industries & Occupations)



Source: Statistics Canada Census, 2016.

**Tech Talent by Sex**



Source: Statistics Canada, April 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 644           | 128%           |
| Math/Statistics           | 142           | 33%            |
| Other Tech Engineering    | 1,255         | 53%            |
| <b>Totals</b>             | <b>2,041</b>  | <b>69%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 11 Vancouver

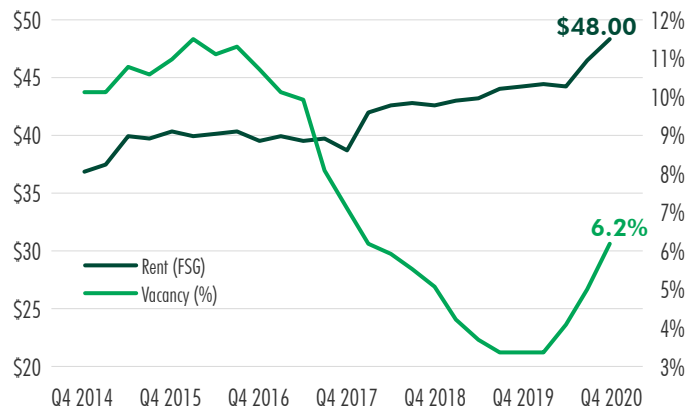
SCORE  
57.09

## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>91,200</b>  | <b>36.1%</b>   | <b>\$89,190</b> | <b>17.7%</b>   |
| Software Developers & Programmers       | 36,300         | 50.6%          | \$97,718        | 24.2%          |
| Computer Support, Database & Systems    | 35,200         | 63.7%          | \$77,418        | 12.7%          |
| Computer & Information Systems Managers | 7,300          | 28.1%          | \$108,638       | 10.0%          |
| Technology Engineering-Related          | 12,400         | -21.0%         | \$86,258        | 18.5%          |
| <b>Total Non-Tech Occupations</b>       | <b>137,800</b> | <b>10.3%</b>   | <b>\$61,963</b> | <b>22.5%</b>   |
| Sales                                   | 7,100          | -35.5%         | \$55,182        | -2.9%          |
| Administrative & Office Support         | 63,600         | -12.6%         | \$52,541        | 19.7%          |
| Business Operations & Finance           | 37,000         | 31.2%          | \$76,752        | 23.8%          |
| Marketing                               | 30,100         | 133.3%         | \$65,291        | 12.7%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

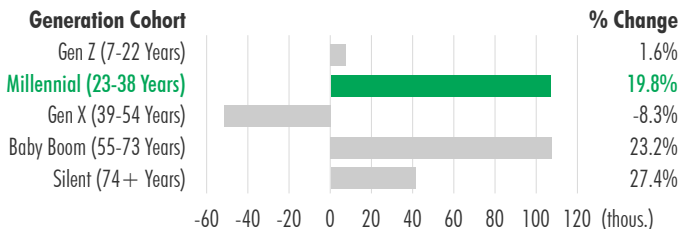
## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## POPULATION TRENDS

The population of millennials grew by 111,433 (19.8%) since 2014.



Source: Statistics Canada, April 2021.

## AVERAGE APARTMENT RENT

**\$1,124\***  
PER UNIT/MO.

**31.8%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,508 in CS)

## AVERAGE ANNUAL OPERATING COSTS

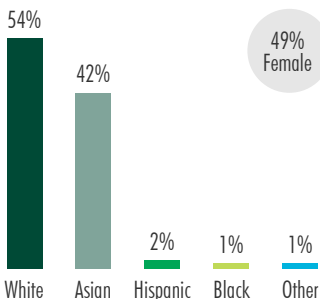
**#47** RANK

**\$30M** TALENT + **\$3M** OFFICE RENT = **\$32.7M** TOTAL

Source: Statistics Canada (Metro Area), CBRE Research, 2021.  
US\$

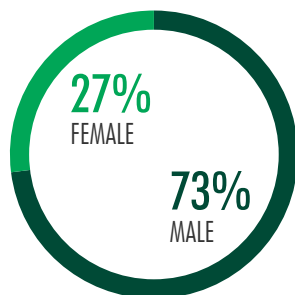
## WORKFORCE DIVERSITY

### Total Workforce by Race/Ethnicity (All Industries & Occupations)



Source: Statistics Canada Census, 2016.

### Tech Talent by Sex



Source: Statistics Canada, April 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 1,277         | 65%            |
| Math/Statistics           | 436           | 52%            |
| Other Tech Engineering    | 1,276         | 30%            |
| <b>Totals</b>             | <b>2,989</b>  | <b>47%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 12 Denver

SCORE  
56.94

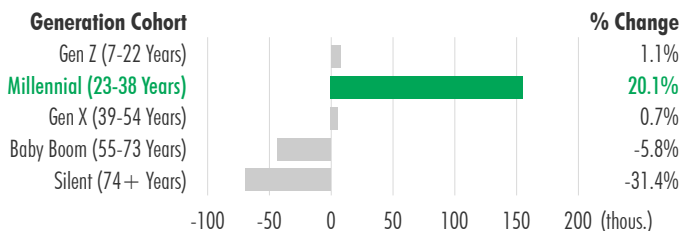
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>114,900</b> | <b>31.1%</b>   | <b>\$107,481</b> | <b>10.9%</b>   |
| Software Developers & Programmers       | 44,140         | 35.5%          | \$110,356        | 7.1%           |
| Computer Support, Database & Systems    | 51,950         | 29.7%          | \$95,799         | 14.1%          |
| Computer & Information Systems Managers | 6,690          | 26.9%          | \$178,605        | 10.6%          |
| Technology Engineering-Related          | 12,120         | 24.7%          | \$107,820        | 14.3%          |
| <b>Total Non-Tech Occupations</b>       | <b>218,990</b> | <b>3.7%</b>    | <b>\$64,121</b>  | <b>19.1%</b>   |
| Sales                                   | 32,070         | 22.6%          | \$93,179         | 17.9%          |
| Administrative & Office Support         | 111,100        | -10.6%         | \$43,440         | 14.4%          |
| Business Operations & Finance           | 51,790         | 15.6%          | \$84,553         | 10.6%          |
| Marketing                               | 24,030         | 52.0%          | \$76,925         | 5.7%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

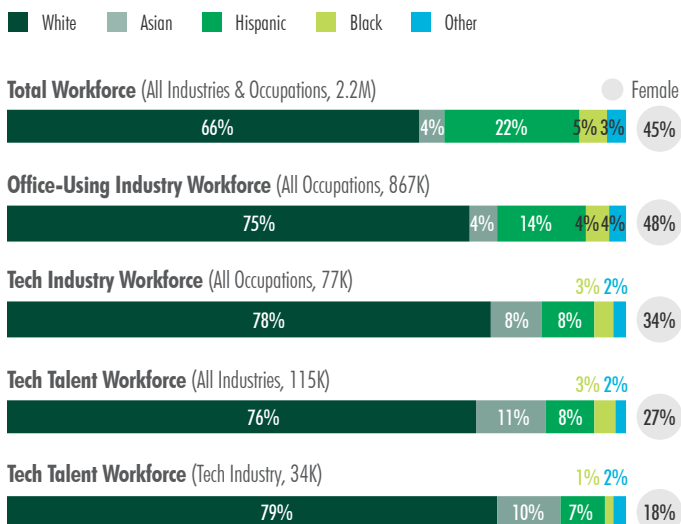
## POPULATION TRENDS

The population of millennials grew by 155,222 (20.1%) since 2014.



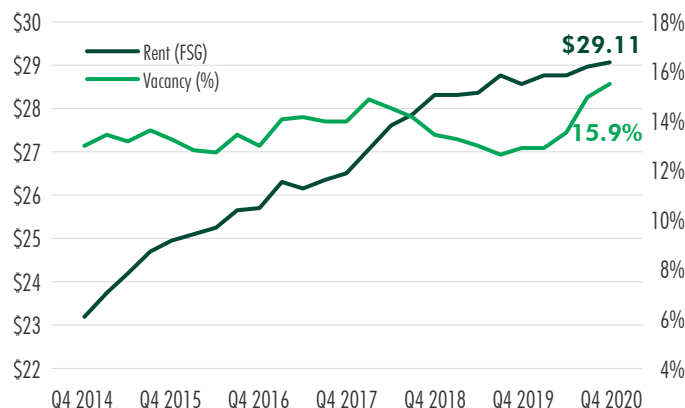
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,518** PER UNIT/MO. **9.3%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#7** RANK | **\$49M** TALENT + **\$2M** OFFICE RENT = **\$51.4M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,710         | 57%            | 77%        | 23%        |
| Math/Statistics           | 662           | 36%            | 63%        | 37%        |
| Other Tech Engineering    | 1,793         | 39%            | 81%        | 19%        |
| <b>Totals</b>             | <b>5,165</b>  | <b>47%</b>     | <b>76%</b> | <b>24%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|-----------|------------|-----------|-----------|
| Computer Engineering      | 2,710         | 71%        | 10%       | 10%        | 5%        | 4%        |
| Math/Statistics           | 662           | 77%        | 9%        | 9%         | 2%        | 4%        |
| Other Tech Engineering    | 1,793         | 79%        | 5%        | 11%        | 1%        | 5%        |
| <b>Totals</b>             | <b>5,165</b>  | <b>75%</b> | <b>8%</b> | <b>10%</b> | <b>3%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 13 Dallas/Ft. Worth

SCORE  
56.47

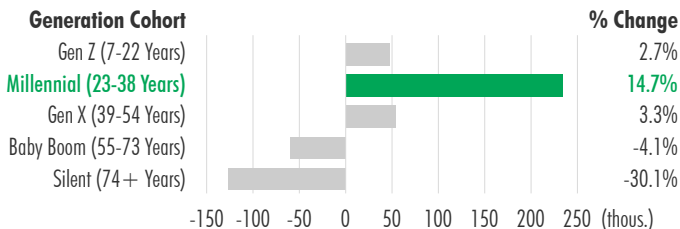
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>189,200</b> | <b>16.3%</b>   | <b>\$102,403</b> | <b>13.9%</b>   |
| Software Developers & Programmers       | 66,910         | 36.0%          | \$109,197        | 11.7%          |
| Computer Support, Database & Systems    | 94,990         | 9.9%           | \$89,639         | 11.3%          |
| Computer & Information Systems Managers | 12,440         | 58.7%          | \$162,180        | 8.4%           |
| Technology Engineering-Related          | 14,860         | -22.6%         | \$103,358        | 18.4%          |
| <b>Total Non-Tech Occupations</b>       | <b>482,460</b> | <b>5.7%</b>    | <b>\$51,304</b>  | <b>7.1%</b>    |
| Sales                                   | 44,480         | -11.3%         | \$68,646         | -1.8%          |
| Administrative & Office Support         | 321,980        | 4.2%           | \$39,185         | 9.7%           |
| Business Operations & Finance           | 84,960         | 13.5%          | \$80,368         | 5.0%           |
| Marketing                               | 31,040         | 37.8%          | \$72,611         | 1.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

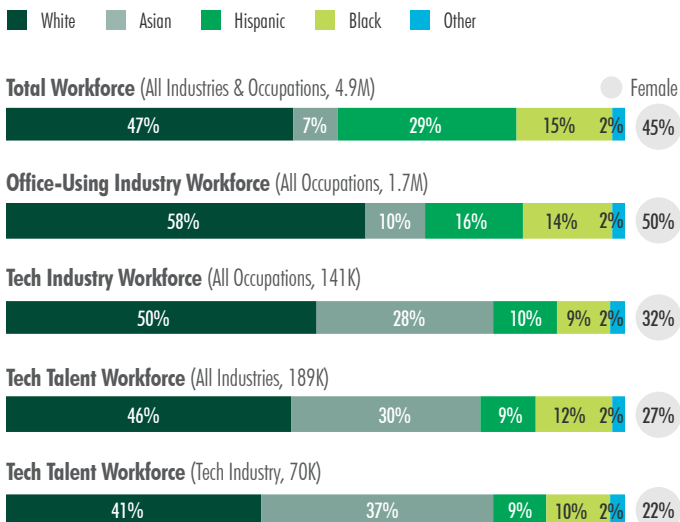
## POPULATION TRENDS

The population of millennials grew by 230,676 (14.7%) since 2014.



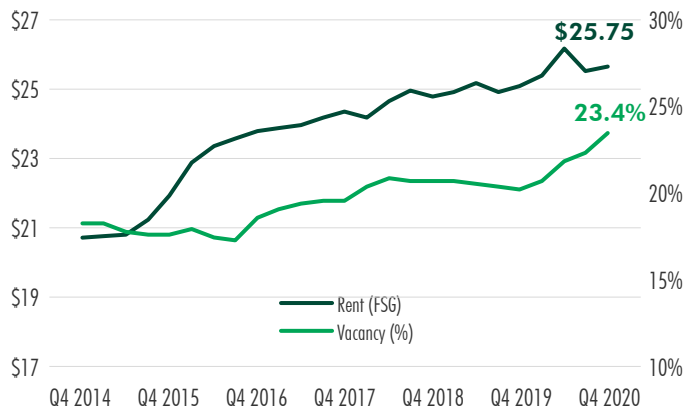
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,210** PER UNIT/MO. **10.6%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#15** RANK | **\$44M** TALENT + **\$2M** OFFICE RENT = **\$46.4M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 4,428         | 70%            | 70%        | 30%        |
| Math/Statistics           | 827           | 103%           | 56%        | 44%        |
| Other Tech Engineering    | 1,417         | 63%            | 83%        | 17%        |
| <b>Totals</b>             | <b>6,672</b>  | <b>71%</b>     | <b>71%</b> | <b>29%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 4,428         | 44%        | 27%        | 16%        | 8%        | 5%        |
| Math/Statistics           | 827           | 57%        | 12%        | 16%        | 6%        | 8%        |
| Other Tech Engineering    | 1,417         | 53%        | 13%        | 21%        | 7%        | 6%        |
| <b>Totals</b>             | <b>6,672</b>  | <b>48%</b> | <b>21%</b> | <b>17%</b> | <b>7%</b> | <b>6%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 14 Raleigh-Durham

SCORE  
56.42

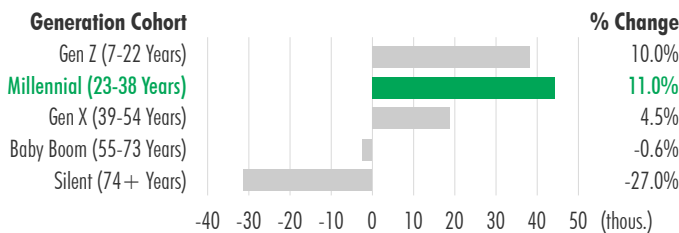
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>67,050</b>  | <b>20.2%</b>   | <b>\$100,643</b> | <b>10.2%</b>   |
| Software Developers & Programmers       | 27,810         | 39.7%          | \$108,251        | 10.3%          |
| Computer Support, Database & Systems    | 28,930         | 14.6%          | \$85,529         | 8.2%           |
| Computer & Information Systems Managers | 5,500          | 20.4%          | \$145,099        | 8.5%           |
| Technology Engineering-Related          | 4,810          | -20.6%         | \$96,725         | 9.4%           |
| <b>Total Non-Tech Occupations</b>       | <b>125,820</b> | <b>13.3%</b>   | <b>\$55,742</b>  | <b>19.7%</b>   |
| Sales                                   | 17,760         | 55.8%          | \$91,877         | 18.4%          |
| Administrative & Office Support         | 74,480         | 0.8%           | \$38,989         | 13.5%          |
| Business Operations & Finance           | 23,350         | 33.8%          | \$75,588         | 8.8%           |
| Marketing                               | 10,230         | 23.6%          | \$69,679         | 7.9%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

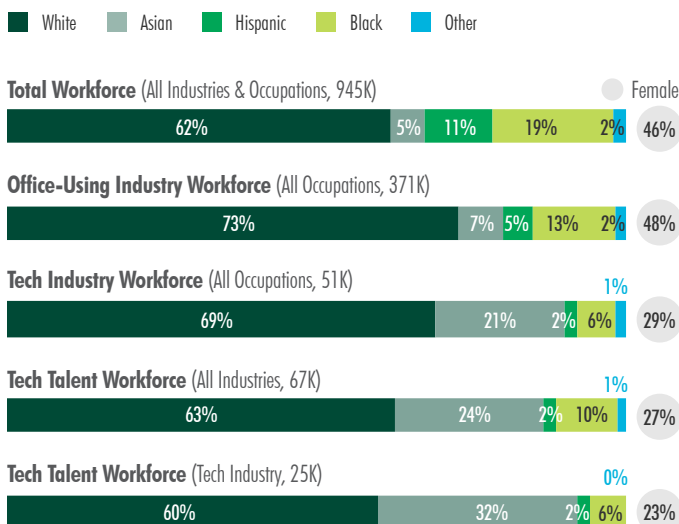
## POPULATION TRENDS

The population of millennials grew by 44,458 (11.0%) since 2014.



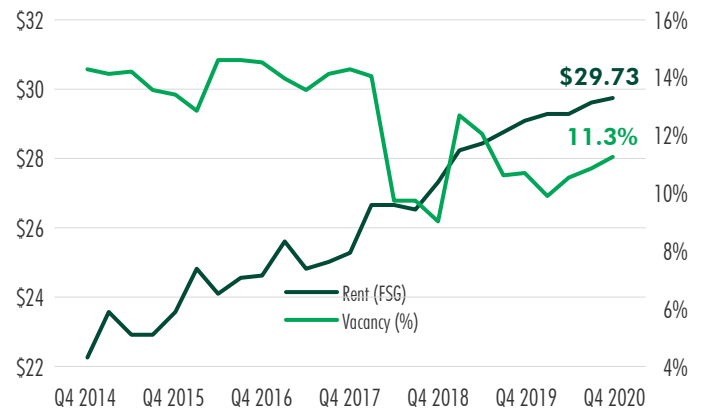
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,181**  
PER UNIT/MO.      **16.1%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#17** RANK      **\$44M** TALENT + **\$2M** OFFICE RENT = **\$46.1M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,510         | 57%            | 74%        | 26%        |
| Math/Statistics           | 742           | 44%            | 59%        | 41%        |
| Other Tech Engineering    | 846           | 17%            | 79%        | 21%        |
| <b>Totals</b>             | <b>4,098</b>  | <b>45%</b>     | <b>72%</b> | <b>28%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 2,510         | 59%        | 23%        | 6%        | 8%        | 5%        |
| Math/Statistics           | 742           | 65%        | 21%        | 4%        | 5%        | 5%        |
| Other Tech Engineering    | 846           | 77%        | 10%        | 7%        | 4%        | 3%        |
| <b>Totals</b>             | <b>4,098</b>  | <b>65%</b> | <b>19%</b> | <b>6%</b> | <b>6%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 15 Baltimore

SCORE  
56.08

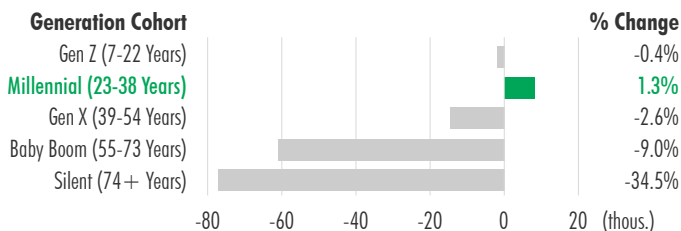
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>81,770</b>  | <b>16.2%</b>   | <b>\$110,306</b> | <b>11.5%</b>   |
| Software Developers & Programmers       | 24,240         | 25.1%          | \$111,616        | 3.5%           |
| Computer Support, Database & Systems    | 43,710         | 17.5%          | \$102,946        | 15.3%          |
| Computer & Information Systems Managers | 6,120          | 44.3%          | \$158,610        | 11.8%          |
| Technology Engineering-Related          | 7,700          | -19.0%         | \$109,573        | 10.2%          |
| <b>Total Non-Tech Occupations</b>       | <b>156,610</b> | <b>-7.8%</b>   | <b>\$55,701</b>  | <b>13.7%</b>   |
| Sales                                   | 18,080         | 2.1%           | \$87,504         | 22.6%          |
| Administrative & Office Support         | 99,110         | -10.7%         | \$41,059         | 10.7%          |
| Business Operations & Finance           | 30,260         | -7.1%          | \$80,489         | 8.5%           |
| Marketing                               | 9,160          | 6.5%           | \$69,476         | 13.3%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

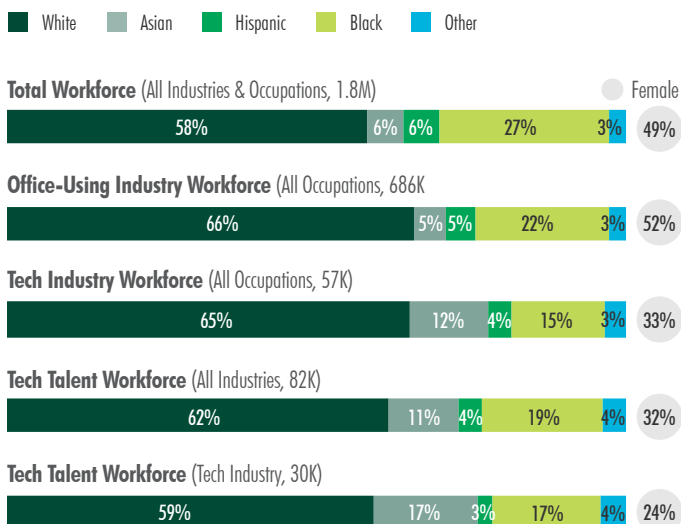
## POPULATION TRENDS

The population of millennials grew by 8,106 (1.3%) since 2014.



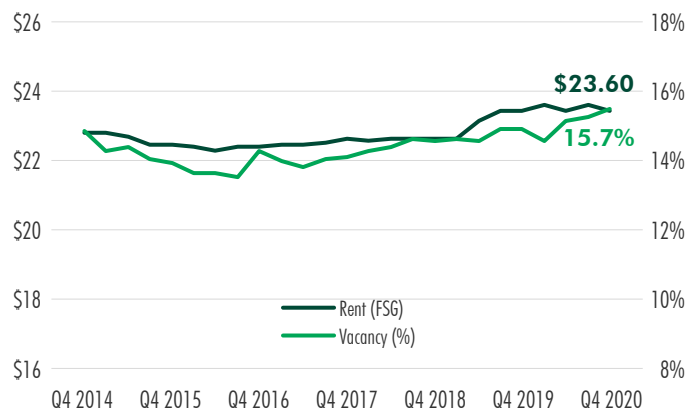
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,391** PER UNIT/MO. **10.2%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#9** RANK | **\$47M** TALENT + **\$2M** OFFICE RENT = **\$48.8M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,597         | 35%            | 72%        | 28%        |
| Math/Statistics           | 560           | 33%            | 63%        | 37%        |
| Other Tech Engineering    | 916           | -2%            | 79%        | 21%        |
| <b>Totals</b>             | <b>4,073</b>  | <b>24%</b>     | <b>72%</b> | <b>28%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 2,597         | 48%        | 21%        | 6%        | 21%        | 5%        |
| Math/Statistics           | 560           | 58%        | 17%        | 8%        | 9%         | 8%        |
| Other Tech Engineering    | 916           | 62%        | 12%        | 10%       | 12%        | 5%        |
| <b>Totals</b>             | <b>4,073</b>  | <b>53%</b> | <b>18%</b> | <b>7%</b> | <b>17%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 16 Montreal

SCORE  
55.20

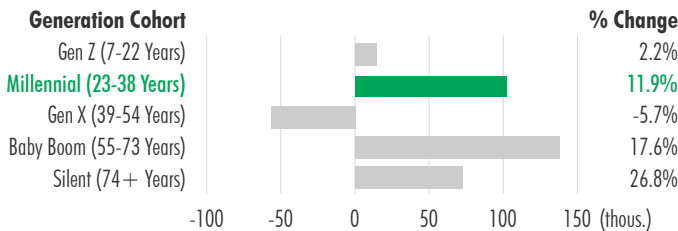
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>160,700</b> | <b>31.4%</b>   | <b>\$84,240</b> | <b>17.7%</b>   |
| Software Developers & Programmers       | 46,000         | 75.6%          | \$77,085        | 11.6%          |
| Computer Support, Database & Systems    | 63,900         | 30.9%          | \$82,576        | 19.9%          |
| Computer & Information Systems Managers | 7,500          | -7.4%          | \$124,571       | 36.1%          |
| Technology Engineering-Related          | 43,300         | 10.5%          | \$87,277        | 20.4%          |
| <b>Total Non-Tech Occupations</b>       | <b>216,400</b> | <b>9.0%</b>    | <b>\$60,830</b> | <b>18.2%</b>   |
| Sales                                   | 14,800         | -5.7%          | \$50,336        | 9.4%           |
| Administrative & Office Support         | 106,800        | -0.6%          | \$48,339        | 15.7%          |
| Business Operations & Finance           | 57,500         | 15.9%          | \$82,285        | 22.1%          |
| Marketing                               | 37,300         | 44.6%          | \$67,683        | 4.9%           |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

## POPULATION TRENDS

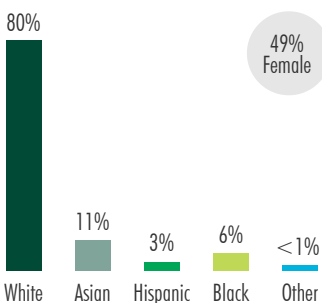
The population of millennials grew by 104,718 (11.9%) since 2014.



Source: Statistics Canada, April 2021.

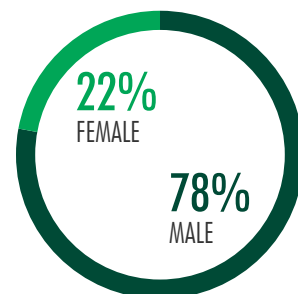
## WORKFORCE DIVERSITY

**Total Workforce by Race/Ethnicity**  
(All Industries & Occupations)



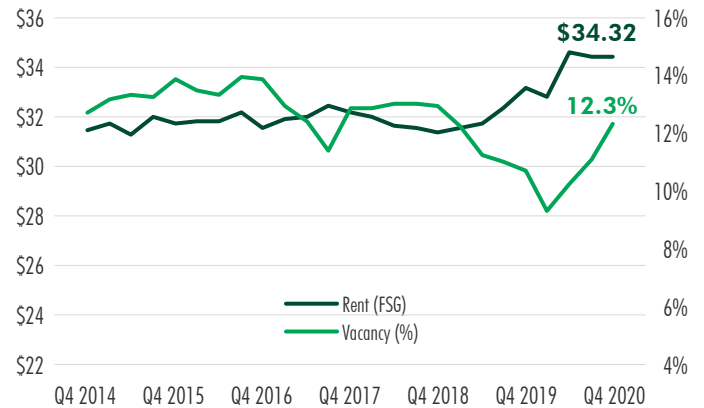
Source: Statistics Canada Census, 2016.

**Tech Talent by Sex**



Source: Statistics Canada, April 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## AVERAGE APARTMENT RENT

**\$664\*** PER UNIT/MO.  
**19.8%** FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$891 in CS)

## AVERAGE ANNUAL OPERATING COSTS

**#49** RANK | **\$30M** TALENT + **\$2M** OFFICE RENT = **\$31.6M** TOTAL

Source: Statistics Canada (Metro Area), CBRE Research, 2021.  
US\$

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 1,528         | 81%            |
| Math/Statistics           | 368           | 23%            |
| Other Tech Engineering    | 3,372         | 35%            |
| <b>Totals</b>             | <b>5,268</b>  | <b>45%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 17 Phoenix

SCORE  
52.70

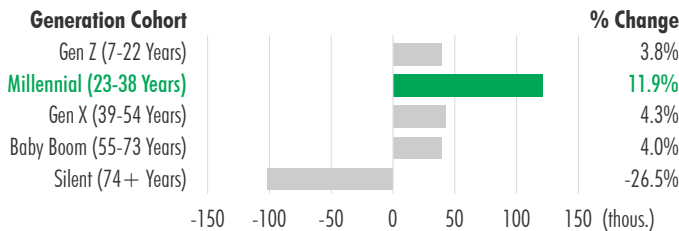
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>98,220</b>  | <b>14.2%</b>   | <b>\$93,655</b> | <b>8.1%</b>    |
| Software Developers & Programmers       | 32,310         | 25.3%          | \$102,039       | 12.7%          |
| Computer Support, Database & Systems    | 47,640         | 10.6%          | \$79,189        | 3.5%           |
| Computer & Information Systems Managers | 8,440          | 45.5%          | \$146,490       | 3.5%           |
| Technology Engineering-Related          | 9,830          | -13.7%         | \$90,836        | 3.4%           |
| <b>Total Non-Tech Occupations</b>       | <b>301,350</b> | <b>21.0%</b>   | <b>\$49,765</b> | <b>17.4%</b>   |
| Sales                                   | 31,460         | 29.9%          | \$76,050        | 20.2%          |
| Administrative & Office Support         | 204,080        | 14.0%          | \$39,503        | 15.3%          |
| Business Operations & Finance           | 47,370         | 45.1%          | \$70,543        | 9.8%           |
| Marketing                               | 18,440         | 39.9%          | \$65,118        | 7.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

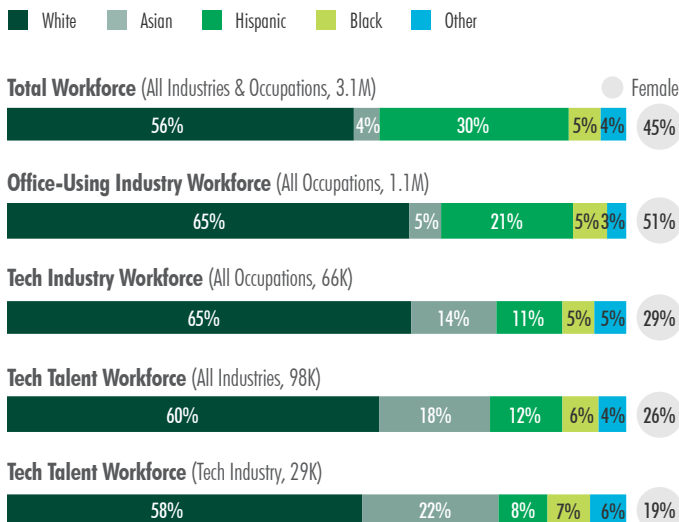
## POPULATION TRENDS

The population of millennials grew by 119,442 (11.9%) since 2014.



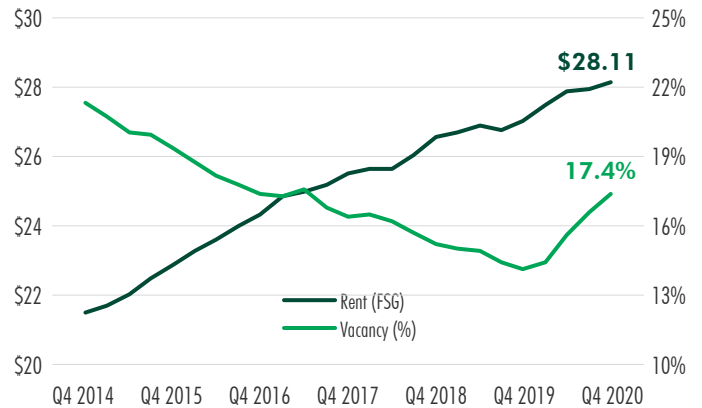
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,250** PER UNIT/MO. **32.9%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#24** RANK | **\$41M** TALENT + **\$2M** OFFICE RENT = **\$43.2M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 4,105         | -4%            | 74%        | 26%        |
| Math/Statistics           | 325           | 61%            | 71%        | 29%        |
| Other Tech Engineering    | 1,241         | 93%            | 85%        | 15%        |
| <b>Totals</b>             | <b>5,671</b>  | <b>11%</b>     | <b>76%</b> | <b>24%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black      | Other     |
|---------------------------|---------------|------------|------------|------------|------------|-----------|
| Computer Engineering      | 4,105         | 53%        | 11%        | 16%        | 14%        | 5%        |
| Math/Statistics           | 325           | 65%        | 9%         | 18%        | 4%         | 5%        |
| Other Tech Engineering    | 1,241         | 65%        | 8%         | 19%        | 2%         | 5%        |
| <b>Totals</b>             | <b>5,671</b>  | <b>57%</b> | <b>10%</b> | <b>17%</b> | <b>11%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 18 Salt Lake City

SCORE  
52.55

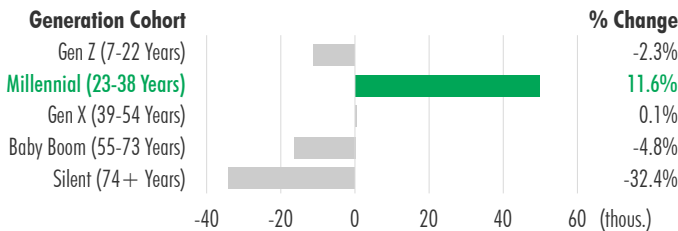
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>50,070</b>  | <b>33.9%</b>   | <b>\$89,184</b> | <b>14.4%</b>   |
| Software Developers & Programmers       | 19,980         | 37.0%          | \$99,517        | 12.3%          |
| Computer Support, Database & Systems    | 23,690         | 35.0%          | \$73,016        | 17.2%          |
| Computer & Information Systems Managers | 4,000          | 53.3%          | \$139,321       | 12.9%          |
| Technology Engineering-Related          | 2,400          | -9.4%          | \$79,188        | 0.4%           |
| <b>Total Non-Tech Occupations</b>       | <b>139,310</b> | <b>3.5%</b>    | <b>\$47,466</b> | <b>15.5%</b>   |
| Sales                                   | 12,340         | -27.5%         | \$77,486        | 30.3%          |
| Administrative & Office Support         | 94,740         | 1.4%           | \$37,702        | 18.3%          |
| Business Operations & Finance           | 21,710         | 30.8%          | \$66,353        | 0.0%           |
| Marketing                               | 10,520         | 39.0%          | \$61,207        | 4.7%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

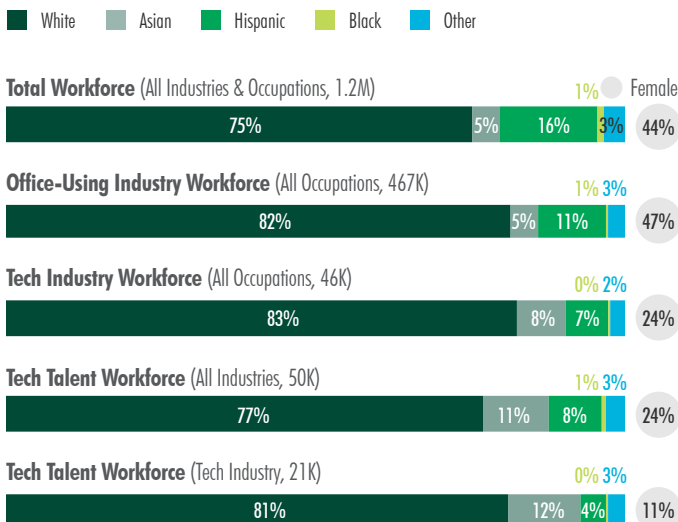
## POPULATION TRENDS

The population of millennials grew by 50,145 (11.6%) since 2014.



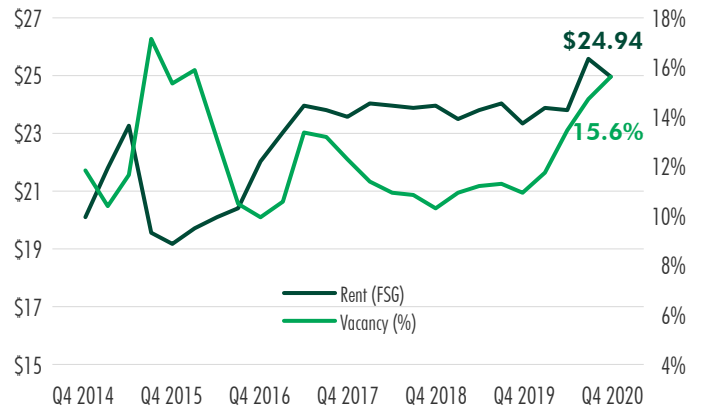
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,204** PER UNIT/MO.      **19.7%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#36** RANK      **\$39M** TALENT + **\$2M** OFFICE RENT = **\$41M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 4,918         | 95%            | 88%        | 12%        |
| Math/Statistics           | 405           | 36%            | 72%        | 28%        |
| Other Tech Engineering    | 521           | 44%            | 88%        | 12%        |
| <b>Totals</b>             | <b>5,844</b>  | <b>83%</b>     | <b>87%</b> | <b>13%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|-----------|-----------|-----------|-----------|
| Computer Engineering      | 4,918         | 76%        | 6%        | 8%        | 6%        | 4%        |
| Math/Statistics           | 405           | 84%        | 4%        | 4%        | 1%        | 7%        |
| Other Tech Engineering    | 521           | 83%        | 3%        | 8%        | 0%        | 6%        |
| <b>Totals</b>             | <b>5,844</b>  | <b>77%</b> | <b>5%</b> | <b>8%</b> | <b>5%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 19 San Diego

SCORE  
51.66

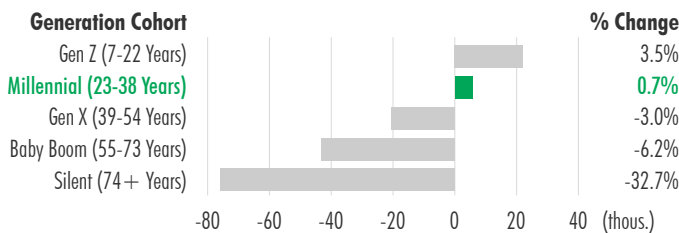
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>70,350</b>  | <b>4.1%</b>    | <b>\$109,987</b> | <b>11.1%</b>   |
| Software Developers & Programmers       | 24,140         | 4.8%           | \$115,601        | 13.4%          |
| Computer Support, Database & Systems    | 29,260         | 19.2%          | \$94,255         | 13.3%          |
| Computer & Information Systems Managers | 6,720          | 57.7%          | \$169,570        | 3.5%           |
| Technology Engineering-Related          | 10,230         | -35.0%         | \$102,596        | 0.9%           |
| <b>Total Non-Tech Occupations</b>       | <b>147,390</b> | <b>-6.2%</b>   | <b>\$57,143</b>  | <b>17.7%</b>   |
| Sales                                   | 17,830         | 1.7%           | \$77,998         | 14.6%          |
| Administrative & Office Support         | 89,800         | -13.8%         | \$43,737         | 18.5%          |
| Business Operations & Finance           | 27,830         | 15.4%          | \$82,072         | 7.7%           |
| Marketing                               | 11,930         | 6.2%           | \$68,731         | 3.0%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

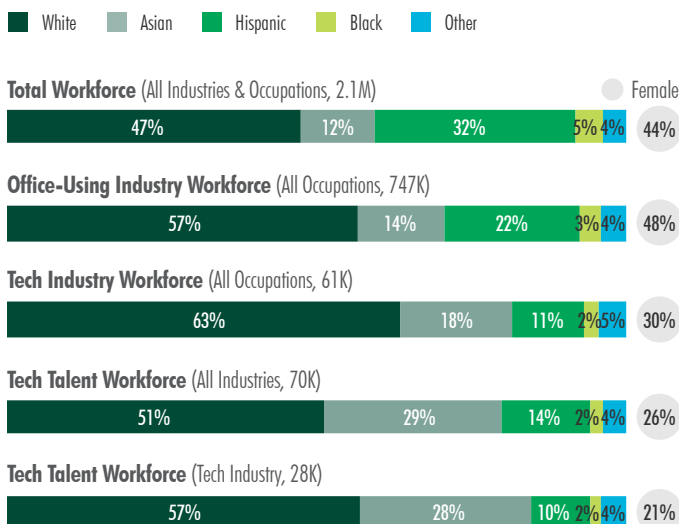
## POPULATION TRENDS

The population of millennials grew by 6,243 (0.7%) since 2014.



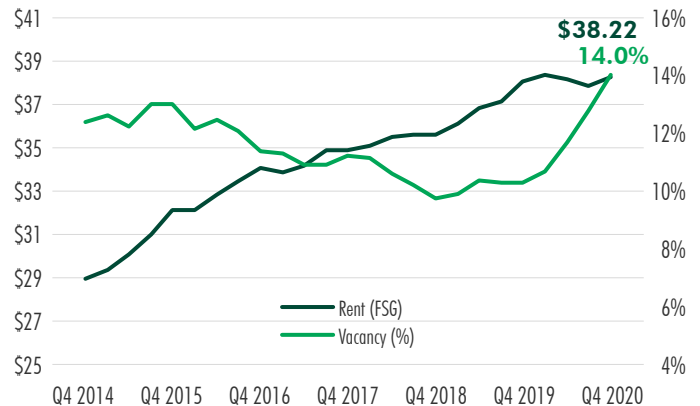
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$2,072**  
PER UNIT/MO.

**17.4%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#8** RANK

**\$48M** TALENT + **\$3M** OFFICE RENT = **\$50.8M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,289         | 84%            | 82%        | 18%        |
| Math/Statistics           | 1,318         | 232%           | 58%        | 42%        |
| Other Tech Engineering    | 1,052         | 56%            | 81%        | 19%        |
| <b>Totals</b>             | <b>4,659</b>  | <b>101%</b>    | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 2,289         | 35%        | 37%        | 17%        | 4%        | 7%        |
| Math/Statistics           | 1,318         | 30%        | 46%        | 17%        | 1%        | 6%        |
| Other Tech Engineering    | 1,052         | 46%        | 22%        | 21%        | 2%        | 8%        |
| <b>Totals</b>             | <b>4,659</b>  | <b>37%</b> | <b>35%</b> | <b>18%</b> | <b>3%</b> | <b>7%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 20 Portland

SCORE  
49.44

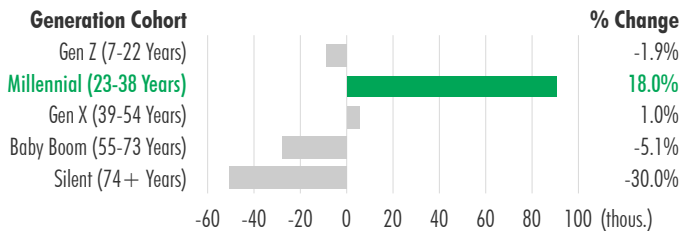
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>60,330</b>  | <b>27.7%</b>   | <b>\$99,384</b> | <b>11.7%</b>   |
| Software Developers & Programmers       | 19,930         | 7.8%           | \$107,789       | 14.1%          |
| Computer Support, Database & Systems    | 23,540         | 12.7%          | \$87,080        | 11.3%          |
| Computer & Information Systems Managers | 5,180          | 45.1%          | \$142,630       | 12.4%          |
| Technology Engineering-Related          | 11,680         | 171.6%         | \$90,662        | 5.0%           |
| <b>Total Non-Tech Occupations</b>       | <b>130,500</b> | <b>5.5%</b>    | <b>\$55,115</b> | <b>18.6%</b>   |
| Sales                                   | 11,320         | 7.3%           | \$80,011        | 11.3%          |
| Administrative & Office Support         | 84,050         | -1.9%          | \$43,123        | 16.9%          |
| Business Operations & Finance           | 23,270         | 20.1%          | \$78,074        | 13.4%          |
| Marketing                               | 11,860         | 45.7%          | \$71,295        | 16.2%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

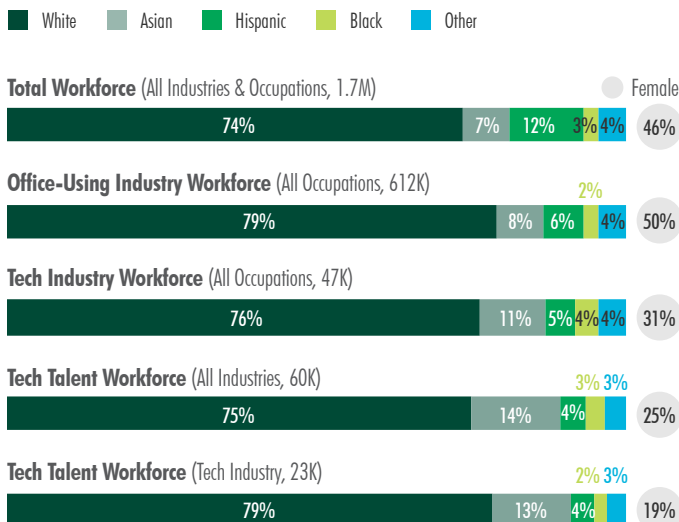
## POPULATION TRENDS

The population of millennials grew by 92,261 (18.0%) since 2014.



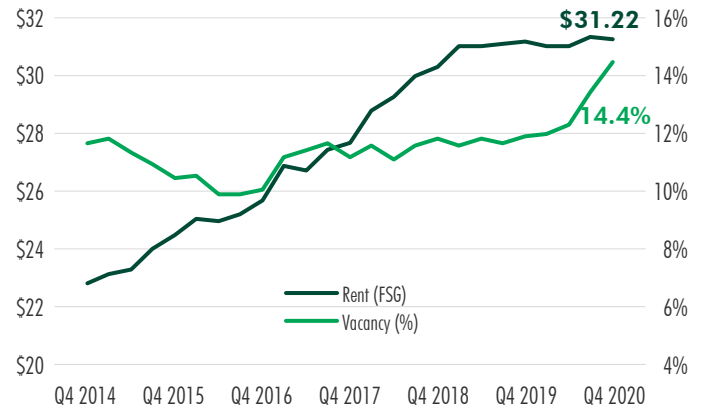
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,429**  
PER UNIT/MO.

**11.3%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#19** RANK

**\$43M** TALENT + **\$2M** OFFICE RENT = **\$45.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,679         | 108%           | 81%        | 19%        |
| Math/Statistics           | 540           | 57%            | 61%        | 39%        |
| Other Tech Engineering    | 712           | 55%            | 84%        | 16%        |
| <b>Totals</b>             | <b>2,931</b>  | <b>82%</b>     | <b>78%</b> | <b>22%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 1,679         | 68%        | 16%        | 7%        | 1%        | 7%        |
| Math/Statistics           | 540           | 73%        | 8%         | 10%       | 3%        | 7%        |
| Other Tech Engineering    | 712           | 75%        | 8%         | 8%        | 2%        | 8%        |
| <b>Totals</b>             | <b>2,931</b>  | <b>71%</b> | <b>12%</b> | <b>8%</b> | <b>1%</b> | <b>7%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 21 Waterloo Region

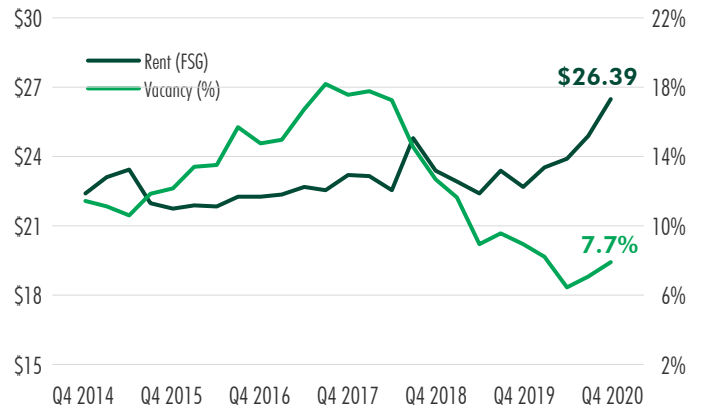
SCORE  
47.88

## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>25,900</b> | <b>47.2%</b>   | <b>\$87,922</b> | <b>30.9%</b>   |
| Software Developers & Programmers       | 11,900        | 105.2%         | \$96,574        | 32.4%          |
| Computer Support, Database & Systems    | 8,400         | 52.7%          | \$77,605        | 8.7%           |
| Computer & Information Systems Managers | 800           | -42.9%         | N/A             | N/A            |
| Technology Engineering-Related          | 4,800         | -2.0%          | \$75,067        | 0.3%           |
| <b>Total Non-Tech Occupations</b>       | <b>24,800</b> | <b>3.3%</b>    | <b>\$60,947</b> | <b>13.7%</b>   |
| Sales                                   | 2,300         | 21.1%          | \$69,098        | 7.5%           |
| Administrative & Office Support         | 13,800        | -1.4%          | \$51,085        | 18.1%          |
| Business Operations & Finance           | 5,800         | 5.5%           | \$79,435        | 16.6%          |
| Marketing                               | 2,900         | 11.5%          | \$64,438        | -9.3%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

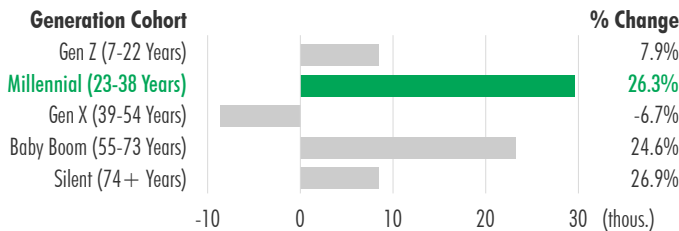
## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## POPULATION TRENDS

The population of millennials grew by 29,726 (26.3%) since 2014.



Source: Statistics Canada, April 2021.

## AVERAGE APARTMENT RENT

**\$910\***  
PER UNIT/MO.

**28.9%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,221 in CS)

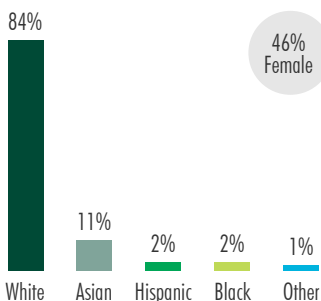
## AVERAGE ANNUAL OPERATING COSTS

**#50** RANK | **\$30M** TALENT + **\$1M** OFFICE RENT = **\$31.4M** TOTAL

Source: Statistics Canada (Metro Area), CBRE Research, 2021.  
US\$

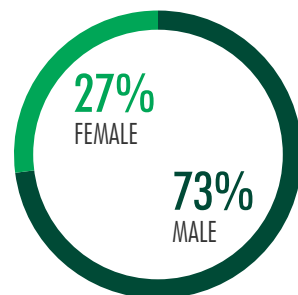
## WORKFORCE DIVERSITY

### Total Workforce by Race/Ethnicity (All Industries & Occupations)



Source: Statistics Canada Census, 2016.

### Tech Talent by Sex



Source: Statistics Canada, April 2021.

## TALENT PIPELINE AND DIVERSITY

### Degree Completions (2019)

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 1,165         | 105%           |
| Math/Statistics           | 768           | 32%            |
| Other Tech Engineering    | 1,502         | 37%            |
| <b>Totals</b>             | <b>3,435</b>  | <b>53%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 22 Minneapolis/St. Paul

SCORE  
47.11

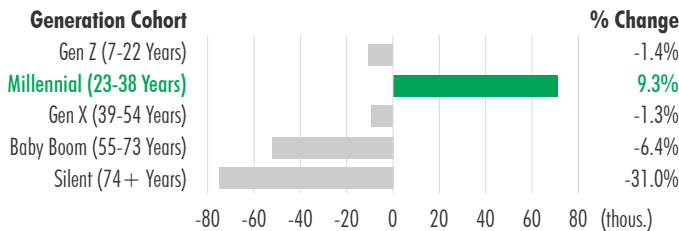
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>97,470</b>  | <b>5.3%</b>    | <b>\$102,391</b> | <b>14.7%</b>   |
| Software Developers & Programmers       | 35,080         | 23.7%          | \$105,593        | 14.7%          |
| Computer Support, Database & Systems    | 46,660         | -3.1%          | \$90,014         | 12.9%          |
| Computer & Information Systems Managers | 9,520          | 11.7%          | \$155,970        | 14.2%          |
| Technology Engineering-Related          | 6,210          | -17.3%         | \$95,161         | 10.8%          |
| <b>Total Non-Tech Occupations</b>       | <b>230,210</b> | <b>-4.1%</b>   | <b>\$57,283</b>  | <b>13.5%</b>   |
| Sales                                   | 23,980         | -7.0%          | \$77,307         | -1.0%          |
| Administrative & Office Support         | 136,990        | -8.9%          | \$43,391         | 14.6%          |
| Business Operations & Finance           | 45,700         | -0.8%          | \$79,718         | 12.6%          |
| Marketing                               | 23,540         | 31.4%          | \$74,174         | 15.2%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

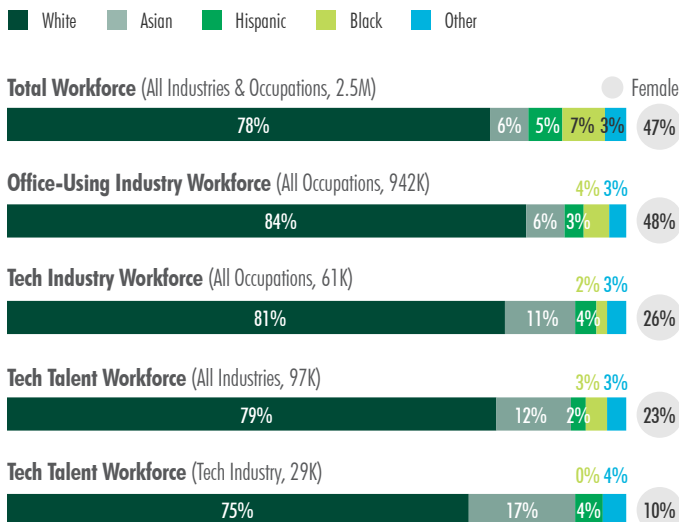
## POPULATION TRENDS

The population of millennials grew by 71,329 (9.3%) since 2014.



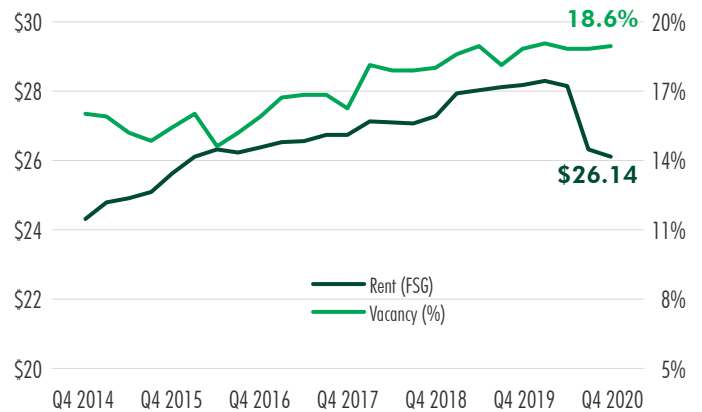
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,340** PER UNIT/MO. **13.8%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#11** RANK | **\$45M** TALENT + **\$2M** OFFICE RENT = **\$47.3M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,530         | 49%            | 78%        | 22%        |
| Math/Statistics           | 616           | 24%            | 57%        | 43%        |
| Other Tech Engineering    | 730           | 18%            | 77%        | 23%        |
| <b>Totals</b>             | <b>3,876</b>  | <b>38%</b>     | <b>74%</b> | <b>26%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 2,530         | 61%        | 15%        | 4%        | 16%        | 4%        |
| Math/Statistics           | 616           | 76%        | 13%        | 3%        | 3%         | 5%        |
| Other Tech Engineering    | 730           | 80%        | 9%         | 3%        | 3%         | 5%        |
| <b>Totals</b>             | <b>3,876</b>  | <b>67%</b> | <b>13%</b> | <b>4%</b> | <b>12%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 23 Chicago

SCORE  
46.40

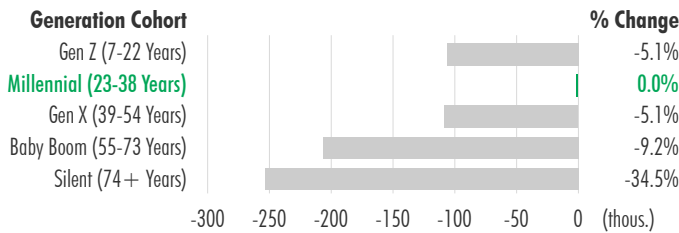
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>167,380</b> | <b>4.6%</b>    | <b>\$100,551</b> | <b>15.3%</b>   |
| Software Developers & Programmers       | 60,030         | 17.6%          | \$105,069        | 17.7%          |
| Computer Support, Database & Systems    | 79,840         | -4.0%          | \$85,662         | 7.8%           |
| Computer & Information Systems Managers | 17,820         | 39.3%          | \$156,960        | 19.0%          |
| Technology Engineering-Related          | 9,690          | -25.5%         | \$91,505         | 7.6%           |
| <b>Total Non-Tech Occupations</b>       | <b>558,000</b> | <b>2.9%</b>    | <b>\$53,502</b>  | <b>13.5%</b>   |
| Sales                                   | 60,240         | 10.1%          | \$71,751         | 1.4%           |
| Administrative & Office Support         | 354,000        | -5.4%          | \$41,482         | 13.6%          |
| Business Operations & Finance           | 97,180         | 13.8%          | \$79,242         | 7.2%           |
| Marketing                               | 46,580         | 65.5%          | \$67,546         | 10.0%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

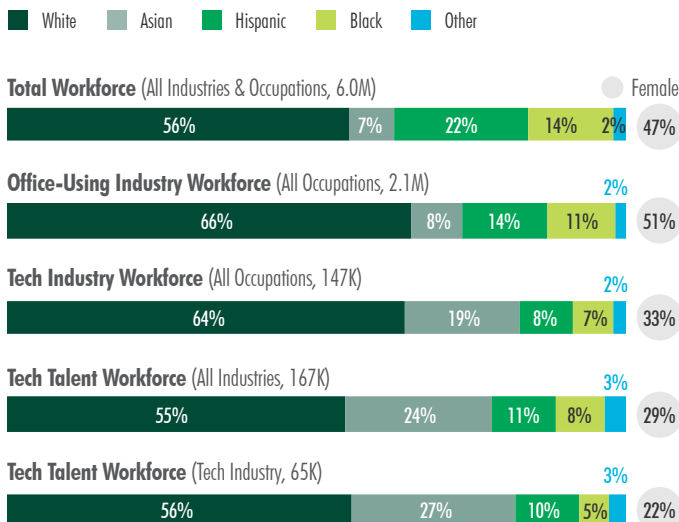
## POPULATION TRENDS

The population of millennials declined by -885 (0.0%) since 2014.



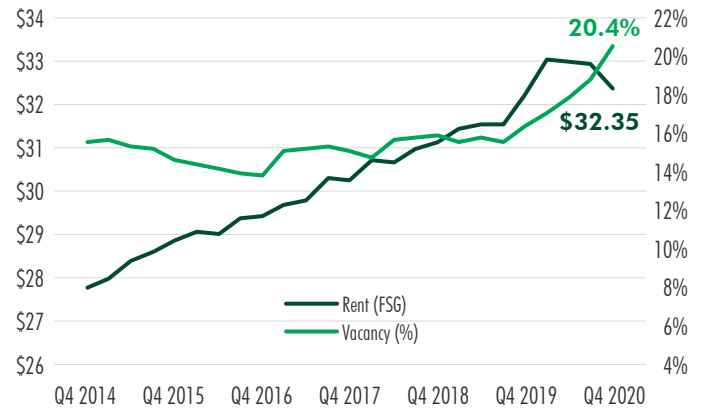
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,473** PER UNIT/MO. **1.9%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#13** RANK | **\$44M** TALENT + **\$2M** OFFICE RENT = **\$46.6M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 5,509         | 51%            | 76%        | 24%        |
| Math/Statistics           | 1,401         | 22%            | 64%        | 36%        |
| Other Tech Engineering    | 1,638         | 71%            | 79%        | 21%        |
| <b>Totals</b>             | <b>8,548</b>  | <b>48%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 5,509         | 52%        | 19%        | 17%        | 9%        | 3%        |
| Math/Statistics           | 1,401         | 61%        | 21%        | 12%        | 3%        | 3%        |
| Other Tech Engineering    | 1,638         | 61%        | 15%        | 16%        | 4%        | 4%        |
| <b>Totals</b>             | <b>8,548</b>  | <b>56%</b> | <b>19%</b> | <b>16%</b> | <b>7%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 24 Madison

SCORE  
45.04

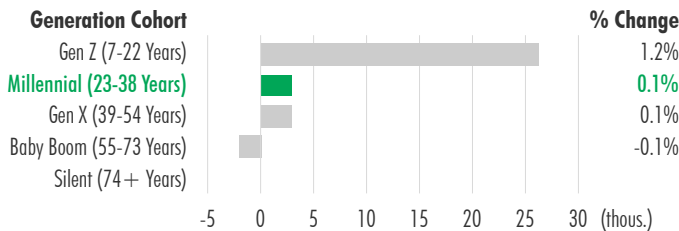
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>24,580</b> | <b>31.9%</b>   | <b>\$92,363</b> | <b>24.0%</b>   |
| Software Developers & Programmers       | 11,300        | 152.8%         | \$98,199        | 22.5%          |
| Computer Support, Database & Systems    | 10,710        | -6.6%          | \$81,179        | 18.9%          |
| Computer & Information Systems Managers | 1,250         | -1.6%          | \$135,310       | 22.0%          |
| Technology Engineering-Related          | 1,320         | -7.7%          | \$92,474        | 24.8%          |
| <b>Total Non-Tech Occupations</b>       | <b>55,990</b> | <b>14.2%</b>   | <b>\$51,462</b> | <b>14.2%</b>   |
| Sales                                   | 4,200         | 22.1%          | \$72,636        | 1.8%           |
| Administrative & Office Support         | 35,880        | 9.5%           | \$41,505        | 16.2%          |
| Business Operations & Finance           | 10,050        | 18.7%          | \$71,346        | 11.1%          |
| Marketing                               | 5,860         | 35.0%          | \$63,149        | 9.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

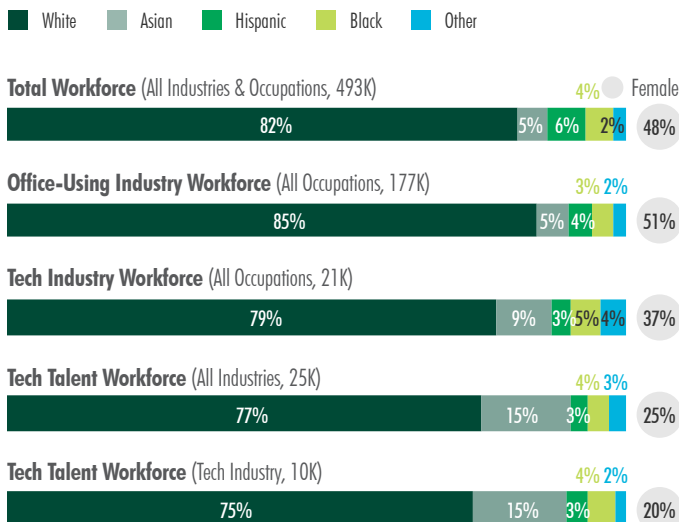
## POPULATION TRENDS

The population of millennials grew by 3,000 (0.1%) since 2014.



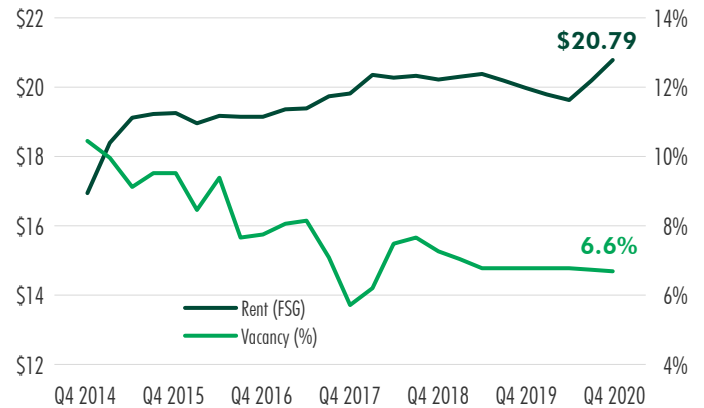
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,220**  
PER UNIT/MO.      **9.4%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#28** RANK      **\$40M** TALENT + **\$2M** OFFICE RENT = **\$42.1M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,079         | 72%            | 84%        | 16%        |
| Math/Statistics           | 484           | 77%            | 66%        | 34%        |
| Other Tech Engineering    | 651           | 18%            | 77%        | 23%        |
| <b>Totals</b>             | <b>2,214</b>  | <b>52%</b>     | <b>78%</b> | <b>22%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 1,079         | 79%        | 12%        | 3%        | 1%        | 4%        |
| Math/Statistics           | 484           | 84%        | 10%        | 3%        | 1%        | 3%        |
| Other Tech Engineering    | 651           | 85%        | 6%         | 5%        | 2%        | 2%        |
| <b>Totals</b>             | <b>2,214</b>  | <b>82%</b> | <b>10%</b> | <b>4%</b> | <b>2%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 25 Detroit

SCORE  
44.40

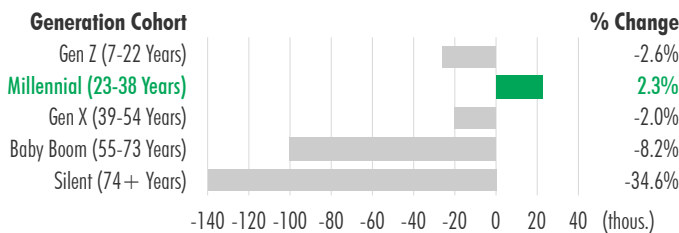
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>89,680</b>  | <b>4.5%</b>    | <b>\$91,623</b> | <b>11.7%</b>   |
| Software Developers & Programmers       | 33,020         | 24.5%          | \$93,498        | 8.3%           |
| Computer Support, Database & Systems    | 39,270         | -4.8%          | \$79,489        | 7.3%           |
| Computer & Information Systems Managers | 7,200          | 31.1%          | \$142,265       | 14.4%          |
| Technology Engineering-Related          | 10,190         | -18.7%         | \$96,524        | 19.6%          |
| <b>Total Non-Tech Occupations</b>       | <b>229,480</b> | <b>0.1%</b>    | <b>\$52,786</b> | <b>24.3%</b>   |
| Sales                                   | 21,770         | 1.7%           | \$78,365        | 4.0%           |
| Administrative & Office Support         | 149,050        | -16.8%         | \$40,026        | 15.9%          |
| Business Operations & Finance           | 40,990         | 20.1%          | \$78,072        | 7.7%           |
| Marketing                               | 17,670         | 26.9%          | \$70,250        | 6.9%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

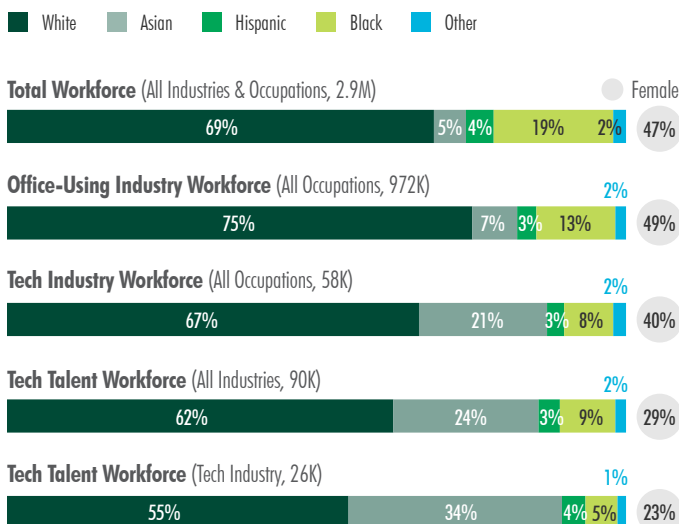
## POPULATION TRENDS

The population of millennials grew by 22,726 (2.3%) since 2014.



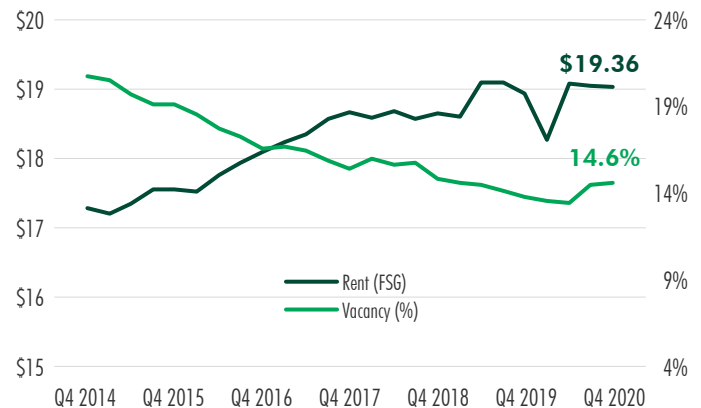
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,070** PER UNIT/MO.      **18.8%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#26** RANK      **\$41M** TALENT + **\$1M** OFFICE RENT = **\$42.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 3,443         | 63%            | 73%        | 27%        |
| Math/Statistics           | 565           | -4%            | 58%        | 42%        |
| Other Tech Engineering    | 2,782         | 42%            | 80%        | 20%        |
| <b>Totals</b>             | <b>6,790</b>  | <b>46%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 3,443         | 69%        | 19%        | 3%        | 4%        | 4%        |
| Math/Statistics           | 565           | 72%        | 16%        | 5%        | 4%        | 3%        |
| Other Tech Engineering    | 2,782         | 74%        | 13%        | 6%        | 4%        | 3%        |
| <b>Totals</b>             | <b>6,790</b>  | <b>71%</b> | <b>17%</b> | <b>4%</b> | <b>4%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 26 Philadelphia

SCORE  
43.95

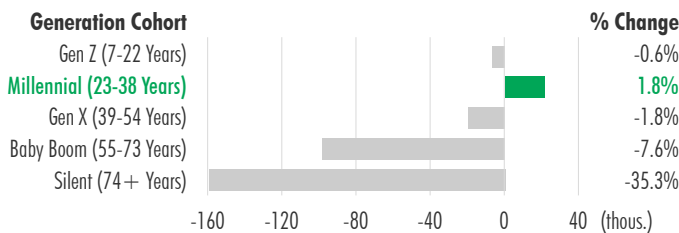
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>112,740</b> | <b>9.3%</b>    | <b>\$102,478</b> | <b>12.2%</b>   |
| Software Developers & Programmers       | 37,500         | 4.6%           | \$104,709        | 11.9%          |
| Computer Support, Database & Systems    | 55,980         | 10.0%          | \$90,501         | 12.0%          |
| Computer & Information Systems Managers | 10,370         | 37.0%          | \$161,290        | 4.9%           |
| Technology Engineering-Related          | 8,890          | 1.4%           | \$99,890         | 12.1%          |
| <b>Total Non-Tech Occupations</b>       | <b>356,420</b> | <b>-2.3%</b>   | <b>\$55,810</b>  | <b>12.1%</b>   |
| Sales                                   | 31,020         | -3.9%          | \$83,112         | 2.2%           |
| Administrative & Office Support         | 236,090        | -3.7%          | \$41,852         | 14.7%          |
| Business Operations & Finance           | 66,210         | 2.8%           | \$86,334         | 10.7%          |
| Marketing                               | 23,100         | 0.7%           | \$74,306         | 8.2%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

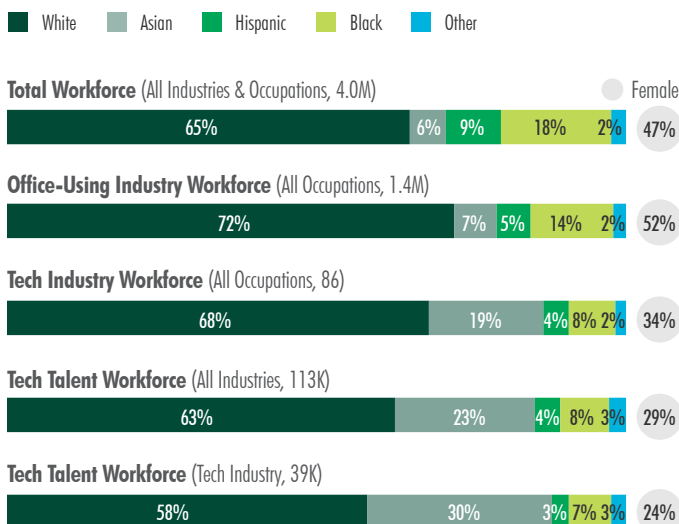
## POPULATION TRENDS

The population of millennials grew by 21,489 (1.8%) since 2014.



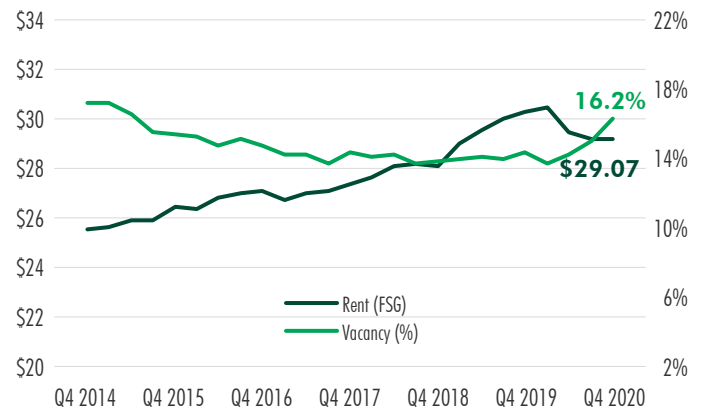
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,458** PER UNIT/MO.      **13.6%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#10** RANK      **\$45M** TALENT + **\$2M** OFFICE RENT = **\$47.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 4,008         | 56%            | 77%        | 23%        |
| Math/Statistics           | 875           | 10%            | 60%        | 40%        |
| Other Tech Engineering    | 1,394         | 29%            | 77%        | 23%        |
| <b>Totals</b>             | <b>6,277</b>  | <b>41%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 4,008         | 62%        | 20%        | 7%        | 9%        | 3%        |
| Math/Statistics           | 875           | 69%        | 18%        | 7%        | 3%        | 3%        |
| Other Tech Engineering    | 1,394         | 73%        | 13%        | 7%        | 5%        | 2%        |
| <b>Totals</b>             | <b>6,277</b>  | <b>65%</b> | <b>18%</b> | <b>7%</b> | <b>7%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 27 Charlotte

SCORE  
43.81

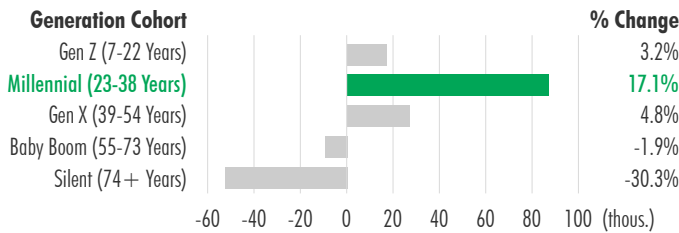
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>62,110</b>  | <b>31.3%</b>   | <b>\$99,959</b> | <b>9.0%</b>    |
| Software Developers & Programmers       | 19,310         | 22.6%          | \$103,505       | 8.7%           |
| Computer Support, Database & Systems    | 33,190         | 40.0%          | \$89,152        | 10.1%          |
| Computer & Information Systems Managers | 6,080          | 34.8%          | \$152,920       | 9.3%           |
| Technology Engineering-Related          | 3,530          | 6.0%           | \$90,951        | 5.6%           |
| <b>Total Non-Tech Occupations</b>       | <b>157,170</b> | <b>18.6%</b>   | <b>\$53,967</b> | <b>17.3%</b>   |
| Sales                                   | 18,290         | 36.3%          | \$73,501        | 2.7%           |
| Administrative & Office Support         | 96,880         | 4.0%           | \$38,394        | 11.8%          |
| Business Operations & Finance           | 31,620         | 40.2%          | \$84,844        | 8.9%           |
| Marketing                               | 10,380         | 56.2%          | \$70,839        | 31.8%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

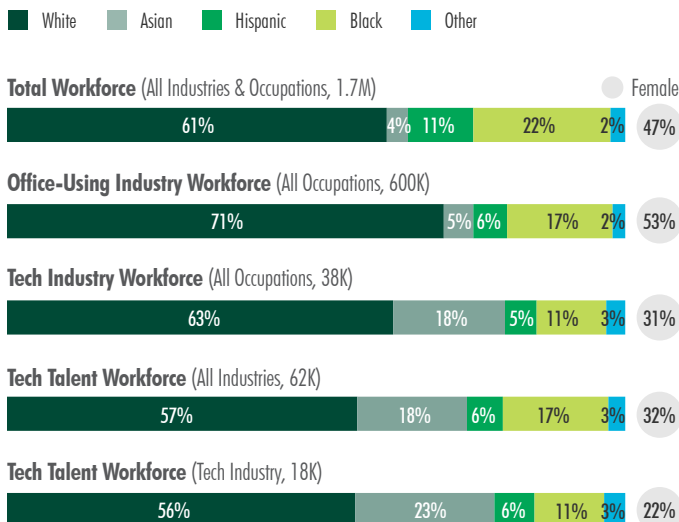
## POPULATION TRENDS

The population of millennials grew by 85,468 (17.1%) since 2014.



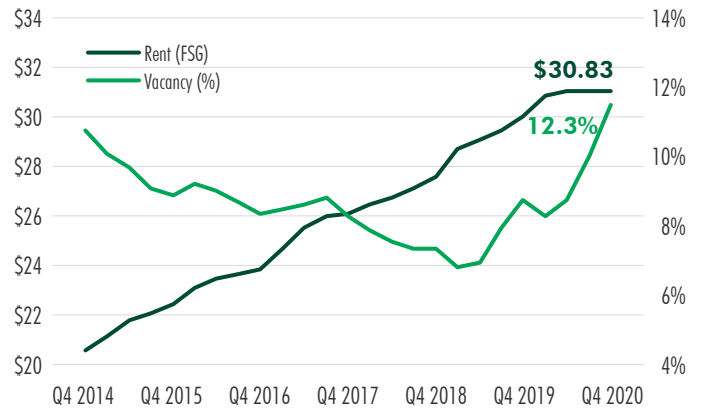
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,200** PER UNIT/MO.      **15.8%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#16** RANK      **\$44M** TALENT + **\$2M** OFFICE RENT = **\$46.2M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,123         | 73%            | 76%        | 24%        |
| Math/Statistics           | 301           | 26%            | 61%        | 39%        |
| Other Tech Engineering    | 312           | 56%            | 88%        | 12%        |
| <b>Totals</b>             | <b>1,736</b>  | <b>59%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 1,123         | 55%        | 16%        | 8%        | 17%        | 4%        |
| Math/Statistics           | 301           | 70%        | 8%         | 6%        | 14%        | 2%        |
| Other Tech Engineering    | 312           | 81%        | 7%         | 6%        | 3%         | 2%        |
| <b>Totals</b>             | <b>1,736</b>  | <b>63%</b> | <b>13%</b> | <b>7%</b> | <b>14%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 28 Calgary

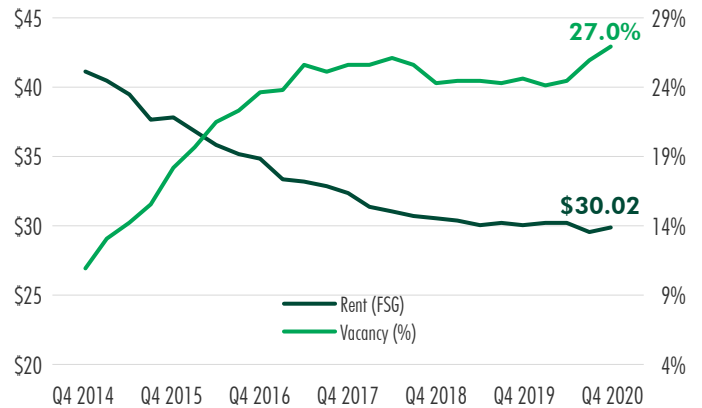
SCORE  
42.68

## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>46,700</b> | <b>17.9%</b>   | <b>\$95,826</b> | <b>5.9%</b>    |
| Software Developers & Programmers       | 12,700        | 19.8%          | \$94,806        | 13.9%          |
| Computer Support, Database & Systems    | 16,300        | 101.2%         | \$90,709        | 8.0%           |
| Computer & Information Systems Managers | 3,700         | 19.4%          | \$121,950       | 12.6%          |
| Technology Engineering-Related          | 14,000        | -21.3%         | \$95,888        | 1.3%           |
| <b>Total Non-Tech Occupations</b>       | <b>78,600</b> | <b>6.6%</b>    | <b>\$74,123</b> | <b>16.3%</b>   |
| Sales                                   | 6,200         | 17.0%          | \$75,400        | 3.3%           |
| Administrative & Office Support         | 38,000        | 1.3%           | \$58,614        | 16.4%          |
| Business Operations & Finance           | 21,200        | -1.4%          | \$96,221        | 19.4%          |
| Marketing                               | 13,200        | 40.4%          | \$82,680        | 12.4%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

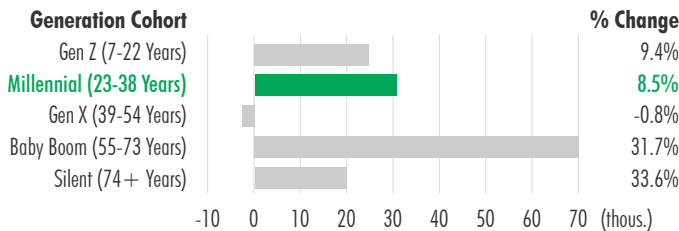
## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## POPULATION TRENDS

The population of millennials grew by 30,313 (8.5%) since 2014.



Source: Statistics Canada, April 2021.

## AVERAGE APARTMENT RENT

**\$891\***  
PER UNIT/MO.

**-1.4%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,195 in CS)

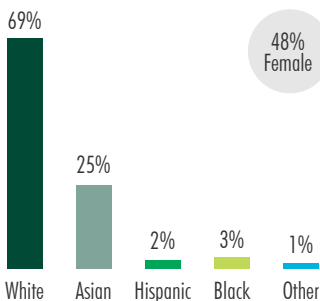
## AVERAGE ANNUAL OPERATING COSTS

**#43** RANK | **\$34M** TALENT + **\$2M** OFFICE RENT = **\$35.9M** TOTAL

Source: Statistics Canada (Metro), CBRE Research, 2021.  
US\$

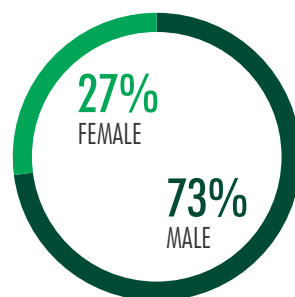
## WORKFORCE DIVERSITY

### Total Workforce by Race/Ethnicity (All Industries & Occupations)



Source: Statistics Canada Census, 2016.

### Tech Talent by Sex



Source: Statistics Canada, April 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 298           | 63%            |
| Math/Statistics           | 76            | 6%             |
| Other Tech Engineering    | 375           | -10%           |
| <b>Totals</b>             | <b>749</b>    | <b>11%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 29 Pittsburgh

SCORE  
42.27

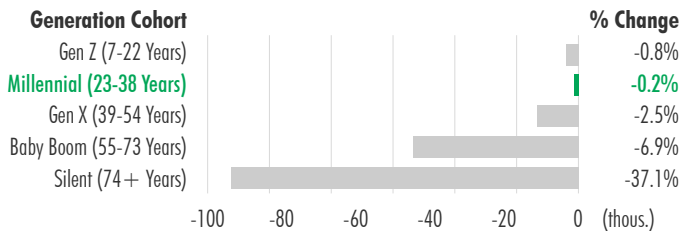
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>43,080</b>  | <b>10.7%</b>   | <b>\$88,685</b> | <b>15.1%</b>   |
| Software Developers & Programmers       | 12,750         | 8.1%           | \$92,449        | 15.5%          |
| Computer Support, Database & Systems    | 21,710         | 7.5%           | \$77,424        | 11.5%          |
| Computer & Information Systems Managers | 3,820          | 43.6%          | \$142,610       | 12.4%          |
| Technology Engineering-Related          | 4,800          | 12.1%          | \$86,705        | 17.7%          |
| <b>Total Non-Tech Occupations</b>       | <b>134,080</b> | <b>-9.8%</b>   | <b>\$46,866</b> | <b>9.8%</b>    |
| Sales                                   | 8,940          | -18.6%         | \$71,741        | 1.2%           |
| Administrative & Office Support         | 95,980         | -10.0%         | \$37,484        | 12.8%          |
| Business Operations & Finance           | 21,290         | -7.7%          | \$71,754        | 6.1%           |
| Marketing                               | 7,870          | 0.5%           | \$65,696        | 13.1%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

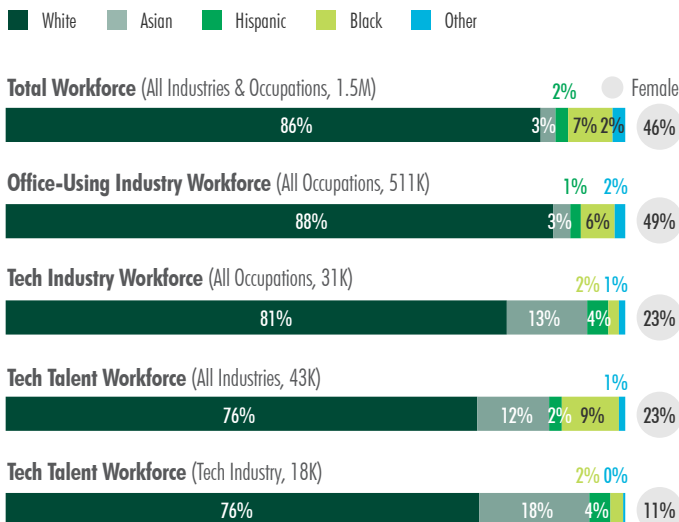
## POPULATION TRENDS

The population of millennials declined by -870 (-0.2%) since 2014.



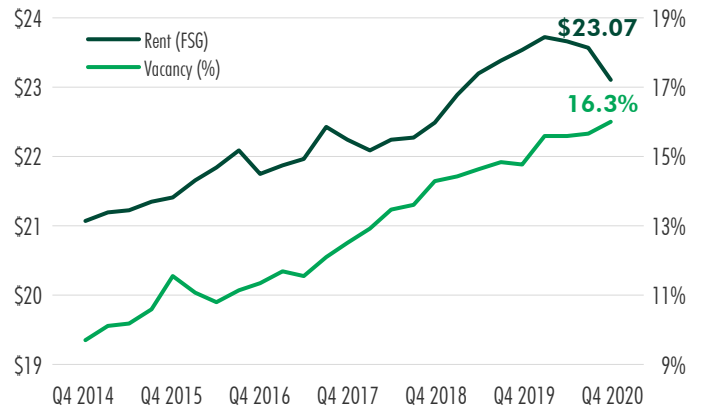
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,182** PER UNIT/MO. **5.2%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#37** RANK | **\$39M** TALENT + **\$2M** OFFICE RENT = **\$40.9M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 3,556         | 29%            | 69%        | 31%        |
| Math/Statistics           | 666           | 43%            | 58%        | 42%        |
| Other Tech Engineering    | 1,192         | 33%            | 75%        | 25%        |
| <b>Totals</b>             | <b>5,414</b>  | <b>32%</b>     | <b>69%</b> | <b>31%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 3,556         | 65%        | 23%        | 4%        | 5%        | 4%        |
| Math/Statistics           | 666           | 68%        | 21%        | 5%        | 2%        | 4%        |
| Other Tech Engineering    | 1,192         | 73%        | 10%        | 7%        | 7%        | 3%        |
| <b>Totals</b>             | <b>5,414</b>  | <b>67%</b> | <b>19%</b> | <b>5%</b> | <b>5%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 30 Kansas City

SCORE  
40.61

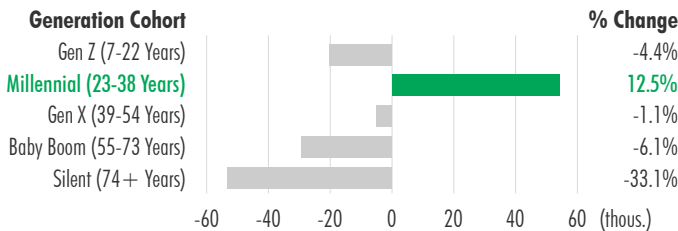
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>52,630</b>  | <b>8.5%</b>    | <b>\$86,770</b> | <b>6.0%</b>    |
| Software Developers & Programmers       | 19,450         | 29.8%          | \$94,199        | 7.4%           |
| Computer Support, Database & Systems    | 26,740         | 5.4%           | \$76,851        | 6.5%           |
| Computer & Information Systems Managers | 3,380          | -3.4%          | \$126,400       | 1.5%           |
| Technology Engineering-Related          | 3,060          | -34.3%         | \$82,453        | -1.7%          |
| <b>Total Non-Tech Occupations</b>       | <b>126,420</b> | <b>-8.7%</b>   | <b>\$51,064</b> | <b>16.1%</b>   |
| Sales                                   | 14,060         | 25.3%          | \$73,634        | 8.3%           |
| Administrative & Office Support         | 78,870         | -19.2%         | \$38,794        | 12.5%          |
| Business Operations & Finance           | 24,130         | 16.1%          | \$72,655        | 6.7%           |
| Marketing                               | 9,360          | 5.6%           | \$64,895        | 5.1%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

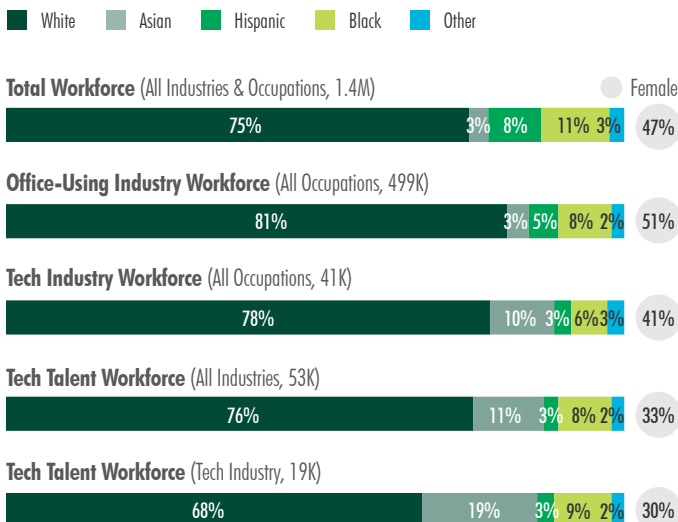
## POPULATION TRENDS

The population of millennials grew by 53,932 (12.5%) since 2014.



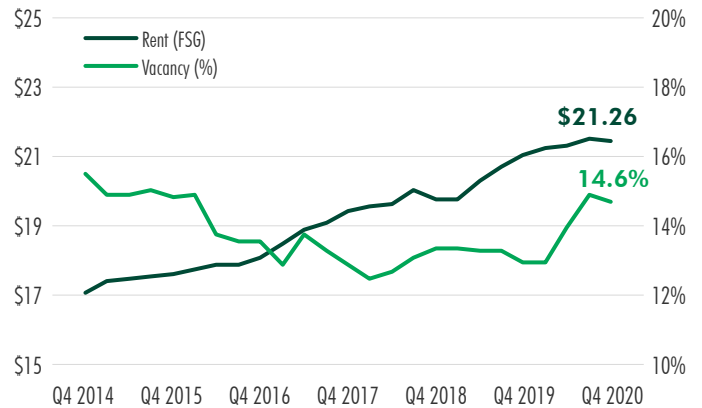
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,004** PER UNIT/MO.      **11.9%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#41** RANK      **\$38M** TALENT + **\$2M** OFFICE RENT = **\$40.1M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,258         | 62%            | 76%        | 24%        |
| Math/Statistics           | 184           | -3%            | 61%        | 39%        |
| Other Tech Engineering    | 297           | 30%            | 88%        | 12%        |
| <b>Totals</b>             | <b>1,739</b>  | <b>46%</b>     | <b>77%</b> | <b>23%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|-----------|-----------|------------|-----------|
| Computer Engineering      | 1,258         | 64%        | 9%        | 8%        | 14%        | 5%        |
| Math/Statistics           | 184           | 80%        | 5%        | 5%        | 6%         | 3%        |
| Other Tech Engineering    | 297           | 82%        | 4%        | 4%        | 5%         | 6%        |
| <b>Totals</b>             | <b>1,739</b>  | <b>70%</b> | <b>7%</b> | <b>7%</b> | <b>11%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 31 Columbus

SCORE  
40.10

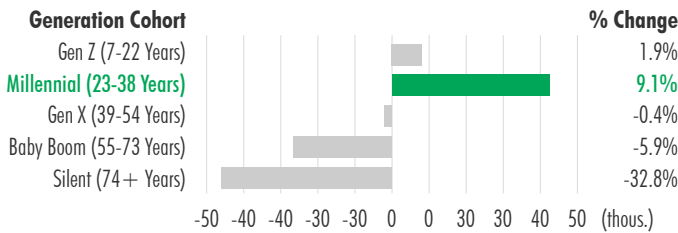
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>47,940</b>  | <b>5.1%</b>    | <b>\$92,684</b> | <b>10.5%</b>   |
| Software Developers & Programmers       | 17,740         | 26.3%          | \$97,959        | 10.6%          |
| Computer Support, Database & Systems    | 24,080         | -6.3%          | \$83,328        | 10.7%          |
| Computer & Information Systems Managers | 3,030          | -13.7%         | \$144,080       | 8.3%           |
| Technology Engineering-Related          | 3,090          | 29.8%          | \$84,916        | 11.5%          |
| <b>Total Non-Tech Occupations</b>       | <b>134,730</b> | <b>3.2%</b>    | <b>\$51,044</b> | <b>13.3%</b>   |
| Sales                                   | 10,050         | -14.6%         | \$68,717        | 0.3%           |
| Administrative & Office Support         | 85,610         | -2.0%          | \$39,140        | 15.1%          |
| Business Operations & Finance           | 28,720         | 27.6%          | \$72,994        | 7.0%           |
| Marketing                               | 10,350         | 16.3%          | \$71,440        | 12.0%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

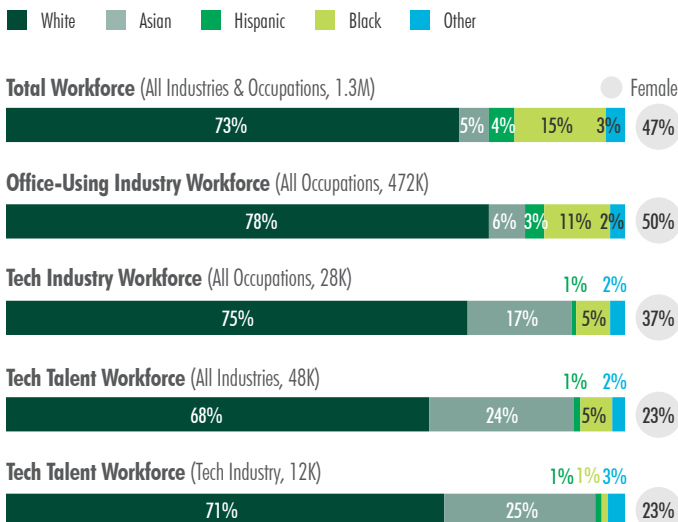
## POPULATION TRENDS

The population of millennials grew by 43,014 (9.1%) since 2014.



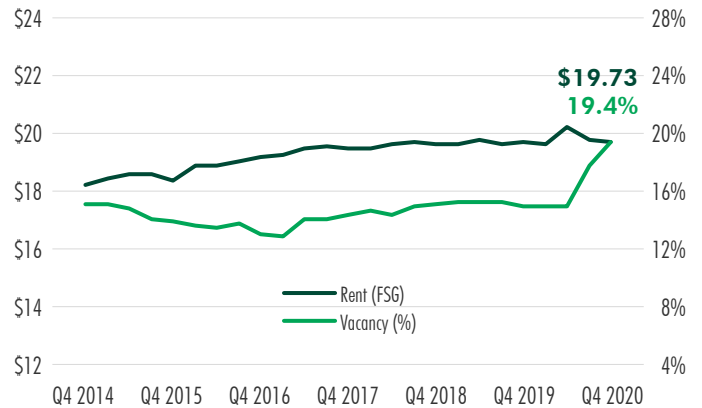
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,028**  
PER UNIT/MO.

**16.6%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#25** RANK

**\$41M** TALENT + **\$1M** OFFICE RENT = **\$42.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,132         | 17%            | 83%        | 17%        |
| Math/Statistics           | 501           | 86%            | 57%        | 43%        |
| Other Tech Engineering    | 788           | -2%            | 78%        | 22%        |
| <b>Totals</b>             | <b>2,421</b>  | <b>18%</b>     | <b>76%</b> | <b>24%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|-----------|-----------|-----------|-----------|
| Computer Engineering      | 1,132         | 75%        | 11%       | 4%        | 6%        | 3%        |
| Math/Statistics           | 501           | 77%        | 9%        | 4%        | 7%        | 3%        |
| Other Tech Engineering    | 788           | 82%        | 7%        | 4%        | 3%        | 4%        |
| <b>Totals</b>             | <b>2,421</b>  | <b>78%</b> | <b>9%</b> | <b>4%</b> | <b>5%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 32 Orlando

SCORE  
38.83

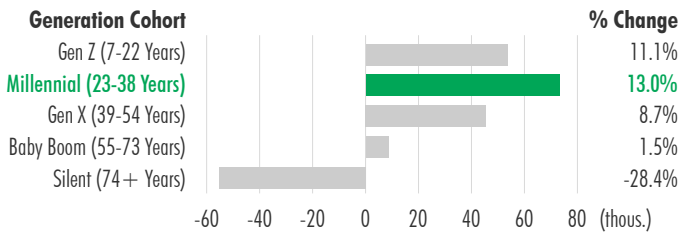
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>43,340</b>  | <b>30.0%</b>   | <b>\$89,180</b> | <b>13.6%</b>   |
| Software Developers & Programmers       | 13,560         | 31.4%          | \$92,727        | 5.9%           |
| Computer Support, Database & Systems    | 21,990         | 24.3%          | \$78,174        | 14.6%          |
| Computer & Information Systems Managers | 3,370          | 123.2%         | \$147,580       | 4.3%           |
| Technology Engineering-Related          | 4,420          | 15.7%          | \$88,524        | 15.5%          |
| <b>Total Non-Tech Occupations</b>       | <b>152,940</b> | <b>5.0%</b>    | <b>\$45,275</b> | <b>14.0%</b>   |
| Sales                                   | 18,190         | 29.6%          | \$58,751        | -3.0%          |
| Administrative & Office Support         | 100,940        | -3.1%          | \$36,257        | 15.6%          |
| Business Operations & Finance           | 23,030         | 11.6%          | \$68,398        | 8.7%           |
| Marketing                               | 10,780         | 58.1%          | \$57,568        | 5.9%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

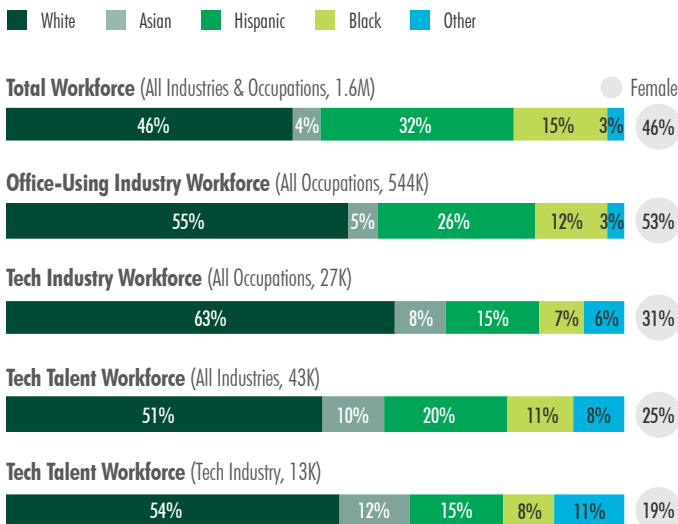
## POPULATION TRENDS

The population of millennials grew by 71,211 (13.0%) since 2014.



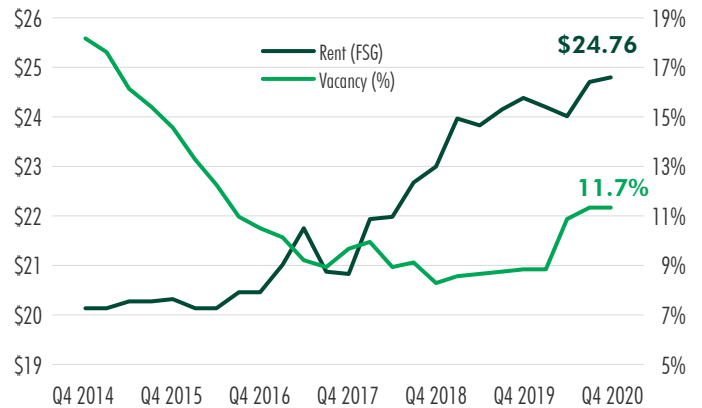
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,253** PER UNIT/MO.      **14.1%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#35** RANK      **\$39M** TALENT + **\$2M** OFFICE RENT = **\$41.1M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,427         | 22%            | 84%        | 16%        |
| Math/Statistics           | 124           | 38%            | 59%        | 41%        |
| Other Tech Engineering    | 1,242         | 111%           | 86%        | 14%        |
| <b>Totals</b>             | <b>2,793</b>  | <b>51%</b>     | <b>84%</b> | <b>16%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|-----------|------------|-----------|-----------|
| Computer Engineering      | 1,427         | 52%        | 12%       | 23%        | 8%        | 4%        |
| Math/Statistics           | 124           | 69%        | 11%       | 14%        | 5%        | 2%        |
| Other Tech Engineering    | 1,242         | 62%        | 6%        | 21%        | 7%        | 5%        |
| <b>Totals</b>             | <b>2,793</b>  | <b>57%</b> | <b>9%</b> | <b>22%</b> | <b>7%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 33 Tampa

SCORE  
37.70

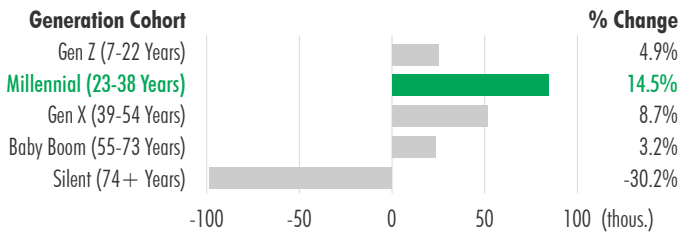
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>53,960</b>  | <b>23.5%</b>   | <b>\$90,525</b> | <b>16.7%</b>   |
| Software Developers & Programmers       | 17,440         | 24.0%          | \$97,251        | 15.4%          |
| Computer Support, Database & Systems    | 28,640         | 19.0%          | \$78,870        | 16.0%          |
| Computer & Information Systems Managers | 3,970          | 78.0%          | \$150,150       | 2.8%           |
| Technology Engineering-Related          | 3,910          | 17.1%          | \$85,345        | 16.7%          |
| <b>Total Non-Tech Occupations</b>       | <b>194,270</b> | <b>8.1%</b>    | <b>\$46,601</b> | <b>15.4%</b>   |
| Sales                                   | 18,810         | -2.6%          | \$70,596        | 9.7%           |
| Administrative & Office Support         | 135,210        | 3.9%           | \$37,165        | 19.3%          |
| Business Operations & Finance           | 28,130         | 25.4%          | \$71,070        | 6.9%           |
| Marketing                               | 12,120         | 53.6%          | \$57,843        | -3.1%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

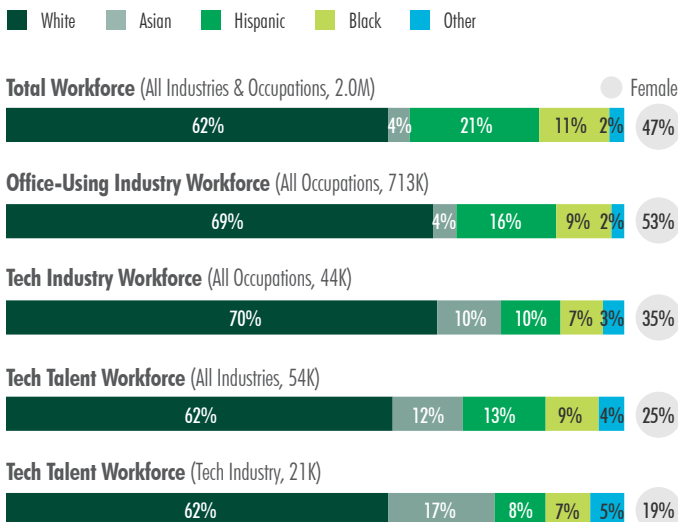
## POPULATION TRENDS

The population of millennials grew by 84,525 (14.5%) since 2014.



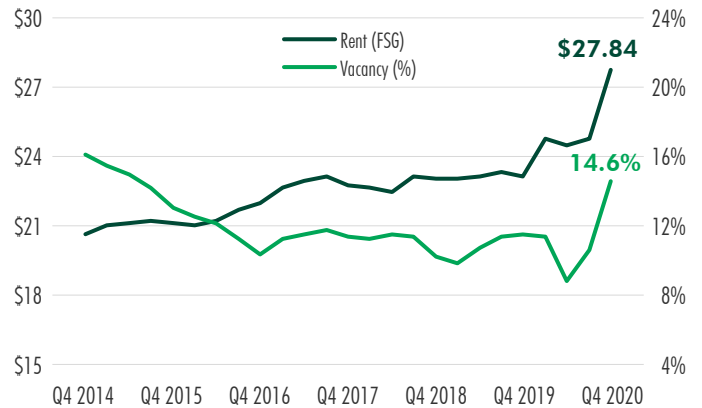
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,292** PER UNIT/MO.      **18.7%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#29** RANK      **\$40M** TALENT + **\$2M** OFFICE RENT = **\$42M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,328         | 85%            | 76%        | 24%        |
| Math/Statistics           | 127           | 19%            | 59%        | 41%        |
| Other Tech Engineering    | 413           | 59%            | 84%        | 16%        |
| <b>Totals</b>             | <b>1,868</b>  | <b>72%</b>     | <b>76%</b> | <b>24%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic   | Black      | Other     |
|---------------------------|---------------|------------|-----------|------------|------------|-----------|
| Computer Engineering      | 1,328         | 54%        | 10%       | 17%        | 16%        | 3%        |
| Math/Statistics           | 127           | 60%        | 6%        | 24%        | 6%         | 5%        |
| Other Tech Engineering    | 413           | 61%        | 7%        | 23%        | 5%         | 4%        |
| <b>Totals</b>             | <b>1,868</b>  | <b>56%</b> | <b>9%</b> | <b>19%</b> | <b>13%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 34 Quebec City

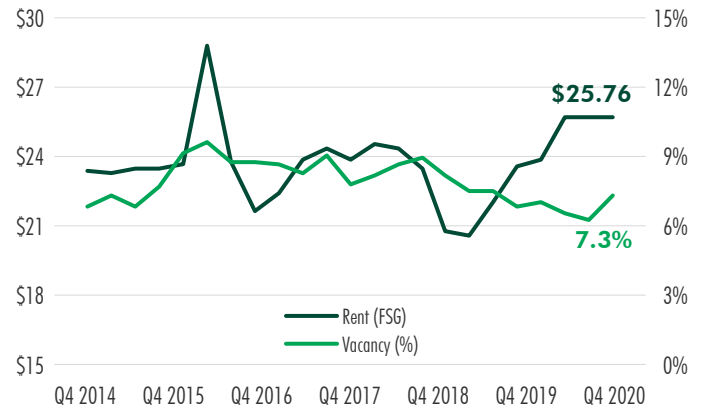
SCORE  
37.02

## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>29,400</b> | <b>18.1%</b>   | <b>\$85,093</b> | <b>36.4%</b>   |
| Software Developers & Programmers       | 8,400         | 47.4%          | \$81,120        | 51.7%          |
| Computer Support, Database & Systems    | 11,700        | 10.4%          | \$81,494        | 14.2%          |
| Computer & Information Systems Managers | 2,100         | 200.0%         | \$150,488       | N/A            |
| Technology Engineering-Related          | 7,200         | -8.9%          | \$76,981        | 23.6%          |
| <b>Total Non-Tech Occupations</b>       | <b>42,700</b> | <b>-3.0%</b>   | <b>\$61,290</b> | <b>11.4%</b>   |
| Sales                                   | 2,300         | -11.5%         | \$58,074        | 17.0%          |
| Administrative & Office Support         | 21,000        | -16.3%         | \$48,048        | 7.1%           |
| Business Operations & Finance           | 12,700        | 8.5%           | \$80,330        | 6.1%           |
| Marketing                               | 6,700         | 45.7%          | \$67,808        | 11.7%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

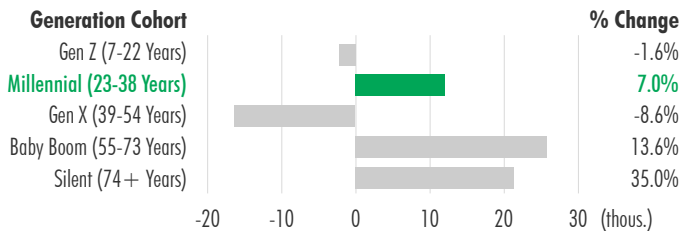
## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## POPULATION TRENDS

The population of millennials grew by 11,734 (7.0%) since 2014.



Source: Statistics Canada, April 2021.

## AVERAGE APARTMENT RENT

**\$652\***  
PER UNIT/MO.

**15.0%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$874 in CS)

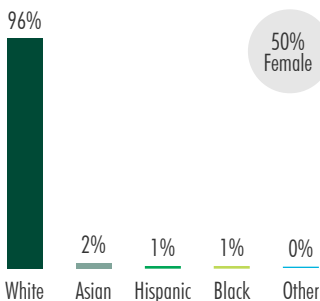
## AVERAGE ANNUAL OPERATING COSTS

**#48** RANK | **\$31M** TALENT + **\$1M** OFFICE RENT = **\$32.5M** TOTAL

Source: Statistics Canada (Metro), CBRE Research, 2021.  
US\$

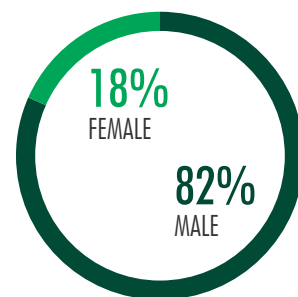
## WORKFORCE DIVERSITY

**Total Workforce by Race/Ethnicity**  
(All Industries & Occupations)



Source: Statistics Canada Census, 2016.

**Tech Talent by Sex**



Source: Statistics Canada, April 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 183           | 27%            |
| Math/Statistics           | 42            | 11%            |
| Other Tech Engineering    | 236           | 35%            |
| <b>Totals</b>             | <b>461</b>    | <b>29%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

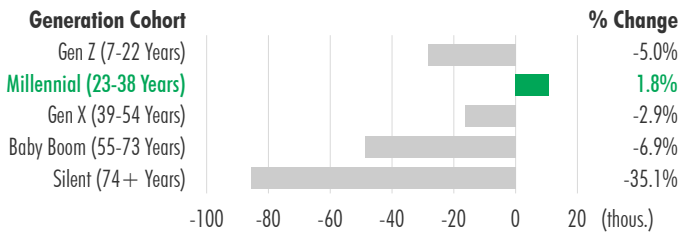
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>55,080</b>  | <b>9.9%</b>    | <b>\$91,900</b> | <b>7.1%</b>    |
| Software Developers & Programmers       | 17,920         | 25.7%          | \$96,166        | 4.5%           |
| Computer Support, Database & Systems    | 28,220         | 1.6%           | \$79,964        | 5.3%           |
| Computer & Information Systems Managers | 4,070          | 26.8%          | \$143,710       | 7.1%           |
| Technology Engineering-Related          | 4,870          | -0.2%          | \$102,073       | 11.6%          |
| <b>Total Non-Tech Occupations</b>       | <b>159,800</b> | <b>-3.7%</b>   | <b>\$50,385</b> | <b>14.9%</b>   |
| Sales                                   | 12,740         | -15.2%         | \$76,628        | 25.7%          |
| Administrative & Office Support         | 107,720        | -9.1%          | \$39,191        | 14.3%          |
| Business Operations & Finance           | 28,970         | 26.5%          | \$74,988        | 1.5%           |
| Marketing                               | 10,370         | 9.5%           | \$65,691        | 3.3%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

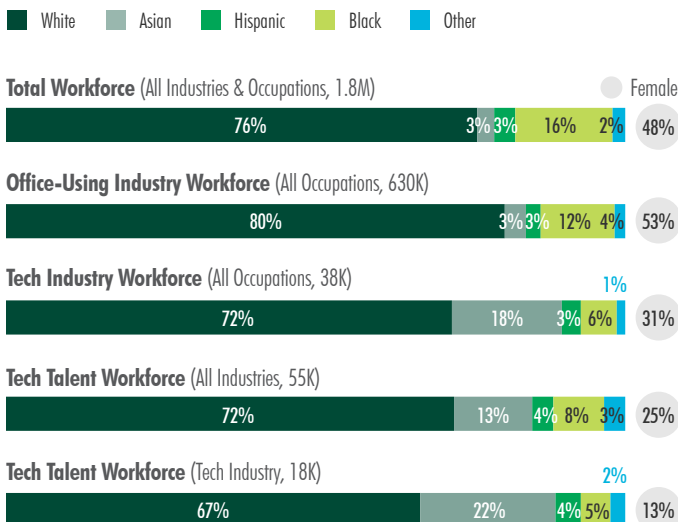
## POPULATION TRENDS

The population of millennials grew by 10,711 (1.8%) since 2014.



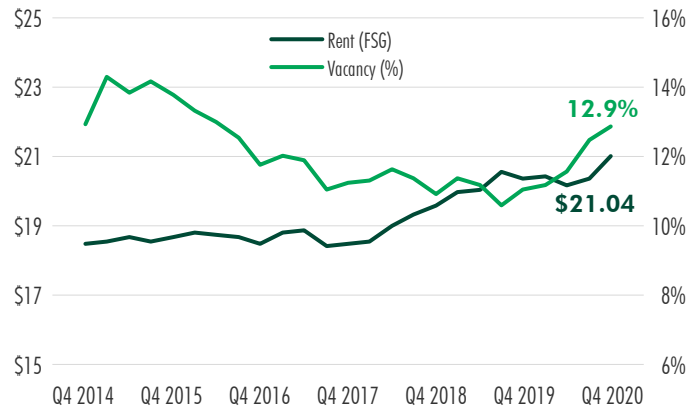
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$992** PER UNIT/MO. **10.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#27** RANK | **\$41M** TALENT + **\$2M** OFFICE RENT = **\$42.3M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,247         | 81%            | 76%        | 24%        |
| Math/Statistics           | 351           | 37%            | 59%        | 41%        |
| Other Tech Engineering    | 559           | 39%            | 78%        | 22%        |
| <b>Totals</b>             | <b>2,157</b>  | <b>60%</b>     | <b>73%</b> | <b>27%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 1,247         | 74%        | 11%        | 4%        | 8%        | 4%        |
| Math/Statistics           | 351           | 75%        | 13%        | 5%        | 3%        | 4%        |
| Other Tech Engineering    | 559           | 81%        | 8%         | 5%        | 4%        | 3%        |
| <b>Totals</b>             | <b>2,157</b>  | <b>76%</b> | <b>10%</b> | <b>4%</b> | <b>6%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 36 Indianapolis

SCORE  
36.03

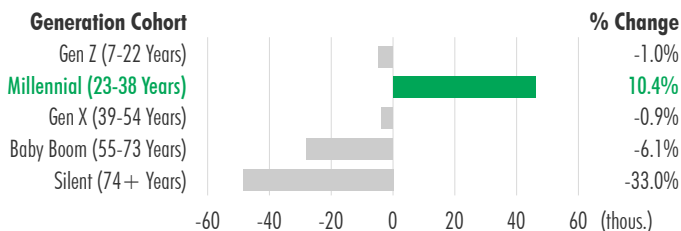
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>39,990</b>  | <b>23.2%</b>   | <b>\$86,361</b> | <b>13.4%</b>   |
| Software Developers & Programmers       | 14,420         | 44.3%          | \$92,621        | 19.9%          |
| Computer Support, Database & Systems    | 20,510         | 18.2%          | \$75,693        | 6.4%           |
| Computer & Information Systems Managers | 2,830          | 11.0%          | \$130,900       | 17.7%          |
| Technology Engineering-Related          | 2,230          | -13.6%         | \$87,480        | 22.1%          |
| <b>Total Non-Tech Occupations</b>       | <b>120,520</b> | <b>5.1%</b>    | <b>\$51,000</b> | <b>11.9%</b>   |
| Sales                                   | 12,640         | -3.7%          | \$84,736        | 18.7%          |
| Administrative & Office Support         | 77,730         | 5.1%           | \$38,898        | 11.6%          |
| Business Operations & Finance           | 21,800         | 7.0%           | \$71,104        | 10.2%          |
| Marketing                               | 8,350          | 14.9%          | \$60,100        | 8.9%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

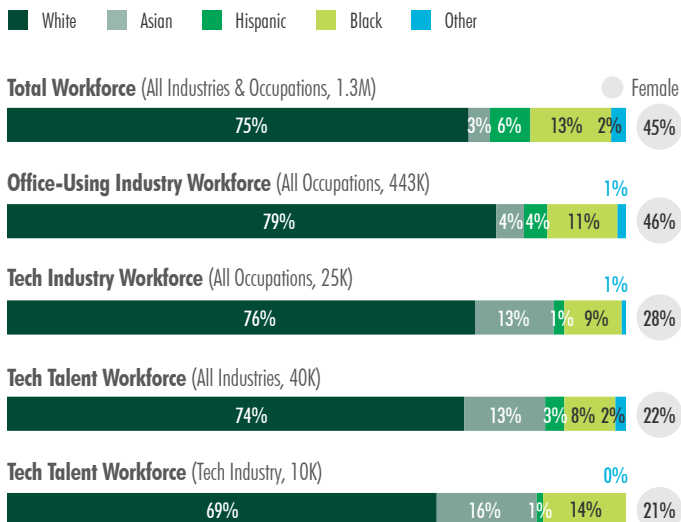
## POPULATION TRENDS

The population of millennials grew by 44,413 (10.4%) since 2014.



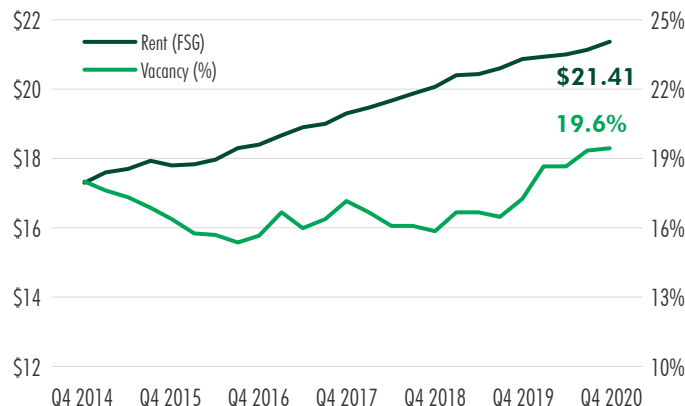
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$951** PER UNIT/MO.      **16.8%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#39** RANK      **\$39M** TALENT + **\$2M** OFFICE RENT = **\$40.3M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 932           | 140%           | 77%        | 23%        |
| Math/Statistics           | 145           | -2%            | 70%        | 30%        |
| Other Tech Engineering    | 355           | 145%           | 82%        | 18%        |
| <b>Totals</b>             | <b>1,432</b>  | <b>110%</b>    | <b>78%</b> | <b>22%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|-----------|-----------|------------|-----------|
| Computer Engineering      | 932           | 71%        | 6%        | 7%        | 12%        | 4%        |
| Math/Statistics           | 145           | 85%        | 7%        | 1%        | 4%         | 3%        |
| Other Tech Engineering    | 355           | 81%        | 5%        | 6%        | 5%         | 3%        |
| <b>Totals</b>             | <b>1,432</b>  | <b>74%</b> | <b>6%</b> | <b>6%</b> | <b>10%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 37 South Florida

SCORE  
35.74

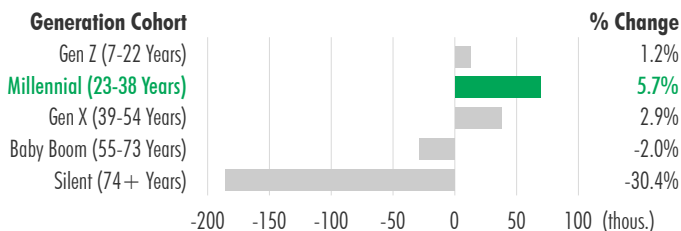
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>67,500</b>  | <b>18.0%</b>   | <b>\$92,096</b> | <b>17.9%</b>   |
| Software Developers & Programmers       | 22,090         | 20.0%          | \$96,638        | 20.0%          |
| Computer Support, Database & Systems    | 34,880         | 13.2%          | \$77,914        | 11.5%          |
| Computer & Information Systems Managers | 6,180          | 74.6%          | \$158,450       | 12.3%          |
| Technology Engineering-Related          | 4,350          | -2.7%          | \$88,476        | 17.6%          |
| <b>Total Non-Tech Occupations</b>       | <b>355,530</b> | <b>1.3%</b>    | <b>\$47,908</b> | <b>14.5%</b>   |
| Sales                                   | 35,530         | -8.4%          | \$71,591        | 8.1%           |
| Administrative & Office Support         | 242,680        | -2.7%          | \$37,274        | 16.5%          |
| Business Operations & Finance           | 53,130         | 14.3%          | \$74,014        | 8.1%           |
| Marketing                               | 24,190         | 47.9%          | \$62,471        | 6.3%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

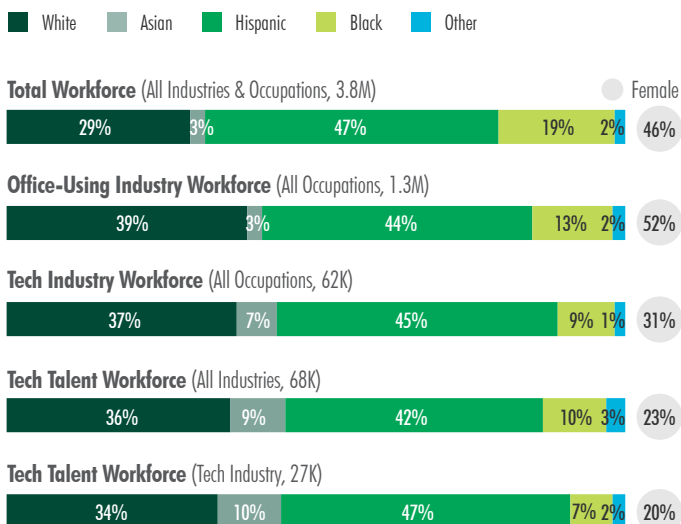
## POPULATION TRENDS

The population of millennials grew by 70,017 (5.7%) since 2014.



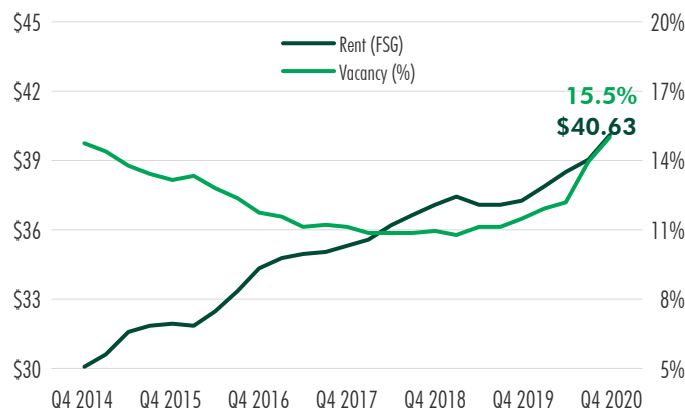
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,712** PER UNIT/MO. **8.3%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#23** RANK | **\$41M** TALENT + **\$3M** OFFICE RENT = **\$44.2M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 2,032         | 28%            | 80%        | 20%        |
| Math/Statistics           | 214           | 65%            | 69%        | 31%        |
| Other Tech Engineering    | 524           | 33%            | 79%        | 21%        |
| <b>Totals</b>             | <b>2,770</b>  | <b>31%</b>     | <b>79%</b> | <b>21%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic   | Black      | Other     |
|---------------------------|---------------|------------|-----------|------------|------------|-----------|
| Computer Engineering      | 2,032         | 24%        | 6%        | 50%        | 17%        | 3%        |
| Math/Statistics           | 214           | 40%        | 7%        | 44%        | 6%         | 3%        |
| Other Tech Engineering    | 524           | 28%        | 4%        | 53%        | 12%        | 2%        |
| <b>Totals</b>             | <b>2,770</b>  | <b>26%</b> | <b>6%</b> | <b>50%</b> | <b>15%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 38 Edmonton

SCORE  
33.64

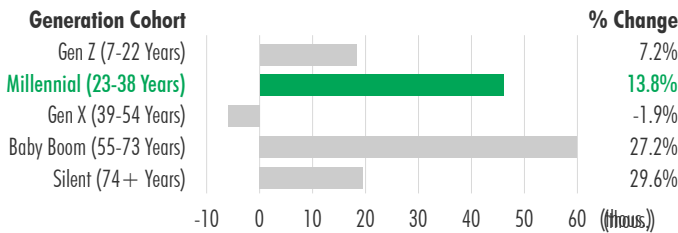
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>34,500</b> | <b>53.3%</b>   | <b>\$92,768</b> | <b>26.9%</b>   |
| Software Developers & Programmers       | 7,400         | 80.5%          | \$77,480        | -0.3%          |
| Computer Support, Database & Systems    | 13,400        | 94.2%          | \$94,037        | 22.3%          |
| Computer & Information Systems Managers | 2,800         | 64.7%          | N/A             | N/A            |
| Technology Engineering-Related          | 10,900        | 11.2%          | \$90,854        | 11.9%          |
| <b>Total Non-Tech Occupations</b>       | <b>68,600</b> | <b>9.6%</b>    | <b>\$68,895</b> | <b>14.0%</b>   |
| Sales                                   | 6,900         | 9.5%           | \$64,106        | -3.0%          |
| Administrative & Office Support         | 35,000        | 0.9%           | \$55,973        | 12.5%          |
| Business Operations & Finance           | 19,900        | 11.2%          | \$89,981        | 15.8%          |
| Marketing                               | 6,800         | 83.8%          | \$78,562        | 16.5%          |

Source: Statistics Canada (Metro Area), April 2021.  
\*Data in CS

## POPULATION TRENDS

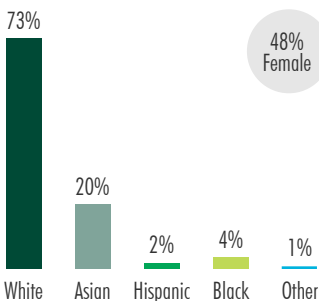
The population of millennials grew by 45,854 (13.8%) since 2014.



Source: Statistics Canada, April 2021.

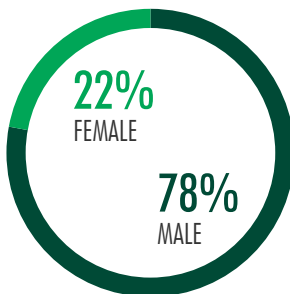
## WORKFORCE DIVERSITY

**Total Workforce by Race/Ethnicity**  
(All Industries & Occupations)



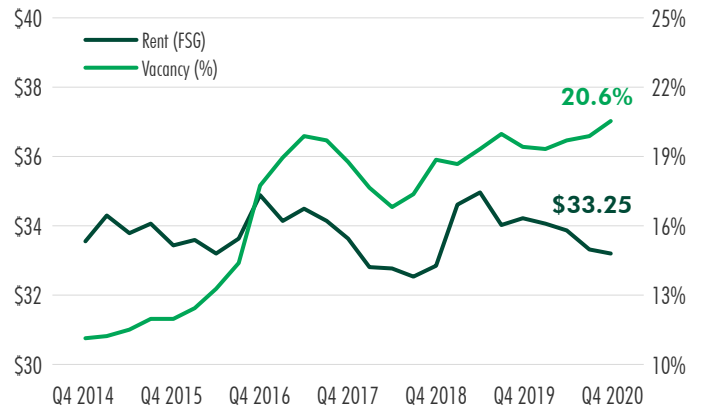
Source: Statistics Canada Census, 2016.

**Tech Talent by Sex**



Source: Statistics Canada, April 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.  
\*Data in CS

## AVERAGE APARTMENT RENT

**\$859\*** PER UNIT/MO.      **1.4%** FIVE-YEAR GROWTH

Source: Apt. rent data from CMHC (Metro), Q4 2020.  
\*US\$ (\$1,153 in CS)

## AVERAGE ANNUAL OPERATING COSTS

**#44** RANK      **\$32M** TALENT + **\$2M** OFFICE RENT = **\$33.9M** TOTAL

Source: Statistics Canada (Metro), CBRE Research, 2021.  
US\$

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 |
|---------------------------|---------------|----------------|
| Computer Engineering      | 378           | 75%            |
| Math/Statistics           | 172           | 41%            |
| Other Tech Engineering    | 720           | 18%            |
| <b>Totals</b>             | <b>1,270</b>  | <b>34%</b>     |

Source: Various Canadian Ministries of Education (Region), 2021.

# 39 Houston

SCORE  
31.06

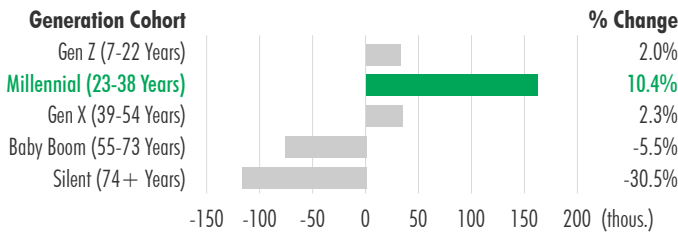
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>96,420</b>  | <b>-5.9%</b>   | <b>\$101,767</b> | <b>8.5%</b>    |
| Software Developers & Programmers       | 26,520         | -1.7%          | \$106,451        | 7.9%           |
| Computer Support, Database & Systems    | 51,320         | -6.0%          | \$93,658         | 8.5%           |
| Computer & Information Systems Managers | 6,410          | 8.1%           | \$161,500        | 6.6%           |
| Technology Engineering-Related          | 12,170         | -18.5%         | \$94,291         | 5.7%           |
| <b>Total Non-Tech Occupations</b>       | <b>356,160</b> | <b>-5.8%</b>   | <b>\$51,625</b>  | <b>3.0%</b>    |
| Sales                                   | 36,050         | -9.5%          | \$70,758         | -6.6%          |
| Administrative & Office Support         | 240,860        | -5.6%          | \$39,834         | 9.1%           |
| Business Operations & Finance           | 62,290         | -8.0%          | \$82,376         | -1.2%          |
| Marketing                               | 16,960         | 10.1%          | \$65,466         | 3.6%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

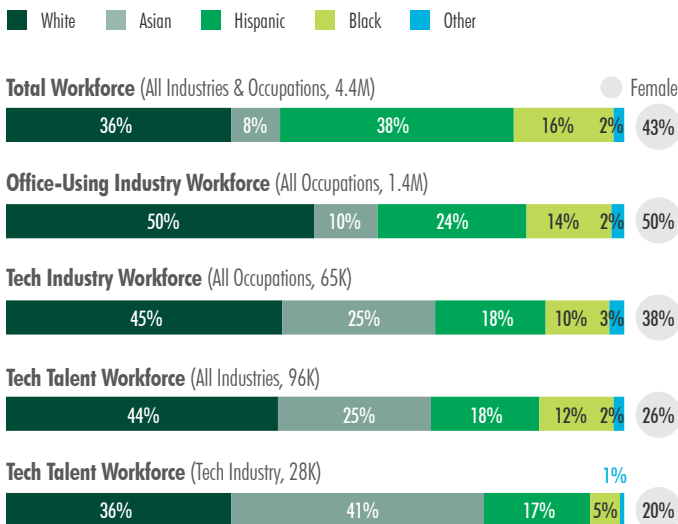
## POPULATION TRENDS

The population of millennials grew by 157,096 (10.4%) since 2014.



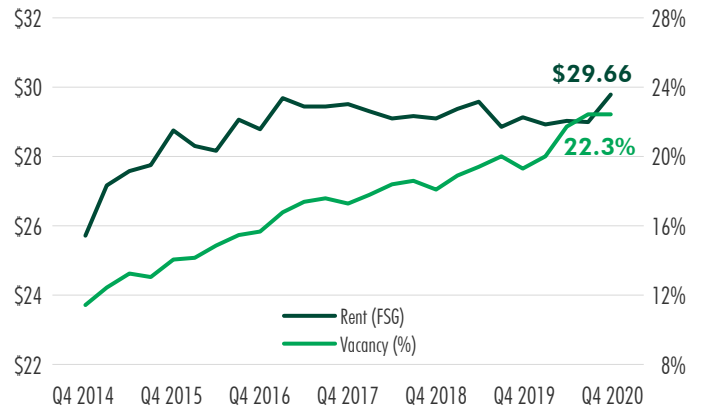
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,092**  
PER UNIT/MO.

**-0.8%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#14** RANK

**\$44M** TALENT + **\$2M** OFFICE RENT = **\$46.6M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,862         | 85%            | 72%        | 28%        |
| Math/Statistics           | 520           | 25%            | 53%        | 47%        |
| Other Tech Engineering    | 672           | 79%            | 79%        | 21%        |
| <b>Totals</b>             | <b>3,054</b>  | <b>70%</b>     | <b>70%</b> | <b>30%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black      | Other     |
|---------------------------|---------------|------------|------------|------------|------------|-----------|
| Computer Engineering      | 1,862         | 31%        | 29%        | 25%        | 14%        | 1%        |
| Math/Statistics           | 520           | 42%        | 22%        | 24%        | 10%        | 2%        |
| Other Tech Engineering    | 672           | 35%        | 18%        | 25%        | 18%        | 3%        |
| <b>Totals</b>             | <b>3,054</b>  | <b>34%</b> | <b>25%</b> | <b>25%</b> | <b>14%</b> | <b>2%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 40 Sacramento

SCORE  
30.97

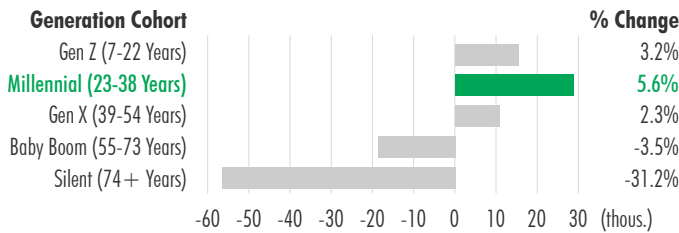
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|----------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>40,160</b>  | <b>10.7%</b>   | <b>\$102,394</b> | <b>16.2%</b>   |
| Software Developers & Programmers       | 10,270         | -21.8%         | \$111,984        | 17.6%          |
| Computer Support, Database & Systems    | 22,640         | 31.2%          | \$92,515         | 20.3%          |
| Computer & Information Systems Managers | 3,540          | 66.2%          | \$160,000        | 23.9%          |
| Technology Engineering-Related          | 3,710          | -1.1%          | \$81,171         | -11.7%         |
| <b>Total Non-Tech Occupations</b>       | <b>106,110</b> | <b>-5.2%</b>   | <b>\$53,750</b>  | <b>15.4%</b>   |
| Sales                                   | 7,570          | -3.9%          | \$76,693         | 12.3%          |
| Administrative & Office Support         | 68,920         | -11.9%         | \$42,794         | 16.5%          |
| Business Operations & Finance           | 22,250         | 9.9%           | \$80,726         | 14.5%          |
| Marketing                               | 7,370          | 32.1%          | \$51,191         | -24.1%         |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

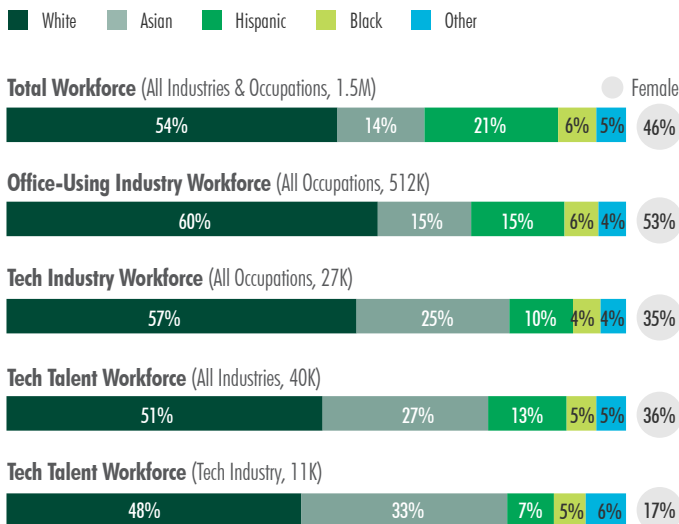
## POPULATION TRENDS

The population of millennials grew by 28,407 (5.6%) since 2014.



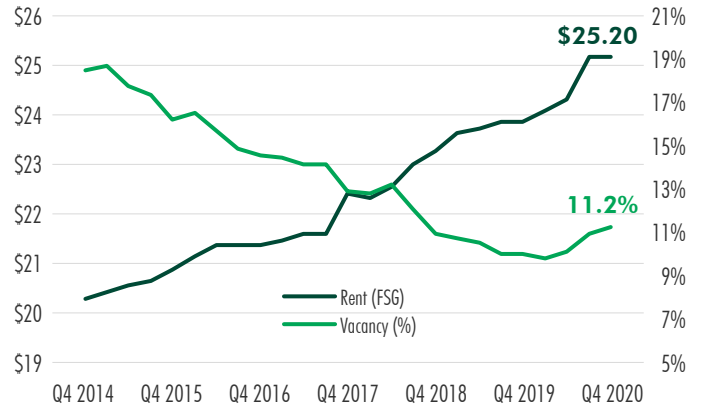
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,602** PER UNIT/MO. **36.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#12** RANK | **\$45M** TALENT + **\$2M** OFFICE RENT = **\$46.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 988           | 93%            | 77%        | 23%        |
| Math/Statistics           | 532           | 145%           | 55%        | 45%        |
| Other Tech Engineering    | 617           | 20%            | 82%        | 18%        |
| <b>Totals</b>             | <b>2,137</b>  | <b>72%</b>     | <b>73%</b> | <b>27%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 988           | 32%        | 48%        | 11%        | 2%        | 7%        |
| Math/Statistics           | 532           | 37%        | 37%        | 19%        | 1%        | 6%        |
| Other Tech Engineering    | 617           | 43%        | 26%        | 22%        | 2%        | 7%        |
| <b>Totals</b>             | <b>2,137</b>  | <b>37%</b> | <b>39%</b> | <b>16%</b> | <b>2%</b> | <b>7%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 41 Nashville

SCORE  
30.56

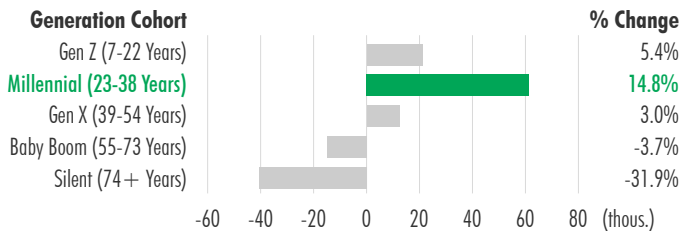
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>35,190</b>  | <b>36.1%</b>   | <b>\$84,615</b> | <b>10.1%</b>   |
| Software Developers & Programmers       | 10,260         | 59.3%          | \$90,821        | 10.9%          |
| Computer Support, Database & Systems    | 19,100         | 38.8%          | \$73,170        | 6.6%           |
| Computer & Information Systems Managers | 3,870          | 19.1%          | \$128,190       | 23.7%          |
| Technology Engineering-Related          | 1,960          | -18.7%         | \$77,621        | 4.5%           |
| <b>Total Non-Tech Occupations</b>       | <b>121,490</b> | <b>8.4%</b>    | <b>\$49,381</b> | <b>17.4%</b>   |
| Sales                                   | 13,620         | 22.8%          | \$73,358        | 21.9%          |
| Administrative & Office Support         | 78,830         | -1.1%          | \$38,657        | 13.5%          |
| Business Operations & Finance           | 22,450         | 38.6%          | \$68,218        | 5.6%           |
| Marketing                               | 6,590          | 30.5%          | \$63,925        | 13.4%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

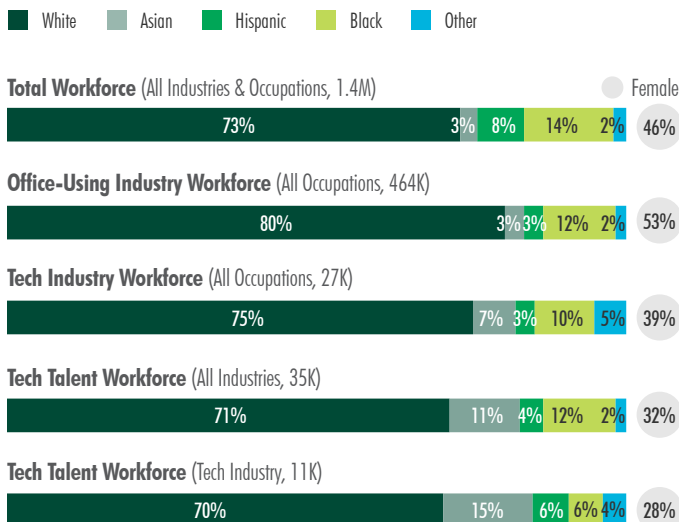
## POPULATION TRENDS

The population of millennials grew by 60,909 (14.8%) since 2014.



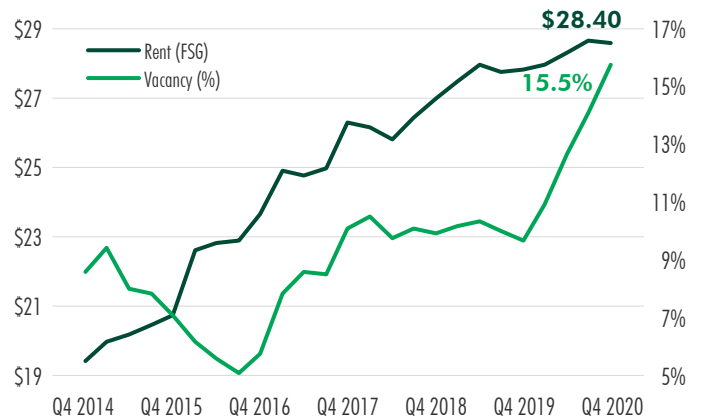
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,244**  
PER UNIT/MO.

**8.8%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#40** RANK | **\$38M** TALENT + **\$2M** OFFICE RENT = **\$39.9M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 501           | 59%            | 76%        | 24%        |
| Math/Statistics           | 266           | 54%            | 67%        | 33%        |
| Other Tech Engineering    | 264           | 66%            | 81%        | 19%        |
| <b>Totals</b>             | <b>1,031</b>  | <b>59%</b>     | <b>75%</b> | <b>25%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 501           | 60%        | 17%        | 7%        | 13%        | 4%        |
| Math/Statistics           | 266           | 62%        | 20%        | 6%        | 5%         | 7%        |
| Other Tech Engineering    | 264           | 65%        | 8%         | 9%        | 14%        | 5%        |
| <b>Totals</b>             | <b>1,031</b>  | <b>62%</b> | <b>15%</b> | <b>7%</b> | <b>11%</b> | <b>5%</b> |

Source: The National Center for Education Statistics (Region), 2020.



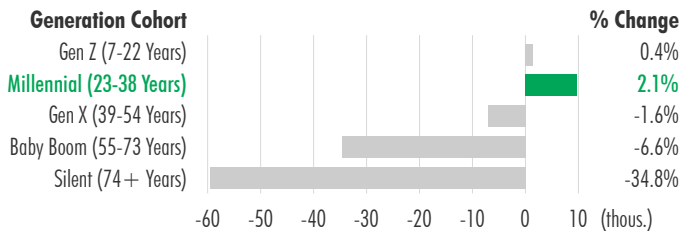
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>39,080</b>  | <b>9.6%</b>    | <b>\$91,596</b> | <b>12.4%</b>   |
| Software Developers & Programmers       | 12,850         | 35.7%          | \$102,568       | 27.0%          |
| Computer Support, Database & Systems    | 20,000         | -3.2%          | \$77,882        | 2.4%           |
| Computer & Information Systems Managers | 2,940          | 1.4%           | \$142,120       | 12.0%          |
| Technology Engineering-Related          | 3,290          | 25.6%          | \$86,964        | 13.3%          |
| <b>Total Non-Tech Occupations</b>       | <b>124,220</b> | <b>6.8%</b>    | <b>\$50,501</b> | <b>12.5%</b>   |
| Sales                                   | 11,290         | -22.7%         | \$78,757        | 12.1%          |
| Administrative & Office Support         | 79,830         | 4.5%           | \$38,623        | 14.1%          |
| Business Operations & Finance           | 23,670         | 38.1%          | \$71,566        | 9.1%           |
| Marketing                               | 9,430          | 16.6%          | \$64,341        | 8.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

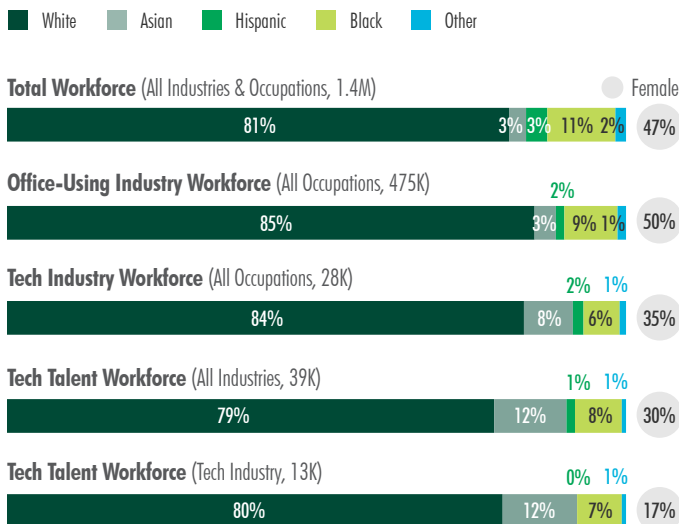
## POPULATION TRENDS

The population of millennials grew by 9,811 (2.1%) since 2014.



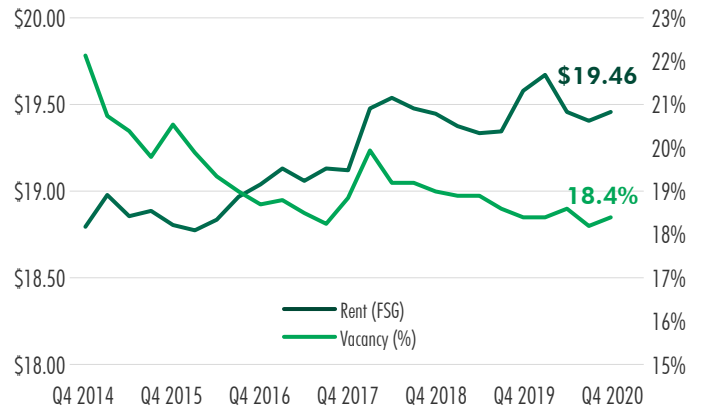
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,033** PER UNIT/MO. **16.3%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#30** RANK | **\$41M** TALENT + **\$1M** OFFICE RENT = **\$42M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,418         | 124%           | 79%        | 21%        |
| Math/Statistics           | 316           | 53%            | 59%        | 41%        |
| Other Tech Engineering    | 576           | 23%            | 85%        | 15%        |
| <b>Totals</b>             | <b>2,310</b>  | <b>76%</b>     | <b>78%</b> | <b>22%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 1,418         | 79%        | 10%        | 3%        | 5%        | 3%        |
| Math/Statistics           | 316           | 66%        | 27%        | 2%        | 2%        | 3%        |
| Other Tech Engineering    | 576           | 84%        | 7%         | 4%        | 3%        | 2%        |
| <b>Totals</b>             | <b>2,310</b>  | <b>79%</b> | <b>12%</b> | <b>3%</b> | <b>4%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 43 Hartford

SCORE  
29.14

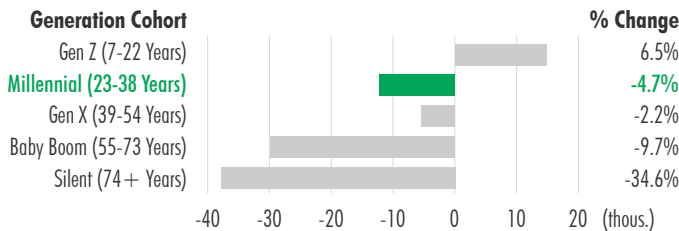
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage     | Growth 2015-20 |
|---|---------------|----------------|------------------|----------------|
| <b>Total Tech Occupations</b>           | <b>26,440</b> | <b>11.9%</b>   | <b>\$100,431</b> | <b>7.7%</b>    |
| Software Developers & Programmers       | 9,500         | 18.9%          | \$97,061         | 6.5%           |
| Computer Support, Database & Systems    | 10,920        | -0.5%          | \$84,943         | 2.0%           |
| Computer & Information Systems Managers | 4,540         | 52.9%          | \$145,070        | 3.5%           |
| Technology Engineering-Related          | 1,480         | -12.4%         | \$99,406         | 15.5%          |
| <b>Total Non-Tech Occupations</b>       | <b>64,100</b> | <b>-9.9%</b>   | <b>\$56,056</b>  | <b>11.3%</b>   |
| Sales                                   | 4,060         | -28.6%         | \$77,325         | 7.0%           |
| Administrative & Office Support         | 41,360        | -16.8%         | \$43,834         | 8.4%           |
| Business Operations & Finance           | 14,590        | 18.7%          | \$79,770         | 5.0%           |
| Marketing                               | 4,090         | 18.2%          | \$73,934         | 11.5%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

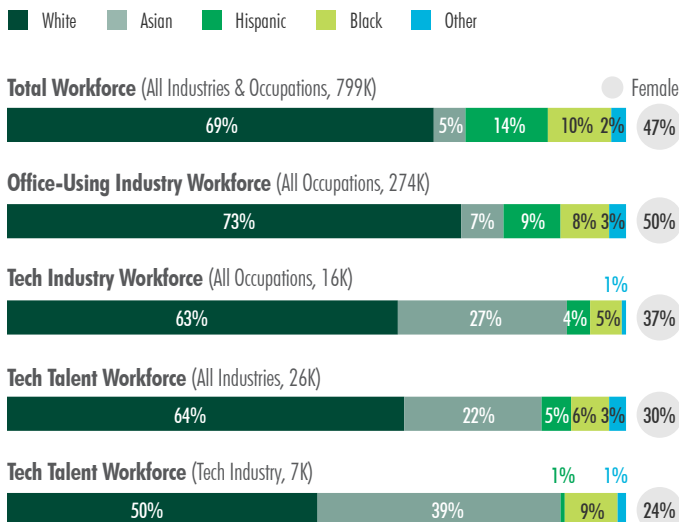
## POPULATION TRENDS

The population of millennials declined by -12,276 (-4.7%) since 2014.



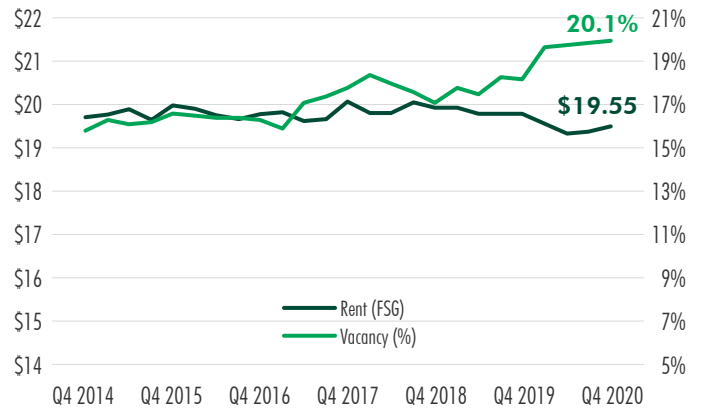
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,413**  
PER UNIT/MO.

**10.3%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#21** RANK

**\$44M** TALENT + **\$1M** OFFICE RENT = **\$45.4M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 615           | 58%            | 80%        | 20%        |
| Math/Statistics           | 571           | 56%            | 56%        | 44%        |
| Other Tech Engineering    | 575           | 40%            | 84%        | 16%        |
| <b>Totals</b>             | <b>1,761</b>  | <b>51%</b>     | <b>73%</b> | <b>27%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 615           | 62%        | 20%        | 9%        | 7%        | 3%        |
| Math/Statistics           | 571           | 69%        | 15%        | 9%        | 3%        | 3%        |
| Other Tech Engineering    | 575           | 75%        | 10%        | 8%        | 4%        | 3%        |
| <b>Totals</b>             | <b>1,761</b>  | <b>69%</b> | <b>15%</b> | <b>9%</b> | <b>5%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 44 Cleveland

SCORE  
28.06

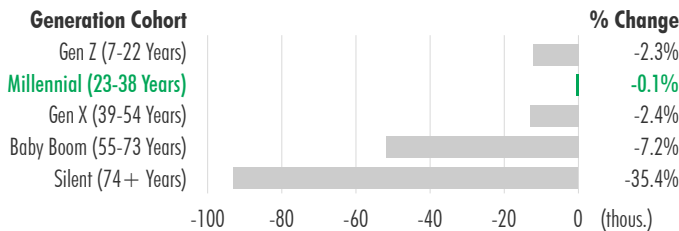
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>36,320</b>  | <b>14.6%</b>   | <b>\$92,073</b> | <b>17.1%</b>   |
| Software Developers & Programmers       | 11,790         | 15.7%          | \$107,205       | 35.1%          |
| Computer Support, Database & Systems    | 19,180         | 15.1%          | \$77,784        | 9.5%           |
| Computer & Information Systems Managers | 2,800          | 2.9%           | \$137,340       | 8.4%           |
| Technology Engineering-Related          | 2,550          | 19.7%          | \$79,887        | 9.3%           |
| <b>Total Non-Tech Occupations</b>       | <b>122,850</b> | <b>6.8%</b>    | <b>\$50,449</b> | <b>8.6%</b>    |
| Sales                                   | 8,790          | -37.6%         | \$77,513        | 5.1%           |
| Administrative & Office Support         | 82,240         | 8.5%           | \$39,772        | 15.3%          |
| Business Operations & Finance           | 23,610         | 30.4%          | \$72,862        | 5.2%           |
| Marketing                               | 8,210          | 16.0%          | \$63,973        | 3.5%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

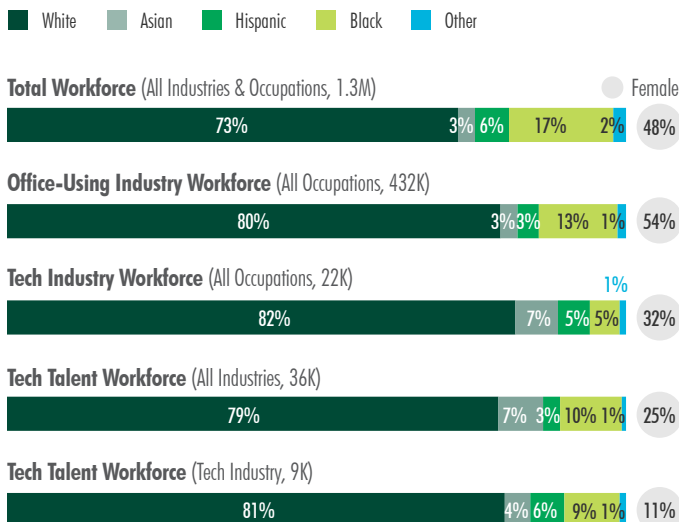
## POPULATION TRENDS

The population of millennials declined by -632 (-0.1%) since 2014.



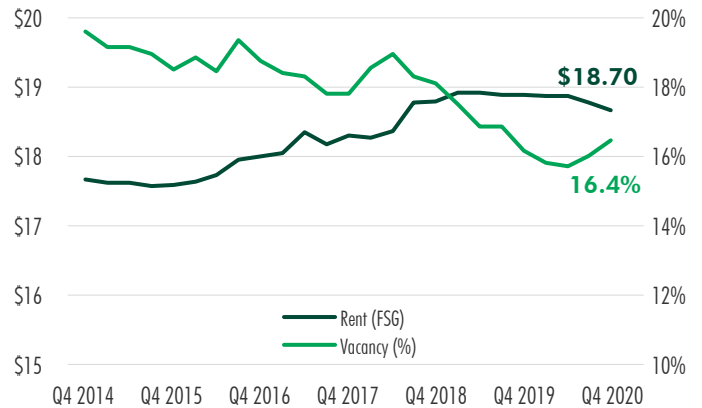
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$973** PER UNIT/MO. **10.7%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#31** RANK | **\$40M** TALENT + **\$1M** OFFICE RENT = **\$41.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,233         | 63%            | 77%        | 23%        |
| Math/Statistics           | 381           | 25%            | 63%        | 37%        |
| Other Tech Engineering    | 757           | 95%            | 82%        | 18%        |
| <b>Totals</b>             | <b>2,371</b>  | <b>63%</b>     | <b>76%</b> | <b>24%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|-----------|-----------|-----------|-----------|
| Computer Engineering      | 1,233         | 76%        | 10%       | 4%        | 6%        | 4%        |
| Math/Statistics           | 381           | 79%        | 9%        | 6%        | 4%        | 3%        |
| Other Tech Engineering    | 757           | 82%        | 7%        | 5%        | 3%        | 3%        |
| <b>Totals</b>             | <b>2,371</b>  | <b>78%</b> | <b>9%</b> | <b>4%</b> | <b>5%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 45 San Antonio

SCORE  
24.34

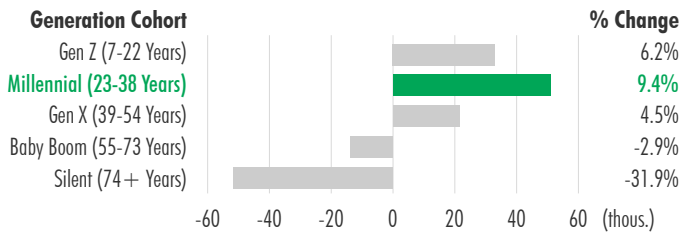
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>33,080</b>  | <b>8.9%</b>    | <b>\$91,586</b> | <b>17.3%</b>   |
| Software Developers & Programmers       | 7,870          | -12.1%         | \$103,900       | 34.1%          |
| Computer Support, Database & Systems    | 20,340         | 13.0%          | \$81,811        | 11.6%          |
| Computer & Information Systems Managers | 2,170          | 77.9%          | \$150,380       | 3.1%           |
| Technology Engineering-Related          | 2,700          | 21.6%          | \$82,084        | 0.4%           |
| <b>Total Non-Tech Occupations</b>       | <b>128,590</b> | <b>0.0%</b>    | <b>\$44,808</b> | <b>8.2%</b>    |
| Sales                                   | 9,080          | -1.8%          | \$57,814        | -4.0%          |
| Administrative & Office Support         | 93,220         | -2.2%          | \$36,097        | 10.1%          |
| Business Operations & Finance           | 21,040         | 10.2%          | \$72,891        | 4.0%           |
| Marketing                               | 5,250          | 5.4%           | \$64,455        | 4.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

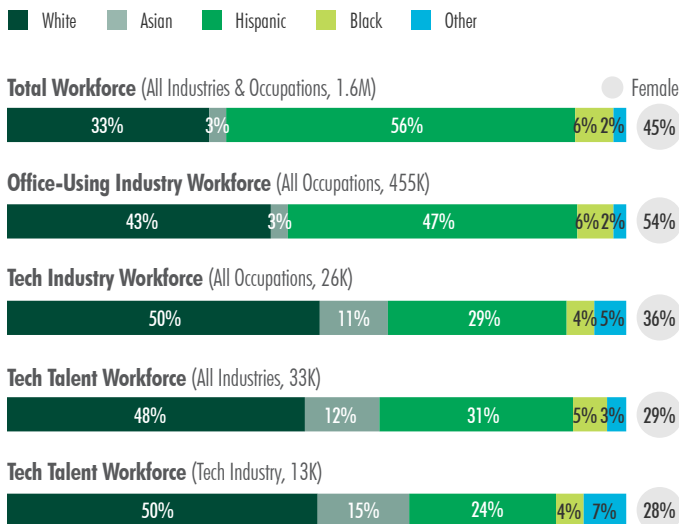
## POPULATION TRENDS

The population of millennials grew by 52,099 (9.4%) since 2014.



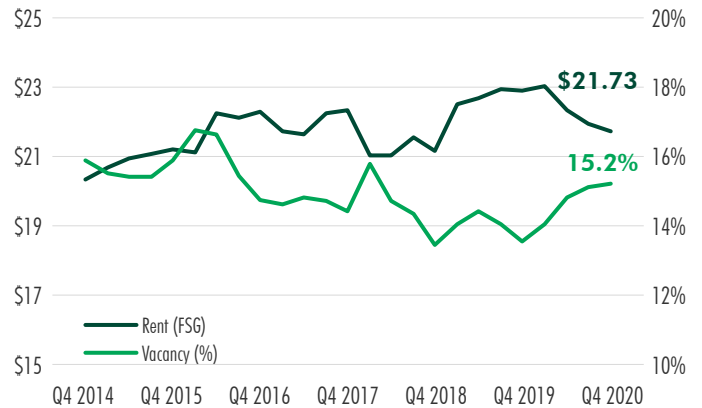
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,010** PER UNIT/MO. **7.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#32** RANK | **\$40M** TALENT + **\$2M** OFFICE RENT = **\$41.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 876           | 95%            | 80%        | 20%        |
| Math/Statistics           | 158           | 11%            | 53%        | 47%        |
| Other Tech Engineering    | 294           | 32%            | 81%        | 19%        |
| <b>Totals</b>             | <b>1,328</b>  | <b>63%</b>     | <b>77%</b> | <b>23%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic   | Black     | Other     |
|---------------------------|---------------|------------|------------|------------|-----------|-----------|
| Computer Engineering      | 876           | 33%        | 11%        | 46%        | 6%        | 5%        |
| Math/Statistics           | 158           | 26%        | 8%         | 54%        | 7%        | 5%        |
| Other Tech Engineering    | 294           | 33%        | 9%         | 46%        | 9%        | 3%        |
| <b>Totals</b>             | <b>1,328</b>  | <b>32%</b> | <b>10%</b> | <b>47%</b> | <b>7%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 46 Jacksonville

SCORE  
23.85

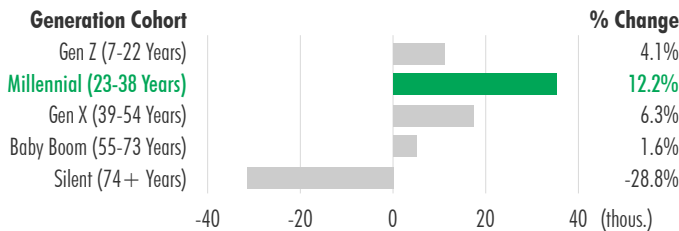
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>21,840</b> | <b>20.4%</b>   | <b>\$83,998</b> | <b>4.9%</b>    |
| Software Developers & Programmers       | 6,590         | 6.5%           | \$90,694        | -0.3%          |
| Computer Support, Database & Systems    | 11,040        | 14.6%          | \$71,343        | 3.8%           |
| Computer & Information Systems Managers | 1,660         | 82.4%          | \$136,380       | 4.3%           |
| Technology Engineering-Related          | 2,550         | 80.9%          | \$87,382        | 13.8%          |
| <b>Total Non-Tech Occupations</b>       | <b>94,440</b> | <b>9.2%</b>    | <b>\$45,195</b> | <b>16.6%</b>   |
| Sales                                   | 7,370         | 3.1%           | \$73,195        | 32.1%          |
| Administrative & Office Support         | 67,580        | 5.2%           | \$36,761        | 18.2%          |
| Business Operations & Finance           | 14,270        | 19.6%          | \$65,418        | 0.9%           |
| Marketing                               | 5,220         | 67.3%          | \$59,570        | 2.8%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

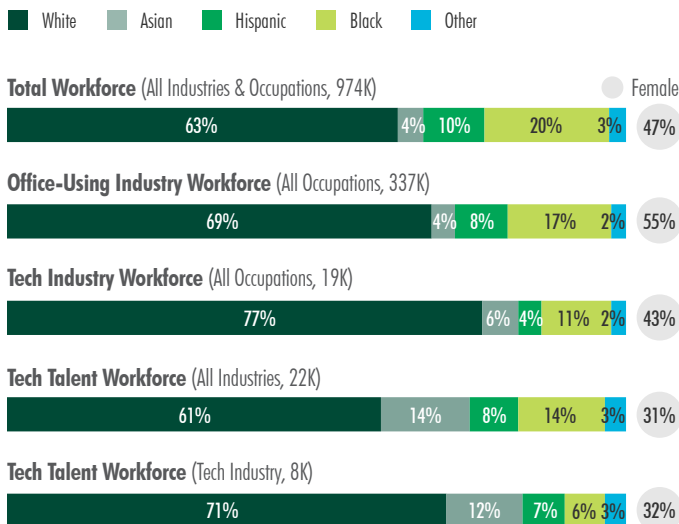
## POPULATION TRENDS

The population of millennials grew by 37,983 (12.2%) since 2014.



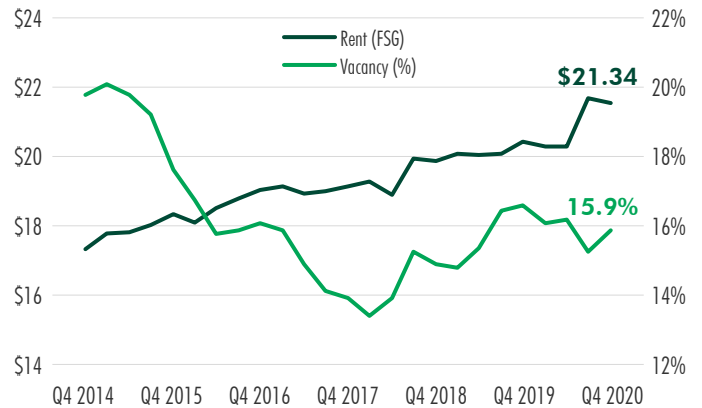
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,142**  
PER UNIT/MO.

**20.1%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#42** RANK | **\$37M** TALENT + **\$2M** OFFICE RENT = **\$38.9M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 343           | 44%            | 81%        | 19%        |
| Math/Statistics           | 51            | 6%             | 53%        | 47%        |
| Other Tech Engineering    | 86            | 91%            | 88%        | 12%        |
| <b>Totals</b>             | <b>480</b>    | <b>45%</b>     | <b>79%</b> | <b>21%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic   | Black      | Other     |
|---------------------------|---------------|------------|-----------|------------|------------|-----------|
| Computer Engineering      | 343           | 66%        | 8%        | 9%         | 13%        | 4%        |
| Math/Statistics           | 51            | 82%        | 9%        | 4%         | 4%         | 0%        |
| Other Tech Engineering    | 86            | 72%        | 5%        | 14%        | 2%         | 6%        |
| <b>Totals</b>             | <b>480</b>    | <b>69%</b> | <b>7%</b> | <b>10%</b> | <b>10%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 47 Rochester

SCORE  
23.37

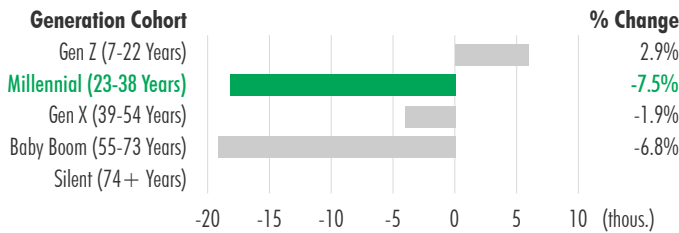
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>20,840</b> | <b>-0.8%</b>   | <b>\$85,256</b> | <b>10.6%</b>   |
| Software Developers & Programmers       | 7,290         | 16.1%          | \$89,733        | 9.1%           |
| Computer Support, Database & Systems    | 9,600         | -4.3%          | \$72,211        | 9.1%           |
| Computer & Information Systems Managers | 1,430         | 2.1%           | \$146,890       | 18.7%          |
| Technology Engineering-Related          | 2,520         | -23.6%         | \$87,025        | 8.2%           |
| <b>Total Non-Tech Occupations</b>       | <b>59,460</b> | <b>-13.3%</b>  | <b>\$50,228</b> | <b>15.2%</b>   |
| Sales                                   | 4,750         | -7.6%          | \$91,865        | 29.8%          |
| Administrative & Office Support         | 40,630        | -18.9%         | \$38,669        | 11.6%          |
| Business Operations & Finance           | 10,420        | 10.9%          | \$72,216        | 5.0%           |
| Marketing                               | 3,660         | -5.9%          | \$61,907        | -0.3%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

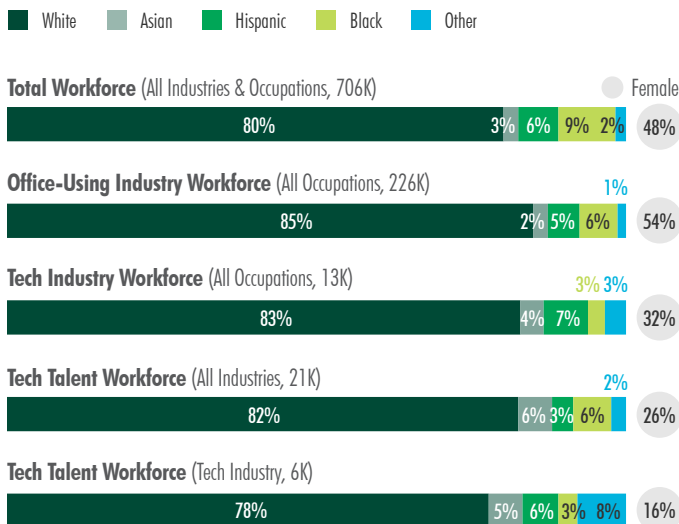
## POPULATION TRENDS

The population of millennials declined by -18,000 (-7.5%) since 2014.



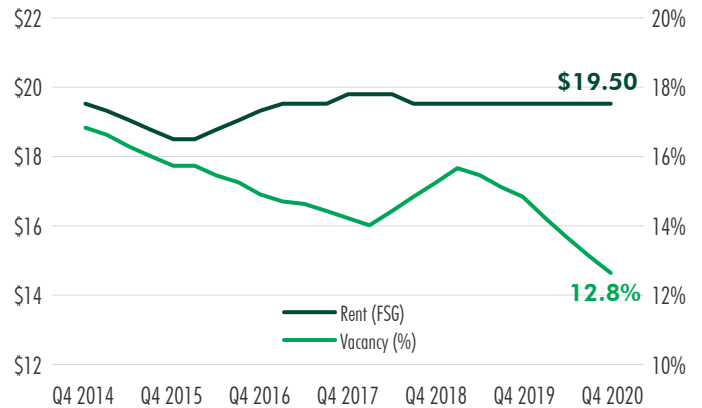
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,114** PER UNIT/MO.  
**25.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#38** RANK | **\$39M** TALENT + **\$1M** OFFICE RENT = **\$40.7M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,651         | 37%            | 81%        | 19%        |
| Math/Statistics           | 313           | -23%           | 54%        | 46%        |
| Other Tech Engineering    | 503           | 28%            | 76%        | 24%        |
| <b>Totals</b>             | <b>2,467</b>  | <b>23%</b>     | <b>77%</b> | <b>23%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|------------|-----------|-----------|-----------|
| Computer Engineering      | 1,651         | 75%        | 12%        | 6%        | 3%        | 4%        |
| Math/Statistics           | 313           | 80%        | 11%        | 4%        | 2%        | 2%        |
| Other Tech Engineering    | 503           | 79%        | 9%         | 8%        | 2%        | 2%        |
| <b>Totals</b>             | <b>2,467</b>  | <b>77%</b> | <b>11%</b> | <b>6%</b> | <b>2%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 48 Virginia Beach

SCORE  
21.10

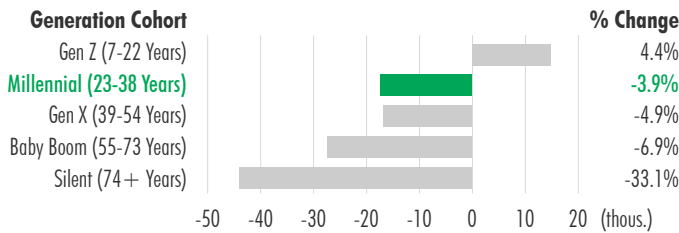
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>29,420</b> | <b>2.8%</b>    | <b>\$90,663</b> | <b>10.0%</b>   |
| Software Developers & Programmers       | 7,840         | 4.7%           | \$90,543        | 0.7%           |
| Computer Support, Database & Systems    | 15,270        | 6.6%           | \$84,617        | 13.1%          |
| Computer & Information Systems Managers | 1,720         | 10.3%          | \$151,130       | 11.6%          |
| Technology Engineering-Related          | 4,590         | -12.4%         | \$88,321        | 15.1%          |
| <b>Total Non-Tech Occupations</b>       | <b>81,110</b> | <b>-3.3%</b>   | <b>\$46,108</b> | <b>10.6%</b>   |
| Sales                                   | 5,670         | 0.5%           | \$62,772        | -6.1%          |
| Administrative & Office Support         | 55,580        | -8.7%          | \$35,406        | 9.8%           |
| Business Operations & Finance           | 15,420        | 11.6%          | \$73,848        | 6.8%           |
| Marketing                               | 4,440         | 26.9%          | \$62,452        | 10.1%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

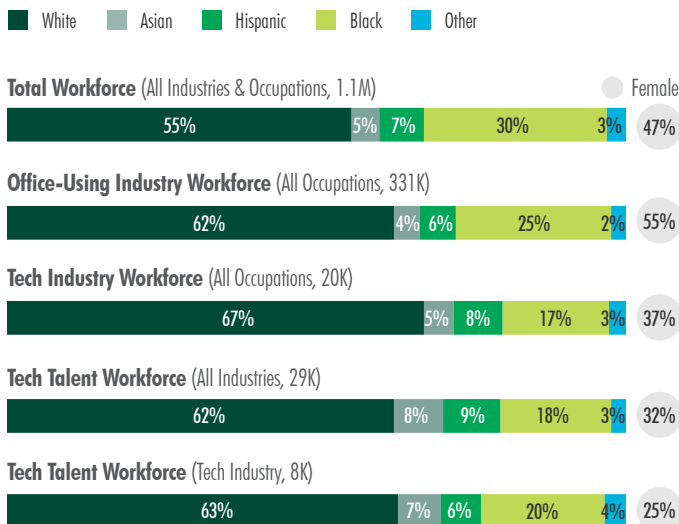
## POPULATION TRENDS

The population of millennials declined by -17,205 (-3.9%) since 2014.



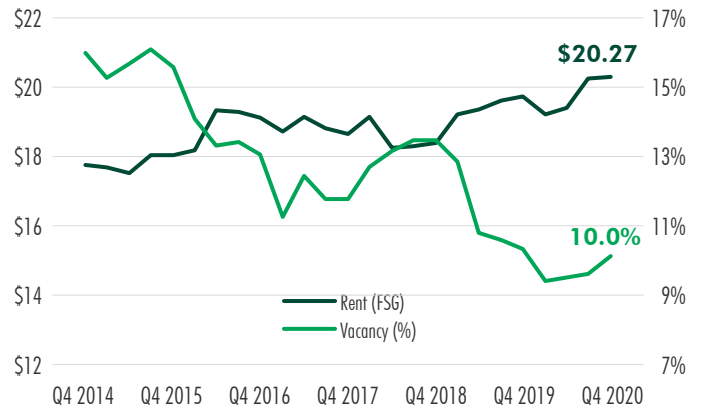
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,314** PER UNIT/MO. **15.4%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#33** RANK | **\$40M** TALENT + **\$2M** OFFICE RENT = **\$41.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 1,077         | 6%             | 79%        | 21%        |
| Math/Statistics           | 158           | 1%             | 55%        | 45%        |
| Other Tech Engineering    | 424           | 8%             | 82%        | 18%        |
| <b>Totals</b>             | <b>1,659</b>  | <b>6%</b>      | <b>78%</b> | <b>22%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|-----------|-----------|------------|-----------|
| Computer Engineering      | 1,077         | 52%        | 8%        | 7%        | 29%        | 4%        |
| Math/Statistics           | 158           | 67%        | 7%        | 5%        | 15%        | 6%        |
| Other Tech Engineering    | 424           | 68%        | 5%        | 9%        | 13%        | 5%        |
| <b>Totals</b>             | <b>1,659</b>  | <b>57%</b> | <b>7%</b> | <b>7%</b> | <b>24%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.

# 49 Milwaukee

SCORE  
18.66

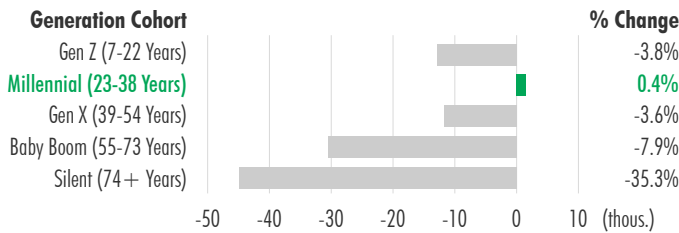
## EMPLOYMENT BREAKDOWN

|   | Employed 2020  | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|----------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>29,810</b>  | <b>-4.2%</b>   | <b>\$89,016</b> | <b>11.5%</b>   |
| Software Developers & Programmers       | 10,390         | 21.9%          | \$94,016        | 16.7%          |
| Computer Support, Database & Systems    | 14,450         | -10.7%         | \$78,228        | 5.5%           |
| Computer & Information Systems Managers | 2,280          | -9.9%          | \$139,260       | 17.8%          |
| Technology Engineering-Related          | 2,690          | -31.0%         | \$85,064        | 11.0%          |
| <b>Total Non-Tech Occupations</b>       | <b>101,050</b> | <b>-1.3%</b>   | <b>\$51,085</b> | <b>12.3%</b>   |
| Sales                                   | 9,570          | 9.2%           | \$76,596        | 8.5%           |
| Administrative & Office Support         | 67,400         | -4.8%          | \$40,245        | 11.6%          |
| Business Operations & Finance           | 17,790         | 12.5%          | \$73,532        | 7.7%           |
| Marketing                               | 6,290          | -9.9%          | \$64,929        | 11.7%          |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

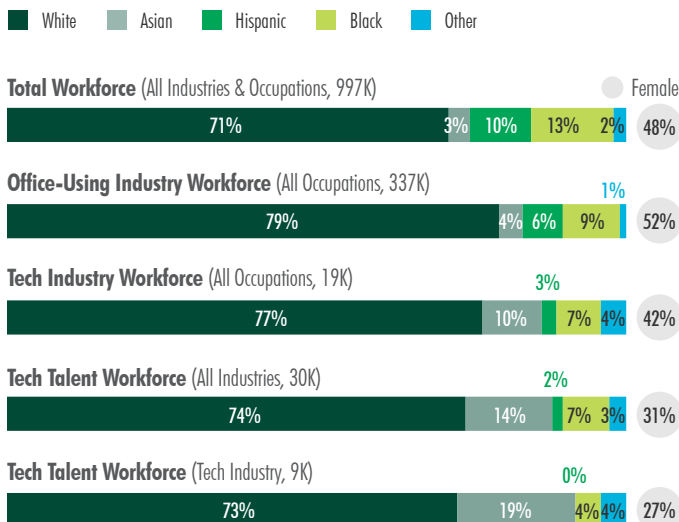
## POPULATION TRENDS

The population of millennials grew by 1,415 (0.4%) since 2014.



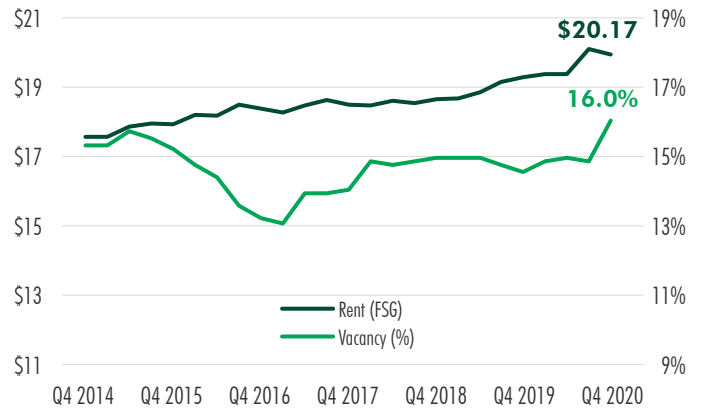
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,212** PER UNIT/MO. **10.5%** FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#34** RANK | **\$40M** TALENT + **\$2M** OFFICE RENT = **\$41.4M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 916           | 40%            | 80%        | 20%        |
| Math/Statistics           | 150           | 15%            | 61%        | 39%        |
| Other Tech Engineering    | 528           | 18%            | 85%        | 15%        |
| <b>Totals</b>             | <b>1,594</b>  | <b>29%</b>     | <b>80%</b> | <b>20%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian     | Hispanic  | Black     | Other     |
|---------------------------|---------------|------------|-----------|-----------|-----------|-----------|
| Computer Engineering      | 916           | 77%        | 10%       | 6%        | 5%        | 3%        |
| Math/Statistics           | 150           | 89%        | 1%        | 6%        | 2%        | 2%        |
| Other Tech Engineering    | 528           | 87%        | 6%        | 4%        | 1%        | 2%        |
| <b>Totals</b>             | <b>1,594</b>  | <b>81%</b> | <b>8%</b> | <b>5%</b> | <b>3%</b> | <b>3%</b> |

Source: The National Center for Education Statistics (Region), 2020.



# 50 Richmond

SCORE  
18.28

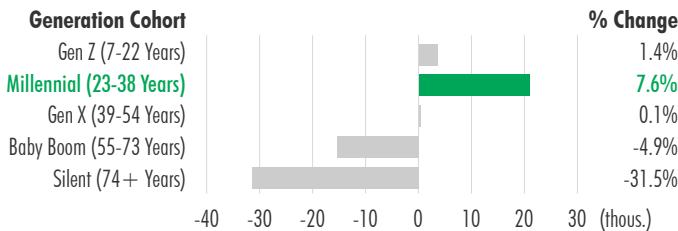
## EMPLOYMENT BREAKDOWN

|   | Employed 2020 | Growth 2015-20 | Average Wage    | Growth 2015-20 |
|---|---------------|----------------|-----------------|----------------|
| <b>Total Tech Occupations</b>           | <b>24,520</b> | <b>7.9%</b>    | <b>\$98,673</b> | <b>12.8%</b>   |
| Software Developers & Programmers       | 9,090         | 27.8%          | \$101,169       | 14.3%          |
| Computer Support, Database & Systems    | 12,460        | 1.5%           | \$89,709        | 12.0%          |
| Computer & Information Systems Managers | 1,580         | -2.5%          | \$159,720       | 11.2%          |
| Technology Engineering-Related          | 1,390         | -18.7%         | \$93,320        | 12.1%          |
| <b>Total Non-Tech Occupations</b>       | <b>81,240</b> | <b>-0.7%</b>   | <b>\$53,593</b> | <b>14.1%</b>   |
| Sales                                   | 6,820         | -11.3%         | \$79,121        | 0.7%           |
| Administrative & Office Support         | 50,320        | -7.5%          | \$38,563        | 12.5%          |
| Business Operations & Finance           | 17,930        | 17.7%          | \$80,912        | 14.3%          |
| Marketing                               | 6,170         | 38.0%          | \$68,565        | 4.3%           |

Source: U.S. Bureau of Labor Statistics (Metro Area), April 2021.

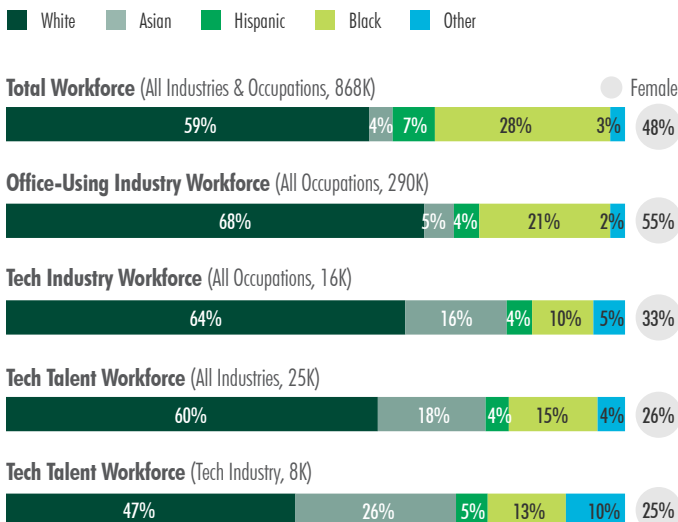
## POPULATION TRENDS

The population of millennials grew by 21,111 (7.6%) since 2014.



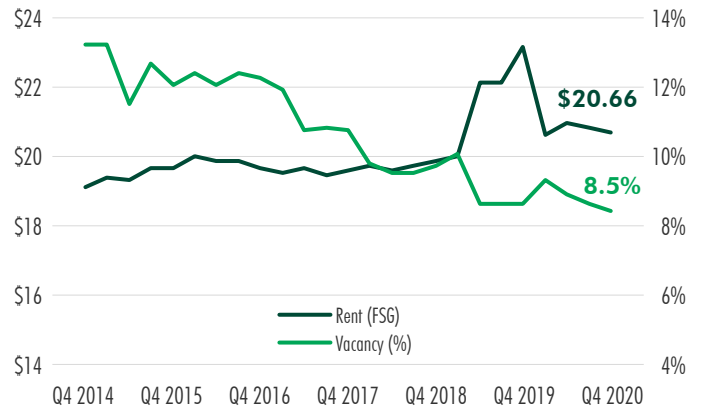
Source: U.S. Census Bureau (Metro), 2021.

## WORKFORCE DIVERSITY



Source: U.S. Census (Metro), IPUMS and CBRE Research, May 2021.

## OFFICE RENT & VACANCY TRENDS



Source: CBRE Research (Metro Area), Q4 2020.

## AVERAGE APARTMENT RENT

**\$1,182**  
PER UNIT/MO.

**19.9%**  
FIVE-YEAR GROWTH

Source: Apt. rent data from CBRE EA (Metro), Q4 2020.

## AVERAGE ANNUAL OPERATING COSTS

**#20** RANK

**\$44M** TALENT + **\$2M** OFFICE RENT = **\$45.5M** TOTAL

Source: U.S. Bureau of Labor Statistics, CBRE Research, 2021.

## TALENT PIPELINE AND DIVERSITY

| Degree Completions (2019) | Total Degrees | Growth 2015-19 | Male       | Female     |
|---------------------------|---------------|----------------|------------|------------|
| Computer Engineering      | 434           | 25%            | 76%        | 24%        |
| Math/Statistics           | 124           | 41%            | 56%        | 44%        |
| Other Tech Engineering    | 178           | 24%            | 76%        | 24%        |
| <b>Totals</b>             | <b>736</b>    | <b>27%</b>     | <b>73%</b> | <b>27%</b> |

| Degree Completions (2019) | Total Degrees | White      | Asian      | Hispanic  | Black      | Other     |
|---------------------------|---------------|------------|------------|-----------|------------|-----------|
| Computer Engineering      | 434           | 39%        | 27%        | 6%        | 23%        | 5%        |
| Math/Statistics           | 124           | 57%        | 14%        | 4%        | 21%        | 4%        |
| Other Tech Engineering    | 178           | 74%        | 9%         | 7%        | 7%         | 3%        |
| <b>Totals</b>             | <b>736</b>    | <b>50%</b> | <b>21%</b> | <b>6%</b> | <b>19%</b> | <b>4%</b> |

Source: The National Center for Education Statistics (Region), 2020.



DATA SU

MARKY

# What is tech talent?

**TABLE 1: U.S. TECH TALENT LABOR BY INDUSTRY (2020)**

Tech Talent Occupations in each industry as a % of U.S. Tech Talent

| <u>Industry</u>   | <u>% of Total Tech Talent Labor</u> |
|---|-------------------------------------|
| Core High-Tech*   | 40.1%                               |
| Professional, Scientific & Technical Services (Excluding High-Tech) | 11.3%                               |
| FIRE  | 8.8%                                |
| Other   | 7.9%                                |
| Management of Companies & Enterprises                               | 6.3%                                |
| Government  | 5.9%                                |
| Transportation, Warehousing & Wholesale                             | 4.8%                                |
| Education   | 4.6%                                |
| Manufacturing (Excluding High-Tech)                                 | 4.3%                                |
| Information (Excluding High-Tech)                                   | 3.5%                                |
| Health Care   | 2.7%                                |

Source: U.S. Bureau of Labor Statistics (National), April 2021.

\*Includes computer software and services and computer product manufacturing

# Which are the top-ranked tech-talent markets?

**TABLE 2: TECH TALENT SCORECARD RANKING**

| Rank | Market                 | Score | Rank | Market         | Score |
|------|------------------------|-------|------|----------------|-------|
| 1    | SF Bay Area            | 86.40 | 26   | Philadelphia   | 43.95 |
| 2    | Seattle                | 73.16 | 27   | Charlotte      | 43.81 |
| 3    | Washington, D.C.       | 65.60 | 28   | Calgary        | 42.68 |
| 4    | Toronto                | 64.78 | 29   | Pittsburgh     | 42.27 |
| 5    | New York Metro         | 63.44 | 30   | Kansas City    | 40.61 |
| 6    | Boston                 | 62.60 | 31   | Columbus       | 40.10 |
| 7    | Austin                 | 58.87 | 32   | Orlando        | 38.83 |
| 8    | Atlanta                | 57.78 | 33   | Tampa          | 37.70 |
| 9    | Los Angeles/Orange Co. | 57.62 | 34   | Quebec City    | 37.02 |
| 10   | Ottawa                 | 57.34 | 35   | St. Louis      | 36.99 |
| 11   | Vancouver              | 57.09 | 36   | Indianapolis   | 36.03 |
| 12   | Denver                 | 56.94 | 37   | South Florida  | 35.74 |
| 13   | Dallas/Ft. Worth       | 56.47 | 38   | Edmonton       | 33.64 |
| 14   | Raleigh-Durham         | 56.42 | 39   | Houston        | 31.06 |
| 15   | Baltimore              | 56.08 | 40   | Sacramento     | 30.97 |
| 16   | Montreal               | 55.20 | 41   | Nashville      | 30.56 |
| 17   | Phoenix                | 52.70 | 42   | Cincinnati     | 30.01 |
| 18   | Salt Lake City         | 52.55 | 43   | Hartford       | 29.14 |
| 19   | San Diego              | 51.66 | 44   | Cleveland      | 28.06 |
| 20   | Portland               | 49.44 | 45   | San Antonio    | 24.34 |
| 21   | Waterloo Region        | 47.88 | 46   | Jacksonville   | 23.85 |
| 22   | Minneapolis/St. Paul   | 47.11 | 47   | Rochester      | 23.37 |
| 23   | Chicago                | 46.40 | 48   | Virginia Beach | 21.10 |
| 24   | Madison                | 45.04 | 49   | Milwaukee      | 18.66 |
| 25   | Detroit                | 44.40 | 50   | Richmond       | 18.28 |

Source: CBRE Research, CBRE Econometric Advisors, U.S. Bureau of Labor Statistics, Statistics Canada, Oxford Economics, The National Center of Education Statistics, National Science Foundation, Axiometrics, 2021.

# How to find tech-talent momentum markets?

**TABLE 3: TECH TALENT LABOR CONCENTRATION**

| Market               | Tech Talent Jobs<br>as a % of Total Jobs | Market                 | Tech Talent Jobs<br>as a % of Total Jobs |
|----------------------|--|------------------------|--|
| Ottawa               | 11.6%                                    | Hartford               | 4.8%                                     |
| SF Bay Area          | 10.9%                                    | Columbus               | 4.7%                                     |
| Toronto              | 10.2%                                    | Phoenix                | 4.7%                                     |
| Waterloo Region      | 9.6%                                     | Detroit                | 4.5%                                     |
| Seattle              | 9.4%                                     | Rochester              | 4.4%                                     |
| Washington, D.C.     | 8.8%                                     | St. Louis              | 4.2%                                     |
| Montreal             | 8.6%                                     | Philadelphia           | 4.2%                                     |
| Vancouver            | 8.1%                                     | Sacramento             | 4.1%                                     |
| Quebec City          | 7.8%                                     | Tampa                  | 4.1%                                     |
| Austin               | 7.5%                                     | Virginia Beach         | 4.1%                                     |
| Raleigh-Durham       | 7.2%                                     | Pittsburgh             | 4.0%                                     |
| Calgary              | 7.1%                                     | New York Metro         | 3.9%                                     |
| Denver               | 7.0%                                     | Indianapolis           | 3.9%                                     |
| Boston               | 6.5%                                     | Richmond               | 3.9%                                     |
| Madison              | 6.4%                                     | Chicago                | 3.8%                                     |
| Baltimore            | 6.4%                                     | Cincinnati             | 3.8%                                     |
| Edmonton             | 5.7%                                     | Los Angeles/Orange Co. | 3.7%                                     |
| Atlanta              | 5.5%                                     | Milwaukee              | 3.7%                                     |
| Portland             | 5.3%                                     | Cleveland              | 3.7%                                     |
| Dallas/Ft. Worth     | 5.3%                                     | Nashville              | 3.6%                                     |
| Minneapolis/St. Paul | 5.3%                                     | Orlando                | 3.6%                                     |
| Charlotte            | 5.1%                                     | San Antonio            | 3.3%                                     |
| Salt Lake City       | 5.1%                                     | Houston                | 3.2%                                     |
| Kansas City          | 5.1%                                     | Jacksonville           | 3.2%                                     |
| San Diego            | 5.0%                                     | South Florida          | 2.7%                                     |

Source: CBRE Research, U.S. Bureau of Labor Statistics, Statistics Canada, 2021.

**TABLE 4: TECH TALENT LABOR POOLS BY MARKET (2020)**

| Large Tech Talent Markets (>50,000 Labor Pool) |                   | Small Tech Talent Markets (<50,000 Labor Pool) |                   |
|--|-------------------|--|-------------------|
| Market   | Tech Talent Total | Market   | Tech Talent Total |
| SF Bay Area                                    | 373,430           | Columbus                                       | 47,940            |
| New York Metro                                 | 348,330           | Calgary  | 46,700            |
| Toronto  | 270,400           | Orlando  | 43,340            |
| Washington, D.C.                               | 265,370           | Pittsburgh                                     | 43,080            |
| Los Angeles/Orange Co.                         | 228,720           | Sacramento                                     | 40,160            |
| Dallas/Ft. Worth                               | 189,200           | Indianapolis                                   | 39,990            |
| Seattle  | 184,660           | Cincinnati                                     | 39,080            |
| Boston   | 168,090           | Cleveland                                      | 36,320            |
| Chicago  | 167,380           | Nashville                                      | 35,190            |
| Montreal                                       | 160,700           | Edmonton                                       | 34,500            |
| Atlanta  | 143,780           | San Antonio                                    | 33,080            |
| Denver   | 114,900           | Milwaukee                                      | 29,810            |
| Philadelphia                                   | 112,740           | Virginia Beach                                 | 29,420            |
| Phoenix  | 98,220            | Quebec City                                    | 29,400            |
| Minneapolis/St. Paul                           | 97,470            | Hartford                                       | 26,440            |
| Houston  | 96,420            | Waterloo Region                                | 25,900            |
| Vancouver                                      | 91,200            | Madison  | 24,580            |
| Detroit  | 89,680            | Richmond                                       | 24,520            |
| Baltimore                                      | 81,770            | Jacksonville                                   | 21,840            |
| Austin   | 79,230            | Rochester                                      | 20,840            |
| Ottawa   | 74,000            |  |                   |
| San Diego                                      | 70,350            |  |                   |
| South Florida                                  | 67,500            |  |                   |
| Raleigh-Durham                                 | 67,050            |  |                   |
| Charlotte                                      | 62,110            |  |                   |
| Portland                                       | 60,330            |  |                   |
| St. Louis                                      | 55,080            |  |                   |
| Tampa  | 53,960            |  |                   |
| Kansas City                                    | 52,630            |  |                   |
| Salt Lake City                                 | 50,070            |  |                   |

Source: CBRE Research, U.S. Bureau of Labor Statistics, Statistics Canada, 2021.

**TABLE 5: TECH LABOR POOL GROWTH RATES (2016-2020)**

| Large Tech Talent Markets (>50,000 Labor Pool) |          |           | Small Tech Talent Markets (<50,000 Labor Pool) |          |           |
|--|----------|-----------|--|----------|-----------|
| Market   | % Change | by Volume | Market   | % Change | by Volume |
| Toronto  | 42.8%    | 81,100    | Edmonton                                       | 53.3%    | 12,000    |
| Vancouver                                      | 36.1%    | 24,200    | Waterloo Region                                | 47.2%    | 8,300     |
| Seattle  | 35.4%    | 48,300    | Nashville                                      | 36.1%    | 9,330     |
| Salt Lake City                                 | 33.9%    | 12,680    | Madison  | 31.9%    | 5,940     |
| Montreal                                       | 31.4%    | 38,400    | Orlando  | 30.0%    | 10,000    |
| Charlotte                                      | 31.3%    | 14,810    | Indianapolis                                   | 23.2%    | 7,520     |
| Denver   | 31.1%    | 27,290    | Jacksonville                                   | 20.4%    | 3,700     |
| Portland                                       | 27.7%    | 13,090    | Quebec City                                    | 18.1%    | 4,500     |
| Tampa  | 23.5%    | 10,250    | Calgary  | 17.9%    | 7,100     |
| Ottawa   | 22.5%    | 13,600    | Cleveland                                      | 14.6%    | 4,620     |
| Raleigh-Durham                                 | 20.2%    | 11,260    | Hartford                                       | 11.9%    | 2,820     |
| Los Angeles/Orange Co.                         | 18.6%    | 35,870    | Sacramento                                     | 10.7%    | 3,890     |
| South Florida                                  | 18.0%    | 10,280    | Pittsburgh                                     | 10.7%    | 4,150     |
| SF Bay Area                                    | 16.4%    | 52,670    | Cincinnati                                     | 9.6%     | 3,420     |
| Dallas/Ft. Worth                               | 16.3%    | 26,570    | San Antonio                                    | 8.9%     | 2,690     |
| Baltimore                                      | 16.2%    | 11,430    | Richmond                                       | 7.9%     | 1,800     |
| Atlanta  | 15.2%    | 18,960    | Columbus                                       | 5.1%     | 2,310     |
| Phoenix  | 14.2%    | 12,180    | Virginia Beach                                 | 2.8%     | 810       |
| Austin   | 10.0%    | 7,200     | Rochester                                      | -0.8%    | -170      |
| Washington, D.C.                               | 10.0%    | 24,080    | Milwaukee                                      | -4.2%    | -1,320    |
| St. Louis                                      | 9.9%     | 4,950     |  |          |           |
| Philadelphia                                   | 9.3%     | 9,630     |  |          |           |
| Kansas City                                    | 8.5%     | 4,120     |  |          |           |
| Boston   | 7.2%     | 11,360    |  |          |           |
| New York Metro                                 | 6.7%     | 21,930    |  |          |           |
| Minneapolis/St. Paul                           | 5.3%     | 4,940     |  |          |           |
| Chicago  | 4.6%     | 7,330     |  |          |           |
| Detroit  | 4.5%     | 3,870     |  |          |           |
| San Diego                                      | 4.1%     | 2,760     |  |          |           |
| Houston  | -5.9%    | -6,030    |  |          |           |

Source: U.S. Bureau of Labor Statistics (Metro) April 2020, Statistics Canada (Metro), 2021.



# What defines a tech talent market?

**TABLE 6: EDUCATIONAL ATTAINMENT BY MARKET**

25+ Years Old, Bachelor's Degree or Higher

| <b>Market</b>        | <b>Educational Attainment Rate</b> | <b>Market</b>    | <b>Educational Attainment Rate</b> |
|----------------------|------------------------------------|------------------|------------------------------------|
| SF Bay Area          | 51.7%                              | Rochester        | 37.1%                              |
| Washington, D.C.     | 51.4%                              | Salt Lake City   | 36.5%                              |
| Boston               | 49.3%                              | Milwaukee        | 36.4%                              |
| Madison              | 48.6%                              | Dallas/Ft. Worth | 36.3%                              |
| Raleigh-Durham       | 47.4%                              | Charlotte        | 36.2%                              |
| Austin               | 46.2%                              | Pittsburgh       | 36.0%                              |
| Denver               | 45.8%                              | St. Louis        | 35.8%                              |
| Ottawa               | 45.7%                              | GLA/OC           | 35.5%                              |
| Seattle              | 44.1%                              | Cincinnati       | 35.4%                              |
| Minneapolis/St. Paul | 43.2%                              | Indianapolis     | 35.2%                              |
| Toronto              | 43.1%                              | Montreal         | 34.2%                              |
| Baltimore            | 41.9%                              | Sacramento       | 34.2%                              |
| New York Metro       | 41.8%                              | Orlando          | 33.3%                              |
| Calgary              | 40.5%                              | Houston          | 33.3%                              |
| Portland             | 40.3%                              | South Florida    | 33.1%                              |
| Atlanta              | 39.9%                              | Virginia Beach   | 32.9%                              |
| San Diego            | 39.9%                              | Jacksonville     | 32.5%                              |
| Hartford             | 39.7%                              | Detroit          | 32.4%                              |
| Vancouver            | 39.7%                              | Quebec City      | 32.3%                              |
| Chicago              | 39.2%                              | Phoenix          | 32.2%                              |
| Philadelphia         | 39.0%                              | Cleveland        | 31.7%                              |
| Nashville            | 38.5%                              | Tampa            | 31.6%                              |
| Columbus             | 37.9%                              | Edmonton         | 31.1%                              |
| Kansas City          | 37.7%                              | Waterloo Region  | 31.0%                              |
| Richmond             | 37.6%                              | San Antonio      | 28.8%                              |
|                      |                                    | <b>U.S.</b>      | <b>33.1%</b>                       |

Source: U.S. Census Bureau and Statistics Canada (Metro) 2021.

**TABLE 7: TOP 10 MARKETS FOR TECH DEGREE COMPLETIONS**

| Market                 | Tech Degree Completions (2019) | Growth (2014-2019) |
|------------------------|--------------------------------|--------------------|
| New York Metro         | 20,576                         | 69.4%              |
| Los Angeles/Orange Co. | 13,923                         | 56.9%              |
| Washington, D.C.       | 12,623                         | 42.3%              |
| Boston                 | 12,183                         | 80.0%              |
| SF Bay Area            | 10,965                         | 65.2%              |
| Chicago                | 8,548                          | 48.3%              |
| Atlanta                | 8,361                          | 90.5%              |
| Detroit                | 6,790                          | 45.5%              |
| Dallas/Ft. Worth       | 6,672                          | 71.5%              |
| Philadelphia           | 6,277                          | 41.1%              |

Source: The National Center for Education Statistics (Region), Canadian Universities, July 2021.  
Note: Bachelor's Degree or Higher.

**TABLE 8: WHERE ARE TECH TALENT WORKERS COMING FROM AND WHERE ARE THEY HEADED?**

| Market           | Tech Degrees (2015-2019)* | Tech Jobs Added (2016-2020)* | Brain Gain or Drain? | Market                 | Tech Degrees (2015-2019)* | Tech Jobs Added (2016-2020)* | Brain Gain or Drain? |
|------------------|---------------------------|------------------------------|----------------------|------------------------|---------------------------|------------------------------|----------------------|
| Toronto          | 26,338                    | 81,200                       | 54,862               | Hartford               | 8,081                     | 2,820                        | -5,261               |
| Seattle          | 18,964                    | 48,300                       | 29,336               | Cincinnati             | 9,115                     | 3,420                        | -5,695               |
| Montreal         | 22,628                    | 38,400                       | 15,772               | Austin                 | 12,962                    | 7,200                        | -5,762               |
| Vancouver        | 12,944                    | 24,200                       | 11,256               | Raleigh-Durham         | 18,078                    | 11,260                       | -6,818               |
| Charlotte        | 7,291                     | 14,810                       | 7,519                | Baltimore              | 18,276                    | 11,430                       | -6,846               |
| Edmonton         | 5,522                     | 12,000                       | 6,478                | Cleveland              | 11,534                    | 4,620                        | -6,914               |
| SF Bay Area      | 47,065                    | 52,670                       | 5,605                | Virginia Beach         | 8,038                     | 810                          | -7,228               |
| Ottawa           | 8,134                     | 13,600                       | 5,466                | Kansas City            | 12,566                    | 4,120                        | -8,446               |
| Denver           | 21,946                    | 27,290                       | 5,344                | Milwaukee              | 7,366                     | -1,320                       | -8,686               |
| Nashville        | 4,323                     | 9,330                        | 5,007                | Columbus               | 11,231                    | 2,310                        | -8,921               |
| Calgary          | 3,634                     | 7,100                        | 3,466                | Salt Lake City         | 22,551                    | 12,680                       | -9,871               |
| Quebec City      | 2,136                     | 4,500                        | 2,364                | Rochester              | 11,208                    | -170                         | -11,378              |
| Tampa            | 7,976                     | 10,250                       | 2,274                | Minneapolis/St. Paul   | 17,752                    | 4,940                        | -12,812              |
| Indianapolis     | 5,524                     | 7,520                        | 1,996                | Phoenix                | 25,519                    | 12,180                       | -13,339              |
| Jacksonville     | 2,026                     | 3,700                        | 1,674                | Atlanta                | 34,623                    | 18,960                       | -15,663              |
| Portland         | 11,778                    | 13,090                       | 1,312                | San Diego              | 18,875                    | 2,760                        | -16,115              |
| Richmond         | 3,544                     | 1,800                        | -1,744               | Philadelphia           | 28,963                    | 9,630                        | -19,333              |
| South Florida    | 12,677                    | 10,280                       | -2,397               | Houston                | 13,629                    | -6,030                       | -19,659              |
| Orlando          | 12,560                    | 10,000                       | -2,560               | Pittsburgh             | 23,972                    | 4,150                        | -19,822              |
| San Antonio      | 5,580                     | 2,690                        | -2,890               | Los Angeles/Orange Co. | 61,261                    | 35,870                       | -25,391              |
| Madison          | 9,144                     | 5,940                        | -3,204               | Detroit                | 30,853                    | 3,870                        | -26,983              |
| Dallas/Ft. Worth | 30,700                    | 26,570                       | -4,130               | Washington, D.C.       | 55,931                    | 24,080                       | -31,851              |
| St. Louis        | 9,527                     | 4,950                        | -4,577               | Chicago                | 39,737                    | 7,330                        | -32,407              |
| Waterloo Region  | 12,894                    | 8,300                        | -4,594               | Boston                 | 48,736                    | 11,360                       | -37,376              |
| Sacramento       | 9,117                     | 3,890                        | -5,227               | New York Metro         | 87,408                    | 21,930                       | -65,478              |

Source: CBRE Research, U.S. Bureau of Labor Statistics, Statistics Canada, National Center for Education Statistics (Metro), Canadian Universities, 2021.  
\*Tech degrees cover the most recent five-year period available (2015-2019) and tech jobs added cover the time period reflecting when most graduates would be counted in employment figures (2016-2020).

**TABLE 9: TOP 10 MOST CONCENTRATED MILLENNIAL MARKETS\* (2019)**

| Market                 | Population Concentration of Millennials |
|------------------------|---|
| Austin                 | 34.6%                                   |
| Seattle                | 33.3%                                   |
| Denver                 | 32.4%                                   |
| SF Bay Area            | 32.0%                                   |
| San Diego              | 31.7%                                   |
| Los Angeles/Orange Co. | 31.2%                                   |
| Portland               | 30.9%                                   |
| Salt Lake City         | 30.6%                                   |
| Nashville              | 30.4%                                   |
| Columbus               | 30.4%                                   |
| <b>United States</b>   | <b>22.0%</b>                            |

Source: U.S. Census Bureau (County), 2021.

\*Millennials aged 22-36 years.

**TABLE 10: TECH TALENT EMPLOYMENT AND UNIVERSITY DEGREE BY MARKET**

| Market                                     | Total Number Employed <sup>1</sup> | Top 25 Degree Producing Universities <sup>2</sup> (% of Total Employed) | Share of Top 25 from within Market <sup>2</sup> (Locally Employed and Educated) |
|--|------------------------------------|---|---|
| San Francisco Bay Area                     | 373,430                            | 41%   | 37%   |
| New York Metro                             | 348,330                            | 31%   | 75%   |
| Toronto                                    | 270,400                            | 54%   | 67%   |
| Washington, D.C.                           | 265,370                            | 43%   | 70%   |
| Los Angeles/Orange Co.                     | 228,720                            | 43%   | 73%   |
| Dallas/Ft. Worth                           | 189,200                            | 41%   | 64%   |
| Seattle                                    | 184,660                            | 35%   | 40%   |
| Boston                                     | 168,090                            | 48%   | 73%   |
| Chicago                                    | 167,380                            | 47%   | 80%   |
| Montreal                                   | 160,700                            | 66%   | 93%   |
| <b>10 Largest "Large" Market Aggregate</b> | <b>2,356,280</b>                   | <b>41%</b>  | <b>61%</b>  |
| Columbus                                   | 47,940                             | 54%   | 75%   |
| Calgary                                    | 46,700                             | 71%   | 82%   |
| Orlando                                    | 43,340                             | 55%   | 76%   |
| Pittsburgh                                 | 43,080                             | 59%   | 79%   |
| Sacramento                                 | 40,160                             | 42%   | 70%   |
| <b>5 Largest "Small" Market Average</b>    | <b>221,220</b>                     | <b>57%</b>  | <b>77%</b>  |

Source: (1) U.S. Bureau of Labor Statistics (Metro), April 2021, Statistics Canada (Metro), 2021. (2) LinkedIn Talent Insights (LTI) and analysis by CBRE Research, May 2021. Tech Talent figures from LTI were defined by CBRE Research as software engineers, data engineers, cyber security analysts, system engineers, data scientists, information security analysts, infrastructure engineers, and database administrators.

LinkedIn Disclaimer: LinkedIn Talent Insights data is derived by aggregating profile data voluntarily submitted by LinkedIn members. As such, LinkedIn cannot guarantee the accuracy of LinkedIn Talent Insights data.

**TABLE 11: MILLENNIAL POPULATION CHANGE BY MARKET\* (2015-2019)**

| Large Tech Talent Markets (>50,000 Labor Pool) |          | Small Tech Talent Markets (<50,000 Labor Pool) |          |
|--|----------|--|----------|
| Market   | % Change | Market   | % Change |
| Seattle  | 21.5%    | Waterloo Region                                | 26.3%    |
| Toronto  | 21.2%    | Nashville                                      | 14.8%    |
| Denver   | 20.1%    | Edmonton                                       | 13.8%    |
| Austin   | 20.1%    | Orlando  | 13.0%    |
| Vancouver                                      | 19.8%    | Jacksonville                                   | 12.2%    |
| Ottawa   | 19.6%    | Indianapolis                                   | 10.4%    |
| Portland                                       | 18.0%    | San Antonio                                    | 9.4%     |
| Charlotte                                      | 17.1%    | Columbus                                       | 9.1%     |
| Dallas/Ft. Worth                               | 14.7%    | Calgary  | 8.5%     |
| Tampa  | 14.5%    | Richmond                                       | 7.6%     |
| SF Bay Area                                    | 14.4%    | Quebec City                                    | 7.0%     |
| Kansas City                                    | 12.5%    | Sacramento                                     | 5.6%     |
| Phoenix  | 11.9%    | Cincinnati                                     | 2.1%     |
| Montreal                                       | 11.9%    | Milwaukee                                      | 0.4%     |
| Salt Lake City                                 | 11.6%    | Madison  | 0.1%     |
| Atlanta  | 11.6%    | Cleveland                                      | -0.1%    |
| Raleigh-Durham                                 | 11.0%    | Pittsburgh                                     | -0.2%    |
| Houston  | 10.4%    | Virginia Beach                                 | -3.9%    |
| Minneapolis/St. Paul                           | 9.3%     | Hartford                                       | -4.7%    |
| Washington, D.C.                               | 7.3%     | Rochester                                      | -7.5%    |
| South Florida                                  | 5.7%     |  |          |
| Detroit  | 2.3%     |  |          |
| New York Metro                                 | 2.2%     |  |          |
| Boston   | 2.0%     |  |          |
| Philadelphia                                   | 1.8%     |  |          |
| St. Louis                                      | 1.8%     |  |          |
| Baltimore                                      | 1.3%     |  |          |
| Los Angeles/Orange Co.                         | 1.3%     |  |          |
| San Diego                                      | 0.7%     |  |          |
| Chicago  | 0.0%     |  |          |

Source: U.S. Census Bureau (Metro), Statistics Canada (Metro), 2021.  
 \*Millennials aged 23-38 years.

**TABLE 12: U.S. TECH TALENT LABOR CONCENTRATION BY INDUSTRY (2020)**

Tech Talent Occupations as a % of All Occupations in Each Industry

| Industry  | Tech Talent as % of Total Industry Occupations |
|---|--|
| Core High-Tech*   | 47.5%  |
| Information (Excluding High-Tech)                                   | 11.9%  |
| Professional, Scientific & Technical Services (Excluding High-Tech) | 8.4%   |
| Management of Companies & Enterprises                               | 8.3%   |
| FIRE  | 5.8%   |
| Total U.S. Employment   | 3.9%   |
| Government  | 3.3%   |
| Manufacturing (Excluding High-Tech)                                 | 2.2%   |
| Transportation, Warehousing & Wholesale                             | 2.1%   |
| Education   | 2.0%   |
| Other   | 0.9%   |
| Health Care   | 0.7%   |

Source: U.S. Bureau of Labor Statistics (National), April 2021.

\*Includes computer software and services and computer product manufacturing.

**TABLE 13: U.S. WORKFORCE BY RACE/ETHNICITY FOR SELECTED INDUSTRIES (2019)**

2019 U.S. Census Micro Data from IPUMS

| Industry   | White | Asian | Hispanic | Black | Other | Female |
|--|-------|-------|----------|-------|-------|--------|
| Total Workforce (All Industries and Occupations)           | 56.5% | 7.3%  | 20.8%    | 12.7% | 2.7%  | 46.1%  |
| Office-Using Industry Workforce (All Occupations)          | 64.7% | 9.0%  | 13.7%    | 10.0% | 2.6%  | 51.3%  |
| Tech Industry Workforce (All Occupations, Tech & Non-Tech) | 61.1% | 21.1% | 8.5%     | 6.4%  | 2.9%  | 33.3%  |
| Tech Talent Workforce (Tech Industry)                      | 54.6% | 28.8% | 7.7%     | 5.9%  | 2.9%  | 21.5%  |
| Tech Talent Workforce (All Industries)                     | 57.4% | 22.5% | 8.7%     | 8.4%  | 3.0%  | 27.2%  |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

**TABLE 14: U.S. WORKFORCE BY SEX FOR SELECTED INDUSTRIES (2019)**

% Female of Total Workforce (Male and Female)

| Industry   | All Races | Other | Black | Hispanic | Asian | White | Under-represented |
|--|-----------|-------|-------|----------|-------|-------|-------------------|
| Total Workforce (All Industries and Occupations)           | 46%       | 48%   | 52%   | 42%      | 49%   | 46%   | 46%               |
| Office-Using Industry Workforce (All Occupations)          | 51%       | 53%   | 62%   | 56%      | 46%   | 49%   | 58%               |
| Tech Industry Workforce (All Occupations, Tech & Non-Tech) | 33%       | 36%   | 42%   | 33%      | 32%   | 33%   | 37%               |
| Tech Talent Workforce (Tech Industry)                      | 22%       | 25%   | 28%   | 19%      | 27%   | 18%   | 23%               |
| Tech Talent Workforce (All Industries)                     | 27%       | 28%   | 38%   | 26%      | 30%   | 25%   | 32%               |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

**TABLE 15: U.S. TECH TALENT OCCUPATION CATEGORY BY RACE/ETHNICITY & SEX (2019)**

| Tech Talent Occupation Category                          | Share of Occupations | RACE/ETHNICITY SHARE OF OCCUPATIONS BY SEX |              |              |              |             |
|--|----------------------|--|--------------|--------------|--------------|-------------|
|  |                      | White                                      | Asian        | Hispanic     | Black        | Other       |
| Software Developers, Programmers & Engineers (2.2M Jobs) |                      |  |              |              |              |             |
| Female   | 20.5%                | 43.4%                                      | 41.4%        | 5.7%         | 6.6%         | 2.8%        |
| Male   | 79.5%                | 57.0%                                      | 29.4%        | 6.6%         | 4.2%         | 2.8%        |
| <b>Total (Both Sexes)</b>                                | <b>100.0%</b>        | <b>54.2%</b>                               | <b>31.9%</b> | <b>6.4%</b>  | <b>4.7%</b>  | <b>2.8%</b> |
| Computer Support, Database & Systems (3.2M Jobs)         |                      |  |              |              |              |             |
| Female   | 32.0%                | 55.8%                                      | 17.1%        | 9.8%         | 14.2%        | 3.1%        |
| Male   | 68.0%                | 61.4%                                      | 15.1%        | 10.7%        | 9.6%         | 3.1%        |
| <b>Total (Both Sexes)</b>                                | <b>100.0%</b>        | <b>59.6%</b>                               | <b>15.8%</b> | <b>10.4%</b> | <b>11.1%</b> | <b>3.1%</b> |
| Total Tech Talent (5.4M Jobs)                            |                      |  |              |              |              |             |
| Female   | 27.2%                | 51.9%                                      | 24.8%        | 8.5%         | 11.8%        | 3.0%        |
| Male   | 72.8%                | 59.4%                                      | 21.7%        | 8.8%         | 7.1%         | 3.0%        |
| <b>Total (Both Sexes)</b>                                | <b>100.0%</b>        | <b>57.4%</b>                               | <b>22.5%</b> | <b>8.7%</b>  | <b>8.4%</b>  | <b>3.0%</b> |

Source: U.S. Census, IPUMS and CBRE Research, May 2021.

**TABLE 16: UNDERREPRESENTED RACE/ETHNIC GROUPS IN U.S. TECH TALENT WORKFORCE BY MARKET (2019)**

| Market                 | Difference* | Tech Talent Share of Underrepresented Groups** | Office-Using Share of Underrepresented Groups** |
|------------------------|-------------|--|---|
| <b>Most Diverse</b>    |             |  |   |
| Pittsburgh             | 3.5%        | 12.2%  | 8.7%  |
| Charlotte              | 0.8%        | 25.5%  | 24.7%   |
| Nashville              | 0.4%        | 17.1%  | 16.7%   |
| Atlanta                | 0.2%        | 36.1%  | 35.9%   |
| Rochester              | -0.6%       | 11.9%  | 12.6%   |
| <b>Least Diverse</b>   |             |  |   |
| San Antonio            | -14.7%      | 39.8%  | 54.5%   |
| Los Angeles/Orange Co. | -12.6%      | 24.3%  | 36.9%   |
| Austin                 | -10.5%      | 18.4%  | 28.9%   |
| San Francisco Bay Area | -9.6%       | 10.7%  | 20.3%   |
| San Diego              | -9.1%       | 20.1%  | 29.2%   |

Source: TBD

\*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark

\*\*Hispanic, Black, Other Non-White/Non-Asian

**TABLE 17: FEMALES IN U.S. TECH TALENT WORKFORCE BY MARKET (2019)**

| Market               | Difference* | Tech Talent Share of Females | Office-Using Share of Females |
|----------------------|-------------|------------------------------|-------------------------------|
| <b>Most Diverse</b>  |             |                              |                               |
| Washington, D.C.     | -17.4%      | 32.3%                        | 49.7%                         |
| Sacramento           | -17.6%      | 35.6%                        | 53.3%                         |
| Kansas City          | -17.9%      | 33.2%                        | 51.2%                         |
| Boston               | -18.4%      | 30.3%                        | 48.6%                         |
| Hartford             | -19.5%      | 30.1%                        | 49.6%                         |
| <b>Least Diverse</b> |             |                              |                               |
| Cleveland            | -29.7%      | 24.6%                        | 54.2%                         |
| South Florida        | -29.1%      | 23.2%                        | 52.3%                         |
| Richmond             | -28.5%      | 26.2%                        | 54.6%                         |
| Orlando              | -28.0%      | 25.0%                        | 53.0%                         |
| St. Louis            | -27.8%      | 24.9%                        | 52.7%                         |

Source: TBD

\*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark

**TABLE 18: U.S. TECH DEGREE GRADUATE'S RACE/ETHNICITY & SEX (2019)**

| Year | Total Graduates | Male  | Female Share of Tech Graduates | White | Asian | Hispanic | Black | Other |
|------|-----------------|-------|--------------------------------|-------|-------|----------|-------|-------|
| 2010 | 156,333         | 78.2% | 21.8%                          | 73.4% | 10.4% | 7.8%     | 10.4% | 7.8%  |
| 2011 | 166,344         | 78.1% | 21.9%                          | 70.0% | 13.2% | 8.3%     | 13.2% | 8.3%  |
| 2012 | 178,283         | 77.9% | 22.1%                          | 69.3% | 12.9% | 8.9%     | 12.9% | 8.9%  |
| 2013 | 192,191         | 77.8% | 22.2%                          | 67.8% | 13.0% | 9.3%     | 13.0% | 9.3%  |
| 2014 | 211,353         | 77.4% | 22.6%                          | 66.9% | 12.8% | 10.1%    | 12.8% | 10.1% |
| 2015 | 233,970         | 76.9% | 23.1%                          | 65.9% | 13.1% | 10.4%    | 13.1% | 10.4% |
| 2016 | 263,364         | 76.4% | 23.6%                          | 64.2% | 14.1% | 10.9%    | 14.1% | 10.9% |
| 2017 | 288,446         | 76.1% | 23.9%                          | 62.9% | 14.9% | 11.4%    | 14.9% | 11.4% |
| 2018 | 304,692         | 75.5% | 24.5%                          | 61.7% | 15.6% | 11.6%    | 15.6% | 11.6% |
| 2019 | 318,659         | 75.1% | 24.9%                          | 60.3% | 16.2% | 12.1%    | 16.2% | 12.1% |

Source: IPEDS

\*Total tech degree graduates and sex breakdown includes U.S. resident and foreigners.

\*\*Race/ethnicity breakdown excludes unknown races and foreigners.

**TABLE 19: U.S. TECH DEGREE GRADUATE'S RACE/ETHNICITY & SEX BY MARKET (2019)**

Bachelor's Degree or Higher

| Market   | Total Graduates | RACE/ETHNICITY** |       |                    |          |       |       |
|--|-----------------|------------------|-------|--------------------|----------|-------|-------|
|  |                 | White            | Asian | Under-represented* | Hispanic | Black | Other |
| <b>Most Diverse (Highest % Underrepresented Groups*)</b> |                 |                  |       |                    |          |       |       |
| South Florida  | 2,770           | 25.8%            | 6.1%  | 68.1%              | 49.9%    | 15.1% | 3.1%  |
| San Antonio  | 1,328           | 32.2%            | 9.9%  | 57.8%              | 47.1%    | 6.5%  | 4.2%  |
| Houston  | 3,054           | 34.2%            | 25.3% | 40.5%              | 24.6%    | 14.0% | 1.9%  |
| Washington, D.C.   | 12,623          | 48.2%            | 16.8% | 35.0%              | 8.7%     | 21.5% | 4.7%  |
| Tampa  | 1,868           | 56.1%            | 9.1%  | 34.7%              | 18.7%    | 12.8% | 3.3%  |
| <b>Least Diverse (Lowest % Underrepresented Groups*)</b> |                 |                  |       |                    |          |       |       |
| Madison  | 2,214           | 81.9%            | 9.5%  | 8.5%               | 3.9%     | 1.5%  | 3.1%  |
| Cincinnati   | 2,310           | 78.7%            | 11.9% | 9.4%               | 3.1%     | 3.6%  | 2.7%  |
| Milwaukee  | 1,594           | 81.2%            | 7.5%  | 11.2%              | 5.0%     | 3.4%  | 2.8%  |
| Rochester  | 2,467           | 76.6%            | 11.4% | 12.0%              | 6.3%     | 2.5%  | 3.3%  |
| Detroit  | 6,790           | 71.2%            | 16.5% | 12.3%              | 4.5%     | 4.1%  | 3.7%  |

| Market                                 | Total Graduates | SEX   |        | Market                                | Total Graduates | SEX   |        |
|--|-----------------|-------|--------|---------------------------------------|-----------------|-------|--------|
|  |                 | Male  | Female |                                       |                 | Male  | Female |
| <b>Most Diverse (Highest % Female)</b> |                 |       |        | <b>Least Diverse (Highest % Male)</b> |                 |       |        |
| Pittsburgh                             | 5,414           | 69.1% | 30.9%  | Salt Lake City                        | 5,844           | 86.8% | 13.2%  |
| Seattle                                | 4,847           | 69.5% | 30.5%  | Orlando                               | 2,793           | 83.7% | 16.3%  |
| New York Metro                         | 20,576          | 69.7% | 30.3%  | Milwaukee                             | 1,594           | 79.8% | 20.2%  |
| Boston                                 | 12,183          | 69.9% | 30.1%  | South Florida                         | 2,770           | 79.3% | 20.7%  |
| Houston                                | 3,054           | 70.4% | 29.6%  | Portland                              | 2,931           | 77.9% | 22.1%  |

Source: IPEDS and CBRE Research, May 2021.

Total tech degree graduates and sex breakdown includes U.S. resident and foreigners. Race/ethnicity breakdown excludes unknown races and foreigners.

\*Aggregate of Hispanic, Black, Other Non-White/Non-Asian \*\*Race/ethnicity breakdown excludes unknown races and foreigners.



# Tech talent has unique concentrations across markets

**TABLE 20: TECH TALENT BY TYPE: SOFTWARE DEVELOPERS & PROGRAMMERS**

Ranked by % of Tech Talent

| Market               | Software Developers & Programmers | % of Tech Talent | Market         | Software Developers & Programmers | % of Tech Talent |
|----------------------|-----------------------------------|------------------|----------------|-----------------------------------|------------------|
| Seattle              | 114,800                           | 62.2%            | San Diego      | 24,140                            | 34.3%            |
| Madison              | 11,300                            | 46.0%            | Philadelphia   | 37,500                            | 33.3%            |
| Waterloo Region      | 11,900                            | 45.9%            | Portland       | 19,930                            | 33.0%            |
| SF Bay Area          | 166,020                           | 44.5%            | Phoenix        | 32,310                            | 32.9%            |
| Raleigh-Durham       | 27,810                            | 41.5%            | Cincinnati     | 12,850                            | 32.9%            |
| Boston               | 68,590                            | 40.8%            | South Florida  | 22,090                            | 32.7%            |
| Salt Lake City       | 19,980                            | 39.9%            | St. Louis      | 17,920                            | 32.5%            |
| Vancouver            | 36,300                            | 39.8%            | Cleveland      | 11,790                            | 32.5%            |
| New York Metro       | 136,120                           | 39.1%            | Tampa          | 17,440                            | 32.3%            |
| Austin               | 30,670                            | 38.7%            | Orlando        | 13,560                            | 31.3%            |
| Denver               | 44,140                            | 38.4%            | Charlotte      | 19,310                            | 31.1%            |
| Richmond             | 9,090                             | 37.1%            | Jacksonville   | 6,590                             | 30.2%            |
| Columbus             | 17,740                            | 37.0%            | Baltimore      | 24,240                            | 29.6%            |
| Kansas City          | 19,450                            | 37.0%            | Pittsburgh     | 12,750                            | 29.6%            |
| Detroit              | 33,020                            | 36.8%            | Ottawa         | 21,900                            | 29.6%            |
| Indianapolis         | 14,420                            | 36.1%            | Nashville      | 10,260                            | 29.2%            |
| Minneapolis/St. Paul | 35,080                            | 36.0%            | Montreal       | 46,000                            | 28.6%            |
| Hartford             | 9,500                             | 35.9%            | Quebec City    | 8,400                             | 28.6%            |
| Chicago              | 60,030                            | 35.9%            | Toronto        | 75,900                            | 28.1%            |
| Dallas/Ft. Worth     | 66,910                            | 35.4%            | Houston        | 26,520                            | 27.5%            |
| GLA/OC               | 80,440                            | 35.2%            | Calgary        | 12,700                            | 27.2%            |
| Rochester            | 7,290                             | 35.0%            | Virginia Beach | 7,840                             | 26.6%            |
| Milwaukee            | 10,390                            | 34.9%            | Sacramento     | 10,270                            | 25.6%            |
| Atlanta              | 49,900                            | 34.7%            | San Antonio    | 7,870                             | 23.8%            |
| Washington, D.C.     | 91,690                            | 34.6%            | Edmonton       | 7,400                             | 21.4%            |

Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2021.

Note: Software Developers & Programmers include: computer programmers; software application developers, software systems software developers and web developers.

**TABLE 21: TECH TALENT BY TYPE: COMPUTER, SUPPORT DATABASE & SYSTEMS**

Ranked by % of Tech Talent

| Market           | Computer,<br>Support Database<br>& Systems | % of<br>Tech Talent | Market               | Computer,<br>Support Database<br>& Systems | % of<br>Tech Talent |
|------------------|--|---------------------|----------------------|--|---------------------|
| San Antonio      | 20,340                                     | 61.5%               | Milwaukee            | 14,450                                     | 48.5%               |
| Sacramento       | 22,640                                     | 56.4%               | Minneapolis/St. Paul | 46,660                                     | 47.9%               |
| Nashville        | 19,100                                     | 54.3%               | Chicago              | 79,840                                     | 47.7%               |
| Baltimore        | 43,710                                     | 53.5%               | Salt Lake City       | 23,690                                     | 47.3%               |
| Charlotte        | 33,190                                     | 53.4%               | Rochester            | 9,600                                      | 46.1%               |
| Houston          | 51,320                                     | 53.2%               | Denver               | 51,950                                     | 45.2%               |
| Tampa            | 28,640                                     | 53.1%               | New York Metro       | 157,230                                    | 45.1%               |
| Cleveland        | 19,180                                     | 52.8%               | Ottawa               | 32,500                                     | 43.9%               |
| Washington, D.C. | 138,270                                    | 52.1%               | Detroit              | 39,270                                     | 43.8%               |
| Virginia Beach   | 15,270                                     | 51.9%               | Madison              | 10,710                                     | 43.6%               |
| South Florida    | 34,880                                     | 51.7%               | Raleigh-Durham       | 28,930                                     | 43.1%               |
| Indianapolis     | 20,510                                     | 51.3%               | Toronto              | 114,900                                    | 42.5%               |
| St. Louis        | 28,220                                     | 51.2%               | GLA/OC               | 97,100                                     | 42.5%               |
| Cincinnati       | 20,000                                     | 51.2%               | San Diego            | 29,260                                     | 41.6%               |
| Richmond         | 12,460                                     | 50.8%               | Hartford             | 10,920                                     | 41.3%               |
| Kansas City      | 26,740                                     | 50.8%               | Quebec City          | 11,700                                     | 39.8%               |
| Orlando          | 21,990                                     | 50.7%               | Montreal             | 63,900                                     | 39.8%               |
| Jacksonville     | 11,040                                     | 50.5%               | Portland             | 23,540                                     | 39.0%               |
| Pittsburgh       | 21,710                                     | 50.4%               | Edmonton             | 13,400                                     | 38.8%               |
| Columbus         | 24,080                                     | 50.2%               | Vancouver            | 35,200                                     | 38.6%               |
| Dallas/Ft. Worth | 94,990                                     | 50.2%               | Boston               | 63,530                                     | 37.8%               |
| Philadelphia     | 55,980                                     | 49.7%               | SF Bay Area          | 130,600                                    | 35.0%               |
| Atlanta          | 71,350                                     | 49.6%               | Calgary              | 16,300                                     | 34.9%               |
| Austin           | 38,470                                     | 48.6%               | Waterloo Region      | 8,400                                      | 32.4%               |
| Phoenix          | 47,640                                     | 48.5%               | Seattle              | 47,770                                     | 25.9%               |

Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2021.

Note: Computer Support, Database &amp; Systems include: computer and information research scientists, computer systems analysts, information security analysts, database administrators, network and computer systems administrators, computer network architects, computer user support specialists, computer network support specialists and all other computer occupations.

**TABLE 22: TECH TALENT BY TYPE: COMPUTER & INFORMATION SYSTEMS MANAGERS**

Ranked by % of Tech Talent

| Market               | Compute & Information Systems Managers | % of Tech Talent | Market           | Compute & Information Systems Managers | % of Tech Talent |
|----------------------|--|------------------|------------------|--|------------------|
| Hartford             | 4,540                                  | 17.2%            | Orlando          | 3,370                                  | 7.8%             |
| Toronto              | 32,000                                 | 11.8%            | Cleveland        | 2,800                                  | 7.7%             |
| Boston               | 19,320                                 | 11.5%            | Milwaukee        | 2,280                                  | 7.6%             |
| Nashville            | 3,870                                  | 11.0%            | Jacksonville     | 1,660                                  | 7.6%             |
| SF Bay Area          | 40,360                                 | 10.8%            | Cincinnati       | 2,940                                  | 7.5%             |
| Chicago              | 17,820                                 | 10.6%            | Baltimore        | 6,120                                  | 7.5%             |
| New York Metro       | 37,080                                 | 10.6%            | St. Louis        | 4,070                                  | 7.4%             |
| GLA/OC               | 22,790                                 | 10.0%            | Tampa            | 3,970                                  | 7.4%             |
| Charlotte            | 6,080                                  | 9.8%             | Washington, D.C. | 19,130                                 | 7.2%             |
| Minneapolis/St. Paul | 9,520                                  | 9.8%             | Quebec City      | 2,100                                  | 7.1%             |
| San Diego            | 6,720                                  | 9.6%             | Indianapolis     | 2,830                                  | 7.1%             |
| Philadelphia         | 10,370                                 | 9.2%             | Rochester        | 1,430                                  | 6.9%             |
| South Florida        | 6,180                                  | 9.2%             | Houston          | 6,410                                  | 6.6%             |
| Pittsburgh           | 3,820                                  | 8.9%             | Dallas/Ft. Worth | 12,440                                 | 6.6%             |
| Sacramento           | 3,540                                  | 8.8%             | San Antonio      | 2,170                                  | 6.6%             |
| Atlanta              | 12,560                                 | 8.7%             | Richmond         | 1,580                                  | 6.4%             |
| Phoenix              | 8,440                                  | 8.6%             | Kansas City      | 3,380                                  | 6.4%             |
| Portland             | 5,180                                  | 8.6%             | Columbus         | 3,030                                  | 6.3%             |
| Raleigh-Durham       | 5,500                                  | 8.2%             | Virginia Beach   | 1,720                                  | 5.8%             |
| Edmonton             | 2,800                                  | 8.1%             | Denver           | 6,690                                  | 5.8%             |
| Ottawa               | 6,000                                  | 8.1%             | Seattle          | 10,560                                 | 5.7%             |
| Detroit              | 7,200                                  | 8.0%             | Madison          | 1,250                                  | 5.1%             |
| Vancouver            | 7,300                                  | 8.0%             | Montreal         | 7,500                                  | 4.7%             |
| Salt Lake City       | 4,000                                  | 8.0%             | Austin           | 3,330                                  | 4.2%             |
| Calgary              | 3,700                                  | 7.9%             | Waterloo Region  | 800                                    | 3.1%             |

Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2021.

**TABLE 23: TECH TALENT BY TYPE: TECHNOLOGY ENGINEERING-RELATED**

Ranked by % of Tech Talent

| Market          | Technology Engineering-Related | % of Tech Talent | Market               | Technology Engineering-Related | % of Tech Talent |
|-----------------|--------------------------------|------------------|----------------------|--------------------------------|------------------|
| Edmonton        | 10,900                         | 32%              | St. Louis            | 4,870                          | 9%               |
| Calgary         | 14,000                         | 30%              | Austin               | 6,760                          | 9%               |
| Montreal        | 43,300                         | 27%              | Cincinnati           | 3,290                          | 8%               |
| Quebec City     | 7,200                          | 24%              | San Antonio          | 2,700                          | 8%               |
| Portland        | 11,680                         | 19%              | Philadelphia         | 8,890                          | 8%               |
| Waterloo Region | 4,800                          | 19%              | Dallas/Ft. Worth     | 14,860                         | 8%               |
| Ottawa          | 13,600                         | 18%              | Tampa                | 3,910                          | 7%               |
| Toronto         | 47,500                         | 18%              | Raleigh-Durham       | 4,810                          | 7%               |
| Virginia Beach  | 4,590                          | 16%              | Cleveland            | 2,550                          | 7%               |
| San Diego       | 10,230                         | 15%              | Atlanta              | 9,970                          | 7%               |
| Vancouver       | 12,400                         | 14%              | Columbus             | 3,090                          | 6%               |
| Houston         | 12,170                         | 13%              | South Florida        | 4,350                          | 6%               |
| GLA/OC          | 28,390                         | 12%              | Minneapolis/St. Paul | 6,210                          | 6%               |
| Rochester       | 2,520                          | 12%              | Seattle              | 11,530                         | 6%               |
| Jacksonville    | 2,550                          | 12%              | Washington, D.C.     | 16,280                         | 6%               |
| Detroit         | 10,190                         | 11%              | Kansas City          | 3,060                          | 6%               |
| Pittsburgh      | 4,800                          | 11%              | Chicago              | 9,690                          | 6%               |
| Denver          | 12,120                         | 11%              | Charlotte            | 3,530                          | 6%               |
| Orlando         | 4,420                          | 10%              | Richmond             | 1,390                          | 6%               |
| Phoenix         | 9,830                          | 10%              | Hartford             | 1,480                          | 6%               |
| Boston          | 16,650                         | 10%              | Indianapolis         | 2,230                          | 6%               |
| SF Bay Area     | 36,450                         | 10%              | Nashville            | 1,960                          | 6%               |
| Baltimore       | 7,700                          | 9%               | Madison              | 1,320                          | 5%               |
| Sacramento      | 3,710                          | 9%               | New York Metro       | 17,900                         | 5%               |
| Milwaukee       | 2,690                          | 9%               | Salt Lake City       | 2,400                          | 5%               |

Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2021.

Note: Technology Engineering-Related includes: computer programmers; computer hardware engineers, electrical engineers, electronics engineers except computer, electrical and electronics drafters, electrical and electronics engineering technicians and electro-mechanical technicians.

**TABLE 24: AVERAGE U.S. TECH COMPANY OCCUPATION POOLS**

500 Employees

| Occupation Pools                                  | Employees | % of Tech Talent Labor |
|---|-----------|------------------------|
| Tech Talent Employees*                            | 238       | 47%                    |
| Support Non-Tech Employees (excluding Management) | 202       | 40%                    |
| Management  | 60        | 12%                    |

Source: U.S. Bureau of Labor Statistics (National), April 2021.

\*Tech Talent includes the following occupation categories: software developers and programmers; computer support, database and systems; technology and engineering related; and computer information system managers.

**TABLE 25: ESTIMATED ONE-YEAR COSTS BY MARKET:  
WAGE AND RENT OBLIGATION FOR TYPICAL TECH FIRM**

Sample Tech Firm Estimates: 500 Employees, 75,000 Sq. Ft.

| Market                 | Rent Cost<br>(avg rent x 75,000 sf) | Tech Talent Wages<br>(avg wage x 237 people) | Support                                   |  | Total        |
|------------------------|-------------------------------------|--|---|--|--------------|
|                        |                                     |  | Non-Tech Wages<br>(avg wage x 202 people) | Management Wages<br>(avg wage x 60 people) |              |
| SF Bay Area            | \$5,253,336                         | \$34,360,103                                 | \$15,694,420                              | \$13,303,186                               | \$68,611,046 |
| New York Metro         | \$5,793,750                         | \$28,119,799                                 | \$13,218,948                              | \$12,079,200                               | \$59,211,697 |
| Seattle                | \$3,001,500                         | \$30,161,857                                 | \$13,299,959                              | \$10,273,800                               | \$56,737,116 |
| Washington, D.C.       | \$3,084,750                         | \$27,900,741                                 | \$14,129,507                              | \$10,670,400                               | \$55,785,397 |
| Boston                 | \$3,148,500                         | \$27,154,520                                 | \$13,221,127                              | \$10,050,000                               | \$53,574,148 |
| Los Angeles/Orange Co. | \$3,388,831                         | \$26,180,345                                 | \$11,448,430                              | \$11,050,200                               | \$52,067,806 |
| Denver                 | \$2,183,250                         | \$25,580,375                                 | \$12,952,469                              | \$10,716,304                               | \$51,432,398 |
| San Diego              | \$2,866,500                         | \$26,176,882                                 | \$11,542,894                              | \$10,174,200                               | \$50,760,476 |
| Baltimore              | \$1,770,000                         | \$26,252,880                                 | \$11,251,684                              | \$9,516,600                                | \$48,791,163 |
| Philadelphia           | \$2,132,250                         | \$24,389,860                                 | \$11,273,558                              | \$9,677,400                                | \$47,473,068 |
| Minneapolis/St. Paul   | \$1,960,500                         | \$24,369,018                                 | \$11,571,166                              | \$9,358,200                                | \$47,258,884 |
| Sacramento             | \$1,890,000                         | \$24,369,838                                 | \$10,857,432                              | \$9,600,000                                | \$46,717,270 |
| Chicago                | \$2,426,250                         | \$23,931,175                                 | \$10,807,378                              | \$9,417,600                                | \$46,582,403 |
| Houston                | \$2,224,500                         | \$24,220,443                                 | \$10,428,254                              | \$9,690,000                                | \$46,563,197 |
| Dallas/Ft. Worth       | \$1,931,250                         | \$24,371,839                                 | \$10,363,358                              | \$9,730,800                                | \$46,397,248 |
| Charlotte              | \$2,312,250                         | \$23,790,169                                 | \$10,901,353                              | \$9,175,200                                | \$46,178,972 |
| Raleigh-Durham         | \$2,229,750                         | \$23,953,048                                 | \$11,259,793                              | \$8,705,915                                | \$46,148,506 |
| Atlanta                | \$2,215,500                         | \$23,737,874                                 | \$10,617,225                              | \$9,123,600                                | \$45,694,199 |
| Portland               | \$2,341,500                         | \$23,653,419                                 | \$11,133,274                              | \$8,557,800                                | \$45,685,993 |
| Austin                 | \$2,954,250                         | \$23,022,375                                 | \$10,350,230                              | \$9,325,200                                | \$45,652,055 |
| Richmond               | \$1,593,750                         | \$23,484,266                                 | \$10,825,808                              | \$9,583,200                                | \$45,487,023 |
| Hartford               | \$1,466,250                         | \$23,902,569                                 | \$11,323,251                              | \$8,704,200                                | \$45,396,270 |
| South Florida          | \$3,047,299                         | \$21,918,770                                 | \$9,677,489                               | \$9,507,000                                | \$44,150,558 |
| Phoenix                | \$2,108,250                         | \$22,289,794                                 | \$10,052,516                              | \$8,789,400                                | \$43,239,960 |
| Columbus               | \$1,479,750                         | \$22,058,820                                 | \$10,310,880                              | \$8,644,800                                | \$42,494,249 |
| Detroit                | \$1,452,000                         | \$21,806,161                                 | \$10,662,772                              | \$8,535,876                                | \$42,456,808 |
| St. Louis              | \$1,578,293                         | \$21,872,253                                 | \$10,177,794                              | \$8,622,600                                | \$42,250,940 |
| Madison                | \$1,559,250                         | \$21,982,411                                 | \$10,395,305                              | \$8,118,600                                | \$42,055,566 |
| Tampa                  | \$2,063,989                         | \$21,544,833                                 | \$9,413,474                               | \$9,009,000                                | \$42,031,296 |
| Cincinnati             | \$1,459,500                         | \$21,799,883                                 | \$10,201,132                              | \$8,527,200                                | \$41,987,715 |
| Cleveland              | \$1,402,500                         | \$21,913,476                                 | \$10,190,782                              | \$8,240,400                                | \$41,747,158 |
| San Antonio            | \$1,629,750                         | \$21,797,565                                 | \$9,051,310                               | \$9,022,800                                | \$41,501,424 |
| Virginia Beach         | \$1,520,250                         | \$21,577,743                                 | \$9,313,768                               | \$9,067,800                                | \$41,479,561 |
| Milwaukee              | \$1,512,750                         | \$21,185,787                                 | \$10,319,091                              | \$8,355,600                                | \$41,373,228 |
| Orlando                | \$1,857,000                         | \$21,224,752                                 | \$9,145,449                               | \$8,854,800                                | \$41,082,002 |
| Salt Lake City         | \$1,870,500                         | \$21,225,684                                 | \$9,588,092                               | \$8,359,260                                | \$41,043,536 |
| Pittsburgh             | \$1,730,250                         | \$21,106,981                                 | \$9,466,876                               | \$8,556,600                                | \$40,860,707 |
| Rochester              | \$1,462,500                         | \$20,290,958                                 | \$10,146,031                              | \$8,813,400                                | \$40,712,889 |
| Indianapolis           | \$1,605,750                         | \$20,553,891                                 | \$10,302,026                              | \$7,854,000                                | \$40,315,666 |
| Kansas City            | \$1,594,500                         | \$20,651,272                                 | \$10,314,941                              | \$7,584,000                                | \$40,144,713 |
| Nashville              | \$2,130,000                         | \$20,138,320                                 | \$9,974,898                               | \$7,691,400                                | \$39,934,617 |
| Jacksonville           | \$1,600,500                         | \$19,991,529                                 | \$9,129,482                               | \$8,182,800                                | \$38,904,311 |
| Calgary                | \$2,251,500                         | \$17,000,811                                 | \$11,161,282                              | \$5,454,342                                | \$35,867,935 |
| Ottawa                 | \$1,885,762                         | \$16,262,772                                 | \$10,537,009                              | \$5,308,312                                | \$33,993,855 |
| Edmonton               | \$1,858,927                         | \$16,458,281                                 | \$10,374,124                              | \$5,166,888                                | \$33,858,219 |
| Toronto                | \$1,985,837                         | \$15,904,751                                 | \$9,743,196                               | \$5,135,266                                | \$32,769,051 |
| Vancouver              | \$2,683,563                         | \$15,823,496                                 | \$9,330,227                               | \$4,858,949                                | \$32,696,235 |
| Quebec City            | \$1,440,179                         | \$15,096,634                                 | \$9,228,907                               | \$6,730,734                                | \$32,496,454 |
| Montreal               | \$1,918,748                         | \$14,945,300                                 | \$9,159,593                               | \$5,571,569                                | \$31,595,210 |
| Waterloo Region        | \$1,475,401                         | \$15,598,536                                 | \$9,177,296                               | \$5,112,009                                | \$31,363,242 |

Source: U.S. Bureau of Labor Statistics, April 2021, Canada Statistics 2021, CBRE Research (Metro), Q4 2020.

\*in US\$

# How does tech talent impact commercial real estate?

**TABLE 26: OFFICE ASKING RENT BY MARKET (Q4 2020)**

| Market               | Annual Gross Direct Asking Rent | Office Rent 5 Yr. Growth | Market           | Annual Gross Direct Asking Rent | Office Rent 5 Yr. Growth |
|----------------------|---------------------------------|--------------------------|------------------|---------------------------------|--------------------------|
| Manhattan            | \$77.25                         | 8%                       | Montreal*        | \$25.58                         | 12%                      |
| SF Bay Area          | \$70.04                         | 19%                      | Sacramento       | \$25.20                         | 21%                      |
| Los Angeles          | \$45.18                         | 30%                      | Ottawa*          | \$25.14                         | 8%                       |
| Boston               | \$41.98                         | 19%                      | Salt Lake City   | \$24.94                         | 30%                      |
| Washington, D.C.     | \$41.13                         | 14%                      | Edmonton*        | \$24.79                         | 2%                       |
| South Florida        | \$40.63                         | 29%                      | Orlando          | \$24.76                         | 22%                      |
| Seattle              | \$40.02                         | 34%                      | Baltimore        | \$23.60                         | 5%                       |
| Austin               | \$39.39                         | 24%                      | Pittsburgh       | \$23.07                         | 8%                       |
| San Diego            | \$38.22                         | 19%                      | San Antonio      | \$21.73                         | 3%                       |
| Vancouver*           | \$35.78                         | 23%                      | Indianapolis     | \$21.41                         | 19%                      |
| Chicago              | \$32.35                         | 12%                      | Jacksonville     | \$21.34                         | 16%                      |
| Portland             | \$31.22                         | 27%                      | Kansas City      | \$21.26                         | 21%                      |
| Charlotte            | \$30.83                         | 38%                      | Richmond         | \$21.25                         | 8%                       |
| Calgary*             | \$30.02                         | -21%                     | St. Louis        | \$21.04                         | 13%                      |
| Raleigh-Durham       | \$29.73                         | 26%                      | Madison          | \$20.79                         | 8%                       |
| Houston              | \$29.66                         | 3%                       | Virginia Beach   | \$20.27                         | 12%                      |
| Atlanta              | \$29.54                         | 35%                      | Milwaukee        | \$20.17                         | 13%                      |
| Denver               | \$29.11                         | 17%                      | Columbus         | \$19.73                         | 8%                       |
| Philadelphia         | \$28.43                         | 8%                       | Waterloo Region* | \$19.67                         | 25%                      |
| Nashville            | \$28.40                         | 35%                      | Hartford         | \$19.55                         | -2%                      |
| Phoenix              | \$28.11                         | 23%                      | Rochester        | \$19.50                         | 5%                       |
| Tampa                | \$27.52                         | 30%                      | Cincinnati       | \$19.46                         | 4%                       |
| Toronto*             | \$26.48                         | 8%                       | Detroit          | \$19.36                         | 10%                      |
| Minneapolis/St. Paul | \$26.14                         | 2%                       | Quebec City*     | \$19.20                         | 14%                      |
| Dallas/Ft. Worth     | \$25.75                         | 18%                      | Cleveland        | \$18.70                         | 6%                       |

Source: CBRE Research (Office Market), Q4 2020.  
\*data in US\$

**TABLE 27: OFFICE VACANCY RATE BY MARKET (Q4 2020)**

| Market          | Vacancy Rate | 5 Yrs. Ago (Q1 2015) | Market               | Vacancy Rate | 5 Yrs. Ago (Q1 2015) |
|-----------------|--------------|----------------------|----------------------|--------------|----------------------|
| Vancouver       | 6.2%         | 11.0%                | South Florida        | 15.5%        | 13.5%                |
| Madison         | 6.6%         | 9.5%                 | Nashville            | 15.5%        | 7.4%                 |
| Quebec City     | 7.3%         | 7.7%                 | Denver               | 15.6%        | 13.4%                |
| Waterloo Region | 7.7%         | 12.0%                | Salt Lake City       | 15.6%        | 15.3%                |
| Ottawa          | 8.7%         | 10.6%                | Baltimore            | 15.7%        | 13.9%                |
| Richmond        | 10.0%        | 12.0%                | Jacksonville         | 15.9%        | 17.7%                |
| Virginia Beach  | 10.0%        | 15.6%                | Milwaukee            | 16.0%        | 15.2%                |
| Toronto         | 11.0%        | 9.6%                 | Philadelphia         | 16.2%        | 15.3%                |
| Sacramento      | 11.2%        | 16.3%                | Los Angeles          | 16.3%        | 15.2%                |
| Manhattan       | 11.3%        | 7.2%                 | Pittsburgh           | 16.3%        | 11.8%                |
| Raleigh-Durham  | 11.3%        | 13.4%                | Cleveland            | 16.4%        | 18.5%                |
| Orlando         | 11.7%        | 15.2%                | Austin               | 16.7%        | 9.6%                 |
| SF Bay Area     | 12.2%        | 6.4%                 | Phoenix              | 17.4%        | 19.4%                |
| Montreal        | 12.3%        | 13.8%                | Washington           | 17.7%        | 15.8%                |
| Seattle         | 12.3%        | 12.1%                | Cincinnati           | 18.4%        | 20.6%                |
| Charlotte       | 12.3%        | 8.7%                 | Minneapolis/St. Paul | 18.6%        | 15.5%                |
| Rochester       | 12.8%        | 15.8%                | Atlanta              | 19.1%        | 17.3%                |
| St. Louis       | 12.9%        | 13.8%                | Columbus             | 19.4%        | 13.7%                |
| Boston          | 13.2%        | 12.9%                | Indianapolis         | 19.6%        | 16.5%                |
| Tampa           | 13.9%        | 13.1%                | Hartford             | 20.1%        | 16.7%                |
| San Diego       | 14.0%        | 13.0%                | Chicago              | 20.4%        | 14.6%                |
| Portland        | 14.4%        | 10.5%                | Edmonton             | 20.6%        | 12.1%                |
| Detroit         | 14.6%        | 19.1%                | Houston              | 22.3%        | 14.2%                |
| Kansas City     | 14.6%        | 14.7%                | Dallas/Ft. Worth     | 23.4%        | 17.7%                |
| San Antonio     | 15.2%        | 15.9%                | Calgary              | 27.0%        | 18.2%                |

Source: CBRE Research (Office Market), Q4 2020.

# Which are the highest- and lowest-cost markets to operate in?

**TABLE 28: TECH TALENT WAGES BY MARKET (2020)**

U.S. Average = 100%

| Market                 | Average Tech Talent Wage | Wage Relative to U.S. Average | Talent Wage 5 Yr. Growth | Market          | Average Tech Talent Wage | Wage Relative to U.S. Average | Talent Wage 5 Yr. Growth |
|------------------------|--------------------------|-------------------------------|--------------------------|-----------------|--------------------------|-------------------------------|--------------------------|
| SF Bay Area            | \$144,370                | 141%                          | 17%                      | South Florida   | \$92,096                 | 90%                           | 18%                      |
| Seattle                | \$126,730                | 124%                          | 15%                      | Cleveland       | \$92,073                 | 90%                           | 17%                      |
| New York Metro         | \$118,150                | 115%                          | 13%                      | St. Louis       | \$91,900                 | 90%                           | 7%                       |
| Washington, D.C.       | \$117,230                | 114%                          | 11%                      | Detroit         | \$91,623                 | 89%                           | 12%                      |
| Boston                 | \$114,095                | 111%                          | 11%                      | Cincinnati      | \$91,596                 | 89%                           | 12%                      |
| Baltimore              | \$110,306                | 108%                          | 11%                      | San Antonio     | \$91,586                 | 89%                           | 17%                      |
| Los Angeles/Orange Co. | \$110,001                | 107%                          | 14%                      | Virginia Beach  | \$90,663                 | 89%                           | 10%                      |
| San Diego              | \$109,987                | 107%                          | 11%                      | Tampa           | \$90,525                 | 88%                           | 17%                      |
| Denver                 | \$107,481                | 105%                          | 11%                      | Salt Lake City  | \$89,184                 | 87%                           | 14%                      |
| Philadelphia           | \$102,478                | 100%                          | 12%                      | Orlando         | \$89,180                 | 87%                           | 14%                      |
| Dallas/Ft. Worth       | \$102,403                | 100%                          | 14%                      | Milwaukee       | \$89,016                 | 87%                           | 12%                      |
| Sacramento             | \$102,394                | 100%                          | 16%                      | Pittsburgh      | \$88,685                 | 87%                           | 15%                      |
| Minneapolis/St. Paul   | \$102,391                | 100%                          | 15%                      | Kansas City     | \$86,770                 | 85%                           | 6%                       |
| Houston                | \$101,767                | 99%                           | 9%                       | Indianapolis    | \$86,361                 | 84%                           | 13%                      |
| Raleigh-Durham         | \$100,643                | 98%                           | 10%                      | Rochester       | \$85,256                 | 83%                           | 11%                      |
| Chicago                | \$100,551                | 98%                           | 15%                      | Nashville       | \$84,615                 | 83%                           | 10%                      |
| Hartford               | \$100,431                | 98%                           | 8%                       | Jacksonville    | \$83,998                 | 82%                           | 5%                       |
| Charlotte              | \$99,959                 | 98%                           | 9%                       | Calgary         | \$71,432                 | 70%                           | 6%                       |
| Atlanta                | \$99,739                 | 97%                           | 14%                      | Edmonton        | \$69,152                 | 68%                           | 27%                      |
| Portland               | \$99,384                 | 97%                           | 12%                      | Ottawa          | \$68,331                 | 67%                           | 11%                      |
| Richmond               | \$98,673                 | 96%                           | 13%                      | Toronto         | \$66,827                 | 65%                           | 13%                      |
| Austin                 | \$96,733                 | 94%                           | 8%                       | Vancouver       | \$66,485                 | 65%                           | 18%                      |
| Phoenix                | \$93,655                 | 91%                           | 8%                       | Waterloo Region | \$65,540                 | 64%                           | 31%                      |
| Columbus               | \$92,684                 | 90%                           | 11%                      | Quebec City     | \$63,431                 | 62%                           | 36%                      |
| Madison                | \$92,363                 | 90%                           | 24%                      | Montreal        | \$62,795                 | 61%                           | 18%                      |

Source: U.S. Bureau of Labor Statistics (Metro), Statistics Canada (Metro), April 2021.

\*data in US\$



**TABLE 29: APARTMENT RENT TO TECH WAGE RATIO**

| Market                 | Annualized Apartment Rent (2020) | Average Annual Tech Wage (2020) | Rent-to-Tech Wage Ratio | Market               | Annualized Apartment Rent (2020) | Average Annual Tech Wage (2020) | Rent-to-Tech Wage Ratio |
|------------------------|----------------------------------|---------------------------------|-------------------------|----------------------|----------------------------------|---------------------------------|-------------------------|
| New York Metro         | \$31,070                         | \$118,150                       | 26.3%                   | Phoenix              | \$14,995                         | \$93,655                        | 16.0%                   |
| Los Angeles/Orange Co. | \$26,669                         | \$110,001                       | 24.2%                   | Pittsburgh           | \$14,190                         | \$88,685                        | 16.0%                   |
| San Diego              | \$24,869                         | \$109,987                       | 22.6%                   | Madison              | \$14,640                         | \$92,363                        | 15.9%                   |
| South Florida          | \$20,544                         | \$92,096                        | 22.3%                   | Minneapolis/St. Paul | \$16,075                         | \$102,391                       | 15.7%                   |
| Boston                 | \$25,444                         | \$114,095                       | 22.3%                   | Rochester            | \$13,368                         | \$85,256                        | 15.7%                   |
| SF Bay Area            | \$30,049                         | \$144,370                       | 20.8%                   | Atlanta              | \$15,627                         | \$99,739                        | 15.7%                   |
| Toronto*               | \$13,668                         | \$66,827                        | 20.5%                   | Austin               | \$15,111                         | \$96,733                        | 15.6%                   |
| Vancouver*             | \$13,489                         | \$66,485                        | 20.3%                   | Baltimore            | \$16,688                         | \$110,306                       | 15.1%                   |
| Sacramento             | \$19,221                         | \$102,394                       | 18.8%                   | Calgary*             | \$10,690                         | \$71,432                        | 15.0%                   |
| Ottawa*                | \$12,148                         | \$68,331                        | 17.8%                   | Edmonton*            | \$10,314                         | \$69,152                        | 14.9%                   |
| Washington, D.C.       | \$20,825                         | \$117,230                       | 17.8%                   | Charlotte            | \$14,397                         | \$99,959                        | 14.4%                   |
| Nashville              | \$14,929                         | \$84,615                        | 17.6%                   | Richmond             | \$14,184                         | \$98,673                        | 14.4%                   |
| Chicago                | \$17,670                         | \$100,551                       | 17.6%                   | Dallas/Ft. Worth     | \$14,521                         | \$102,403                       | 14.2%                   |
| Virginia Beach         | \$15,768                         | \$90,663                        | 17.4%                   | Raleigh-Durham       | \$14,176                         | \$100,643                       | 14.1%                   |
| Portland               | \$17,148                         | \$99,384                        | 17.3%                   | Detroit              | \$12,845                         | \$91,623                        | 14.0%                   |
| Tampa                  | \$15,508                         | \$90,525                        | 17.1%                   | Kansas City          | \$12,043                         | \$86,770                        | 13.9%                   |
| Philadelphia           | \$17,497                         | \$102,478                       | 17.1%                   | Cincinnati           | \$12,391                         | \$91,596                        | 13.5%                   |
| Denver                 | \$18,217                         | \$107,481                       | 16.9%                   | Columbus             | \$12,338                         | \$92,684                        | 13.3%                   |
| Hartford               | \$16,960                         | \$100,431                       | 16.9%                   | San Antonio          | \$12,120                         | \$91,586                        | 13.2%                   |
| Orlando                | \$15,033                         | \$89,180                        | 16.9%                   | Indianapolis         | \$11,407                         | \$86,361                        | 13.2%                   |
| Waterloo Region*       | \$10,922                         | \$65,540                        | 16.7%                   | St. Louis            | \$11,905                         | \$91,900                        | 13.0%                   |
| Seattle                | \$20,923                         | \$126,730                       | 16.5%                   | Houston              | \$13,107                         | \$101,767                       | 12.9%                   |
| Milwaukee              | \$14,544                         | \$89,016                        | 16.3%                   | Montreal*            | \$7,970                          | \$62,795                        | 12.7%                   |
| Jacksonville           | \$13,710                         | \$83,998                        | 16.3%                   | Cleveland            | \$11,677                         | \$92,073                        | 12.7%                   |
| Salt Lake City         | \$14,452                         | \$89,184                        | 16.2%                   | Quebec City*         | \$7,818                          | \$63,431                        | 12.3%                   |

Source: U.S. Bureau of Labor Statistics April 2021, Statistics Canada May 2021, CBRE Econometric Advisors, Axiometrics, CMHC Q4 2020.  
\*in US\$

# Contacts

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