# THE GREATER **PHOENIX** TECH STORY

Greater Phoenix
Economic Council

**+ CBRE**

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# THE GREATER PHOENIX
## TECH STORY

Greater Phoenix is an emerging tech market. The region is sought after for its talent, collaborative environment, business-friendly culture and quality of life. Emerging tech companies choose Greater Phoenix to establish their footprints, test their technologies and scale.

Over the last 70 years, Greater Phoenix has created a diversified tech ecosystem home to R&D, high-tech manufacturing, software companies and next-generation technologies. Today, there are roughly 500 software companies that call Greater Phoenix home. Companies including GoDaddy, Carvana and LifeLock went from startups to household names right in our own backyard. New and innovative companies from coast to coast and around the globe seek Greater Phoenix where they can secure top talent and provide a high quality of life for their employees.

## Talent and Education

Startups and established tech firms alike find that Greater Phoenix works for them. Over 85,000 high-tech employees are in the region. Tech companies can leverage the large and talented workforce fueled by Arizona State University, the largest engineering school in the nation, where 24,000 engineering students are enrolled. The numerous career-based learning initiatives and bootcamps offer learning opportunities to an emerging workforce preparing for diverse industries.

## Collaboration

The Greater Phoenix ecosystem has enabled long-time businesses, emerging disruptors, educational institutions and the public to work together to better the region. In Phoenix, it is easy to be new. The collaborative environment of public-private partnerships propel innovation in the region. The unity of the region has led to technological advancements, new ventures and startup growth.

## Business Culture

The region's business-friendly culture fosters entrepreneurial spirit. Local officials continue to support emerging technologies and pioneering policies allow businesses to thrive. The FinTech and PropTech Sandbox provides entrepreneurs a testing ground without burdensome regulatory costs. Available incentive programs allow businesses to grow and retain the region's top talent.

## Quality of Life

Greater Phoenix offers an affordable quality of life unmatched by competitor tech hubs. Businesses and tech talent find relative affordability in housing and office rent highly attractive qualities. Rising costs and intense competition in competitive markets have motivated talent and businesses to seek alternative locations and some now call Greater Phoenix home.

# THE TECHNOLOGY SECTOR HAS
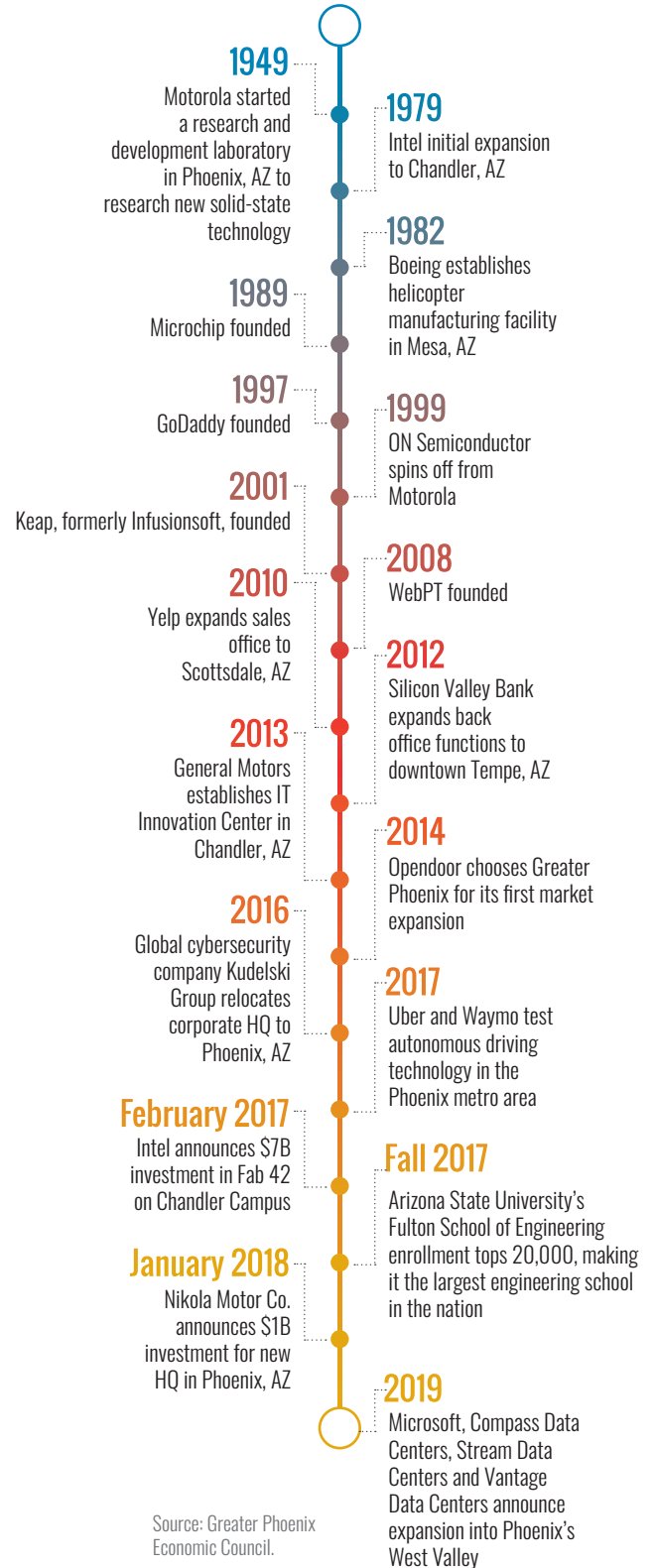## DEEP ROOTS IN GREATER PHOENIX

Greater Phoenix's tech sector emerged following World War II as military installations proliferated throughout the U.S. Phoenix metro quickly became a hotbed for the aerospace, defense and semiconductor industries as companies servicing military operations started investing in research and development labs in the region. Motorola became one of the first tech companies in Greater Phoenix with the establishment of a research lab in 1949. The region evolved with the rise of the Internet age, becoming home to several large enterprise software development and web hosting companies. In recent years, the tech ecosystem has progressed into a highly desirable market for next-generation technologies focused on cybersecurity, autonomous vehicles, FinTech, MedTech, PropTech and other industries related to the Internet of Things (IoT).

## Large Tech Companies in Phoenix

**Intel** - Chandler
10,400 Employees
Headquartered in Santa Clara, CA

**GoDaddy** - Scottsdale, Tempe, Gilbert
3,316 Employees
Headquartered in Scottsdale, AZ

**Microchip** - Chandler
2,000 Employees
Headquartered in Chandler, AZ

**Yelp** - Scottsdale
1,300 Employees
Headquartered in San Francisco, CA

**ON Semiconductor** - Phoenix
1,000 Employees
Headquartered in Phoenix, AZ

**Axon Enterprise** - Scottsdale
721 Employees
Headquartered in Scottsdale, AZ

**Nextiva** - Scottsdale
660 Employees
Headquartered in Scottsdale, AZ

**Keap** - Chandler
450 Employees
Headquartered in Chandler, AZ

**General Dynamics** - Scottsdale, Phoenix
4,131 Employees
Headquartered in Falls Church, VA

**Avnet** - Phoenix, Chandler
3,153 Employees
Headquartered in Phoenix, AZ

**NXP Semiconductors** - Chandler
1,786 Employees
Headquartered in Eindhoven, Netherlands

**Insight** - Tempe
1,025 Employees
Headquartered in Tempe, AZ

**Medtronic** - Tempe
750 Employees
Headquartered in Dublin, Ireland

**Cisco Systems** - Phoenix
690 Employees
Headquartered in San Jose, CA

**Uber** - Phoenix
600 Employees
Headquartered in San Francisco, CA

**JDA Software** - Scottsdale
425 Employees
Headquartered in Scottsdale, AZ

## Phoenix Tech Timeline

**1949**
Motorola started a research and development laboratory in Phoenix, AZ to research new solid-state technology

**1979**
Intel initial expansion to Chandler, AZ

**1982**
Boeing establishes helicopter manufacturing facility in Mesa, AZ

**1989**
Microchip founded

**1997**
GoDaddy founded

**1999**
ON Semiconductor spins off from Motorola

**2001**
Keap, formerly Infusionsoft, founded

**2008**
WebPT founded

**2010**
Yelp expands sales office to Scottsdale, AZ

**2012**
Silicon Valley Bank expands back office functions to downtown Tempe, AZ

**2013**
General Motors establishes IT Innovation Center in Chandler, AZ

**2014**
Opendoor chooses Greater Phoenix for its first market expansion

**2016**
Global cybersecurity company Kudelski Group relocates corporate HQ to Phoenix, AZ

**2017**
Uber and Waymo test autonomous driving technology in the Phoenix metro area

**February 2017**
Intel announces $7B investment in Fab 42 on Chandler Campus

**Fall 2017**
Arizona State University's Fulton School of Engineering enrollment tops 20,000, making it the largest engineering school in the nation

**January 2018**
Nikola Motor Co. announces $1B investment for new HQ in Phoenix, AZ

**2019**
Microsoft, Compass Data Centers, Stream Data Centers and Vantage Data Centers announce expansion into Phoenix's West Valley

# Recent Tech Job Announcements

| COMPANY | LOCATION | EXPECTED NEW JOBS | NEW OCCUPIED SF |
|---|---|---|---|
| Infosys | Tempe | 1,000 | 60,000 |
| Deloitte | Gilbert | 900 | 100,000 |
| Opendoor | Tempe | 500 | 100,000 |
| Choice Hotels International | Scottsdale | 500 | 150,000 |
| AKOS | Phoenix | 400 | 136,000 |
| Silicon Valley Bank | Tempe | 300 | 60,000 |
| Sendoso | Scottsdale | 260 | 36,000 |
| Experis Game Solutions | Tempe | 200 | 42,000 |
| Zillow | Scottsdale | 160 | 25,000 |
| Hawaiian Airlines | Tempe | 150 | 17,000 |
| Synchronoss | Phoenix | 110 | 38,000 |
| Microsoft | Goodyear | 110 | 740,000 |
| AppZen | Tempe | 102 | 10,000 |
| Acronis | Scottsdale | 99 | 20,000 |
| Myndshft Technologies | Mesa | 80 | 11,000 |
| CAVU Aerospace | Mesa | 75 | 281,000 |
| Black Pearl Mail | Scottsdale | 70 | 2,500 |
| WanderJaunt | Phoenix | 60 | 3,400 |
| Lemonade | Scottsdale | 50 | 5,000 |
| Compass Data Centers | Goodyear | 45 | 415,000 |
| The Nerdery | Phoenix | 45 | 8,100 |
| Vantage Data Centers | Goodyear | 40 | 276,000 |
| Arizona Isotopes Corporation (AZI) | Goodyear | 30 | 45,000 |
| Prevalent | Phoenix | 20 | 5,800 |
| Hownd | Tempe | 15 | 20,000 |
| IMNA Solutions | Scottsdale | 10 | 1,000 |
| Insurmi | Phoenix | 10 | - |

Source: Greater Phoenix Economic Council, CBRE Research.
*Job announcements publicized by expanding and new-to-market companies include projections of new jobs that are typically added over a one- to three-year period. Square footage is approximate.

# POPULATION

Greater Phoenix is one of the fastest-growing regions in the nation. The metro is home to more than 4.9 million people, where net migration fuels growth. Over the last two decades, Greater Phoenix has grown by 93,000 people each year on average. The region adds over 250 people each day, making Greater Phoenix the second fastest growing region. Furthermore, Phoenix metro has a relatively young population with a median age of 36.9 years, falling below the national median.

## Fastest Growing Metros
Year-Over-Year Growth (Change in thousands)

| Metro | Growth |
|-------|--------|
| Dallas | 131.8 |
| Phoenix | 96.3 |
| Houston | 91.7 |
| Atlanta | 75.7 |
| Orlando | 60.0 |
| Seattle | 54.9 |
| Austin | 53.1 |
| Riverside | 51.9 |
| Tampa | 51.4 |
| Washington D.C. | 49.9 |
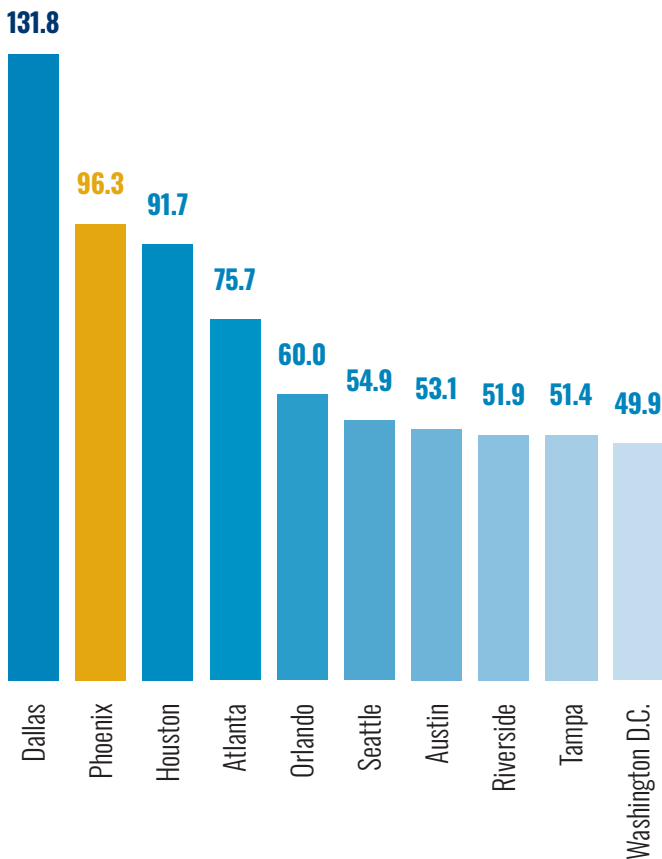
Source: U.S. Census Bureau, 2019.

## Median Age by Metro

| Metro | Median Age |
|-------|-----------|
| Salt Lake City | 32.8 |
| Austin | 34.9 |
| Denver | 36.6 |
| Phoenix | 36.9 |
| Seattle | 37.0 |
| Los Angeles | 37.1 |
| San Jose | 37.1 |
| Charlotte | 37.4 |
| Chicago | 37.7 |
| U.S. | 38.2 |
| New York | 38.8 |
| Boston | 38.8 |
| San Francisco | 39.1 |

Source: U.S. Census Bureau, 2019.

## Change in Population of 20-34 Year Olds

| | Charlotte | Phoenix | Austin | Atlanta | Denver | Salt Lake City | Seattle |
|---|---|---|---|---|---|---|---|
| 2010-2018 | 16.7% | 14.2% | 19.8% | 11.3% | 20.2% | 5.7% | 19.7% |
| 2019-2024* | 11.0% | 7.2% | 7.2% | 7.2% | 6.6% | 6.6% | 2.7% |

| | Boston | San Francisco | Chicago | New York | San Jose | Los Angeles |
|---|---|---|---|---|---|---|
| 2010-2018 | 13.4% | 11.9% | -0.3% | 2.7% | 13.5% | 5.3% |
| 2019-2024* | 2.2% | -0.1% | -0.1% | -0.7% | -0.8% | -2.4% |

Source: U.S. Census Bureau, 2019; Oxford Economics, 2019. *Forecast

## Phoenix's Robust Population Growth Driven By Net Migration
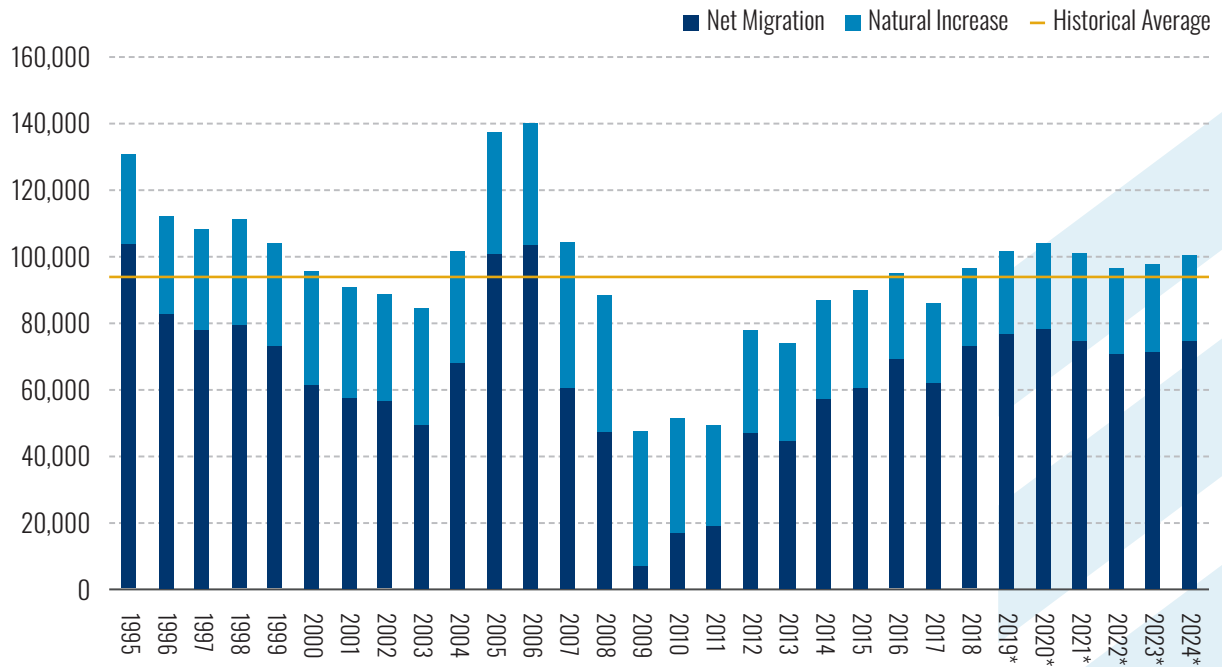


Source: Moody's Analytics, 2019. *Forecast

# WORKFORCE

Greater Phoenix is one of the most rapidly expanding high-tech job markets in the nation. With more than 85,060 high-tech employees, metro employment has grown 12.3 percent over a five-year period. Greater Phoenix not only surpasses many of its tech peers, such as Chicago and Los Angeles for tech employment, but it also provides labor at a relatively lower cost than its competitive markets. Beyond its existing supply of high-quality talent, Greater Phoenix's future labor pipeline is bolstered by the presence of several highly-rated public and private universities, including Arizona State University, The University of Arizona, Grand Canyon University and Northern Arizona University.

## Greater Phoenix is the place to scale

## Greater Phoenix High-Tech Employment Breakdown

**13,430** Computer User Support Specialists

**2,520** Computer Programmers

**2,270** Comp. Network Architects

**6,680** Computer Jobs (other)

**7,700** Software Developers, Systems Software

**550** Electrical & Electronics Drafters

**5,980** Computer and Information Systems Managers
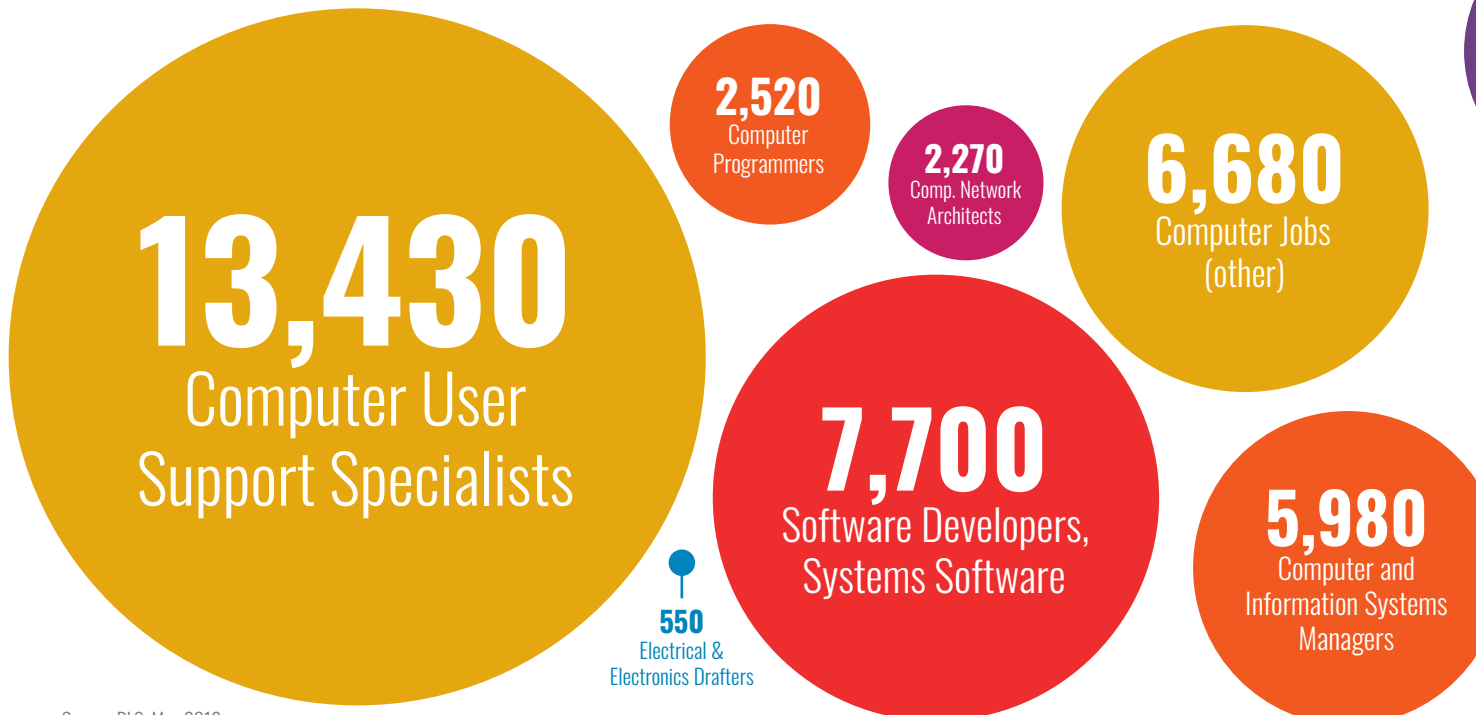
Source: BLS, May 2019.

**5,930**
Network and
Computer Systems
Administrators

**2,020**
Web
Developers

**2,390**
Elec. Engineering
Technicians

**3,150**
Electrical
Engineers

**9,650**
Computer Systems
Analysts

**1,170**
Computer Hardware
Engineers

**1,560**
Database
Admin.

**2,050**
Info Security
Analysts

**310**
Electro-Mechanical
Technicians

**4,840**
Computer
Network Support
Specialists

**12,740**
Software Developers,
Applications

## Workforce vs. Other Tech Markets

| Metro | Labor Force | Unemployed | Unemployment Rate | 2018 Tech Jobs | Tech Job Growth (2013 – 2018) |
|---|---|---|---|---|---|
| New York | 9,934,777 | 396,501 | 4.0% | 264,373 | 20.5% |
| Los Angeles | 6,761,767 | 287,370 | 4.2% | 139,774 | 16.4% |
| Chicago | 4,876,388 | 197,064 | 4.0% | 166,620 | 10.5% |
| Dallas | 3,900,458 | 136,486 | 3.5% | 169,290 | 15.7% |
| San Francisco Bay Area* | 3,664,009 | 98,996 | 2.7% | 353,760 | 33.4% |
| Atlanta | 3,071,570 | 115,989 | 3.8% | 141,580 | 29.1% |
| Boston | 2,811,239 | 84,831 | 3.0% | 160,070 | 2.4% |
| **Phoenix** | **2,407,741** | **101,259** | **4.2%** | **85,060** | **12.3%** |
| Seattle | 2,113,294 | 81,595 | 3.9% | 156,770 | 24.3% |
| Denver | 1,646,342 | 51,975 | 3.2% | 107,170 | 30.9% |
| Charlotte | 1,333,079 | 48,578 | 3.6% | 55,430 | 48.4% |
| Austin | 1,197,091 | 35,043 | 2.9% | 72,360 | 12.6% |
| Salt Lake City | 653,521 | 19,912 | 3.0% | 47,760 | 38.6% |

Source: CBRE Scoring Tech Talent, 2019; U.S. Bureau of Labor Statistics, October 2019.          *Aggregate of San Francisco, Oakland and Silicon Valley

Arizona State University is home to the largest engineering school in the nation with over 24,000 students currently enrolled. The region also benefits from a diverse higher education ecosystem that includes two additional state universities, several private four-year colleges, an extensive community college system and robust career and technical education offerings.

# EDUCATION

## Arizona State University

**Ranked Most Innovative School in the Nation by U.S. News and World Report for the 5th consecutive year.**

## Enrollment and Graduates:
## Greater Phoenix Area Universities (2018)

| School | Total Enrollment | 2017-18 Grads |
|---|---|---|
| ASU | 111,249 | 25,436 |
| GCU | 83,284 | 21,667 |
| UA | 44,216 | 10,077 |
| NAU | 31,051 | 7,432 |
| UAT | 789 | 145 |
| **TOTAL** | **270,589** | **64,757** |

## Graduate Students by Major (2010-2018)

| School | Engineering | Business Administration | Computer & Information Science |
|---|---|---|---|
| ASU | 17,854 | 12,581 | 5,243 |
| GCU | - | 12,953 | 1,083 |
| UA | 2,037 | 3,752 | 309 |
| NAU | 5,779 | 3,323 | 2,468 |
| UAT | - | - | 1,465 |
| **TOTAL** | **25,670** | **32,609** | **10,568** |

## Sample of Higher Education Offerings in Greater Phoenix

- » Arizona Christian University
- » Arizona College
- » Benedictine University at Mesa
- » Brookline College
- » Bryan University
- » Carrington College
- » DeVry University
- » Fortis College
- » Phoenix Biomedical Campus
- » Ottawa University
- » Park University
- » Thunderbird School of Global Management
- » Universal Technical Institute
- » University of Phoenix

ASU = Arizona State University
GCU = Grand Canyon University
UA = University of Arizona
NAU = Northern Arizona University
UAT: University of Advancing Technology

Source: Integrated Postsecondary Education Data System (IPEDS).

# TECH LEARNING INNOVATORS

## Galvanize

**Location**                               **Phoenix**

A hybrid education, training and coworking space offering an organic learning environment and coursework in software engineering, coding and data science. Galvanize members and students can leverage learning, collaboration and professional networking with startups and large firms to jump start and advance a career in tech.

## Tech Talent South

**Location**                               **Phoenix**

A technical education company that offers individual coding courses and connects employers, students and innovators across the Phoenix tech ecosystem. In addition to coursework in web design, coding, UX design and app development, TTS offers talent acquisition, onboarding services and workforce development partnerships to tech firms and entrepreneurs.

## Arizona Cyber Warfare Range

**Location**                      **Surprise/Tempe**

An experimental "live-fire" cyber warfare range offering an open practice environment and applied training in computer systems attack and defense, digital forensics and threat intelligence. Facilities are volunteer-managed and open to anyone wishing to train or upskill their cybersecurity expertise through hands-on learning.

## Woz U

**Location**                             **Scottsdale**

An online multi-pronged Education-as-a-Service platform with offerings in software development, front-end, back-end, full-stack web development, cybersecurity and big data. Woz U works to reduce the growing tech skills gap by making its programs available to universities and private organizations via institutional partnerships.

## UA Coding Boot Camp

**Location**                      **Chandler/Gilbert**

The University of Arizona offers in-person and online curricula in full-stack web development and app development. In 12-24 weeks, students can train or upskill in high-demand areas such as database management, browser-based technologies, internet marketing, quality assurance, server side development and deployment.

## DevMountain

**Location**                               **Phoenix**

A coding bootcamp offering coursework in web development, app development, mobile programming, quality assurance and user experience (UX) design taught by industry professionals. Through intense and immersive 12-week programs, students start building their professional portfolio and make valuable industry connections to help them succeed beyond their educational programs.

## MCCCD IT Institute

**Location**                                 **Mesa**

A new and innovative collaborative within Maricopa Community Colleges designed to meet growing skills demand for app development, big data, blockchain, cloud computing, wearable technology and IoT. Hybrid classes have no prerequisites and offer an affordable, flexible and collaborative learning environment.

# COWORKING

Greater Phoenix is quickly becoming an emerging market for coworking space and has developed into a testing ground for tech startups around the region. Tech users like the flexibility, sense of community and productivity that come with coworking space. At mid-year 2019, Phoenix was the sixth fastest growing coworking market in the U.S. increasing 58.2 percent year-over-year. There is still room for the industry to grow in Greater Phoenix as coworking space accounts for 1.3 percent of the office inventory in Phoenix. This is below the U.S. ratio at 1.8 percent. Roughly 20 coworking operators have leased space in the region. The top operators by square footage includes Regus, WeWork, Novel Coworking, Spaces and Industrious.

Source: CBRE, "Let's Talk About Flex", September 2019.
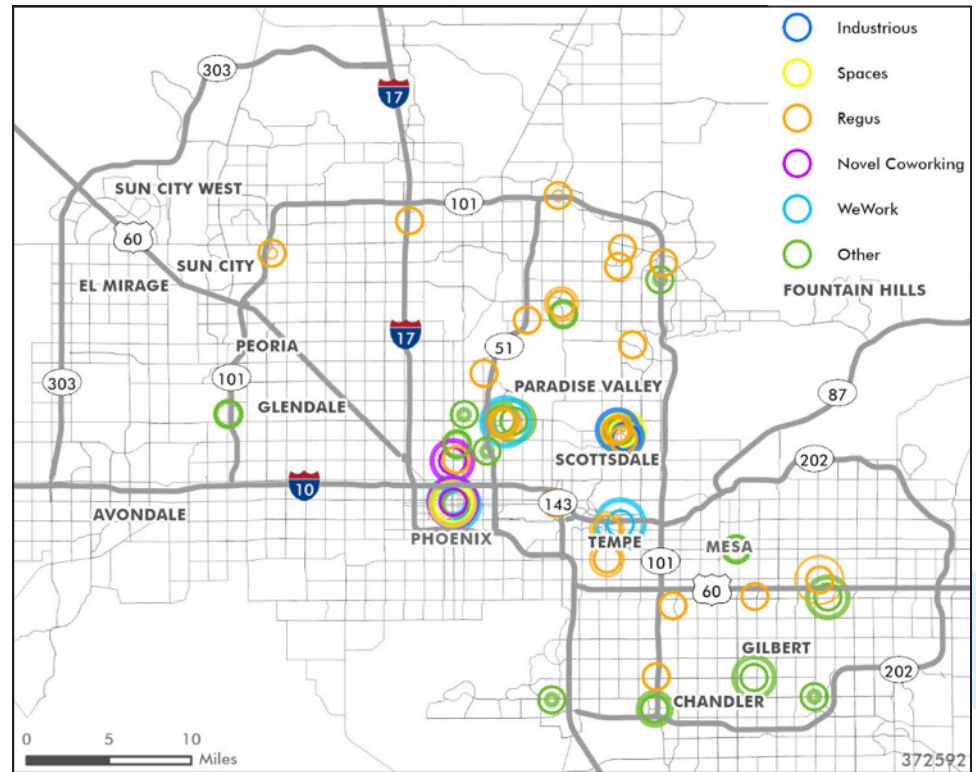


Source: CBRE Research, Q3 2019.

# HOTTEST PHOENIX TECH SUBMARKETS

## Downtown Tempe

**5.5M SF**
Total Base

**< 2.0%**
Vacancy Rate

**$34.00/SF**
Lease Rate (FSG)

Downtown Tempe was the top tech submarket in Greater Phoenix for rent growth from Q2 2017 to Q2 2019. Nationally, Tempe has the third lowest office vacancy rate in the county. The submarket is successfully attracting companies due to the presence of Arizona State University's main campus, a large and talented workforce and walkable urban environment that provides an abundance of amenities. Additionally, Class A developments along Tempe Town Lake has attracted tech companies seeking high-quality space at reduced costs when compared to competitor markets. Notable tech employers in the submarket include Opendoor, LifeLock, Silicon Valley Bank and Carvana.

## Chandler Price Corridor

**3.8M SF**
Total Base

**11.6%**
Vacancy Rate

**$34.16/SF**
Lease Rate (FSG)

The Price Corridor in Chandler is a high-demand submarket for FinTech and high-tech manufacturing companies. Notable tech employers in the submarket include Keap, Intel, PayPal and General Motors. High college attainment and availability of skilled labor makes the area attractive to employers. Additionally, an abundance of low-cost land has resulted in a significant amount of office construction over the last few years, providing companies with numerous high-quality options. Furthermore, the submarket is surrounded by affordable housing and easy commutes, combined with a thriving shopping and dining scene that help attract and retain top talent.

## Downtown Phoenix

**7.0M SF**
Total Base

**16.5%**
Vacancy Rate

**$31.82/SF**
Lease Rate (FSG)

Downtown Phoenix is a vibrant, diverse neighborhood that offers a genuine live-work-play lifestyle. Major draws to downtown include Arizona State University's Downtown Phoenix Campus, Valley Metro Light Rail and walkable streets lined with restaurants, retail and entertainment options. The completion of Block 23, a mixed-use development comprising apartments, Fry's Food and Drug, restaurants and office space, is a monumental landmark for the downtown area and represents the first construction delivery for office space since 2010. An increasing number of technology companies, such as Uber, DoubleDutch and Gainsight, are moving from coastal markets to downtown Phoenix. This shift has diversified the submarket's employer base, which was historically dominated by financial and government services firms.

## South Scottsdale

**4.7M SF**
Total Base

**10.9%**
Vacancy Rate

**$35.89/SF**
Lease Rate (FSG)

Tech employers are drawn to South Scottsdale due to its high concentration of millennials, educated workforce and amenities that attract top talent. The submarket offers numerous walkable attractions, including Scottsdale Fashion Square (the largest mall in the Southwest), a growing culinary scene, unique shops and vibrant nightlife. Technology companies, including Yelp, Sendoso, Indeed and ZocDoc, have expanded in the area over the past several years. The ASU Scottsdale Innovation Center (Skysong) links technology, research, education and entrepreneurship. Skysong is home to nearly 20 tech and tech-adjacent companies, including Workiva, Oracle and Datashield.

Source: CBRE Research, Q4 2019.
*Estimates represent the office market.

# DATA CENTERS

Data centers, which offer Infrastructure-as-a-Service (IaaS) and data management to a wide range of industries, recognize Greater Phoenix as a top market for conducting operations.

Data centers are drawn to Greater Phoenix's mild climate and business-friendly environment. With an average of 300 days of sunshine annually and a low risk of natural disasters, Greater Phoenix's temperate fall and winter seasons permit the use of low-cost "free-cooling" strategies, allowing data centers to operate up to half of the year without the need for more expensive air conditioning systems.* Additionally, Greater Phoenix has differentiated itself from competitors via a robust incentive package, affordable land and a strong, skilled labor pool.

The Phoenix data center market currently ranks fifth in the nation by megawatt inventory size, behind Northern Virginia, Dallas, Silicon Valley and Chicago. The region ranks as the second most active data center market in the country, growing by 60 percent since 2015 and accounting for 16.2 percent of all current construction in primary markets. Over the last few years, planned construction projects have accounted for land purchases totaling 900 acres and 15 million square feet of new data center facilities. This growth has been a boon for the West Valley with Goodyear and El Mirage attracting heavy hitters, such as Microsoft, Compass, Vantage and Stream.

Source: CBRE, "North American Data Center Report H1 2019", September 2019.

*Estimate is based on average monthly temperature estimates from the National Oceanic and Atmospheric Administration. Free cooling methods typically require temperatures of 77° or lower. Average high temperatures in Greater Phoenix fall at or below this threshold roughly 5-6 months out of the year.

## Companies in Greater Phoenix

- » Aligned Data Centers
- » American Express
- » Apple
- » Automatic Data Processing, Inc
- » Bank of America
- » CenturyLink
- » Charles Schwab
- » CyrusOne
- » Cyxtera
- » Digital Realty Trust
- » eBay
- » EdgeConnex
- » EdgeCore
- » Flexential
- » GoDaddy
- » H5 Data Centers
- » Internap Corporation
- » Iron Mountain
- » PhoenixNAP
- » QTS
- » Safeway
- » SecureOne Data Solutions LLC
- » ViaWest
- » zColo

# COMPANY PROFILES

Opportunity is abounding in Greater Phoenix. The region is well-positioned to support new-to-market technologies and the expansion of existing tech industries. A talented workforce, robust education pipeline, collaborative mindset, competitive operating cost and relative affordability continue to attract tech comapnies to the region. These companies have laid foundations, found success and bolstered their operations proving Greater Phoenix is the place to scale.

## Acronis

| | |
|---|---|
| Established Arizona Operations | **2017** |
| Local Operations | **Scottsdale, Tempe** |
| Greater Phoenix Employment | **100** |

*"Scottsdale and the surrounding area have the potential to become the next Silicon Valley"*
*John Zanni, President*

Acronis is an industry leader in data storage, management and security with products available in 150 countries and utilized by over 500,000 businesses. Acronis expanded its IT R&D operations to Greater Phoenix in 2017 to take advantage of the region's talent and inviting community. Since 2017, Acronis has expanded, investing an additional $20 million into its Scottsdale and Tempe locations to focus on cybersecurity, AI and blockchain.

## WebPT

| | |
|---|---|
| Founded | **2008** |
| Local Operations | **Phoenix (HQ)** |
| Greater Phoenix Employment | **300** |

*"I had never lived in Phoenix and didn't know anyone prior to moving, but I took a chance on a great opportunity and have never looked back."*
*Heidi Jannenga, Co-Founder & Chief Clinical Officer*

WebPT evolved from a startup to one of the nation's leading rehab therapy platforms taking 30 percent market share. Their cloud-based multifunctional software grew into one of the top electronic medical records (EMR) platforms for physical therapy clinics nationwide and has since expanded to include a suite of services available to physical, occupational and speech therapy clinics. The company has received numerous accolades, was listed on the Deloitte Technology Fast 500 list in 2016, and was named one of the "Best Places to Work in the Valley" by the Phoenix Business Journal three years in a row.

## Silicon Valley Bank

| | |
|---|---|
| Established Arizona Operations | **2012** |
| Local Operations | **Tempe** |
| Greater Phoenix Employment | **700** |

*"The Phoenix area is a great environment with talented financial candidates to fill our open positions, affordable living for our employees, proximity to our headquarters, and a growing number of technology and life science businesses in the region."*
*Greg Becker, CEO*

For nearly four decades, Silicon Valley Bank (SVB) has funded more than 30,000 startups and has become one of the largest tech investors in the country. SVB has served a broad range of companies and startups in the tech space including Guild Education, Scribd, AppDynamics, Hootsuite and Phoenix-based WebPT. It is recognized by Forbes as one of the world's best employers and is listed on the Bloomberg Gender Equality Index. SVB expanded operations to Greater Phoenix in 2012 and their footprint has since expanded multiple times to become the second largest office outside of Silicon Valley.

## Integrate

| | |
|---|---|
| Founded | **2010** |
| Local Operations | **Phoenix (HQ)** |
| Greater Phoenix Employment | **200** |

*"Integrate is growing at a rapid pace and making the move to tech-centric downtown Phoenix was a natural fit for us. The Monroe Building offers a unique environment that aligns with our company culture and entrepreneurial spirit, while providing a solid foundation for us to keep growing,"*
*Jeremy Bloom, CEO*

In less than a decade, Phoenix-based Integrate has become a premier cloud marketing software and media services platform with a client book that includes Microsoft, Adobe, Dell and Salesforce. The company has expanded aggressively as of late, entering into new markets through recent acquisitions of New York-based ListenLoop and London-based Akkroo. In 2017, Integrate relocated to a newly remodeled office in the heart of downtown Phoenix. Shortly after, the 19-story Monroe building was adorned with the tech company's logo, diversifying the Phoenix skyline alongside J.P. Morgan Chase, Wells Fargo, United Healthcare and US Bank.

## GoDaddy

| Founded | 2003 |
|---|---|
| Local Operations | Scottsdale (HQ), Gilbert, Tempe, Phoenix |
| Greater Phoenix Employment | 3,000 |

*"There's a wonderful sense of community in Gilbert... We've found a wealth of talented, customer-focused employees here and it's worthwhile to invest in them..."*
**Calvin Crowder, VP of Global Real Estate**

Headquartered in Scottsdale, GoDaddy has been a dominant force in web hosting and domain registration for more than two decades, serving over 18.5 million customers worldwide. More than 3,000 employees call Greater Phoenix home with another 6,000 employees across the globe. GoDaddy saw the growth potential and talent the region had to offer. In 2014, GoDaddy opened its "killer tech facility" in Tempe at the Arizona State University Research Park. In 2017, GoDaddy invested $15 million into its Gilbert location, the operational hub of GoDaddy. Recently, GoDaddy partnered with the Better Business Bureau to launch an incubator for young businesses in the Valley to grow new tech talent.

## Opendoor

| Established Arizona Operations | 2015 |
|---|---|
| Local Operations | Scottsdale, Tempe |
| Greater Phoenix Employment | 250 |

*"Phoenix's population has grown by more than 500,000 people since 2010, making it one of the nation's fastest growing cities...All of that means a lot of people need to move, and that's what makes Opendoor such a great fit for the city. By providing certainty and a simplified experience to buyers and sellers we help all those Phoenicians sell their home, or find a new one, so they can move on to the next step in their lives."*
**Rob Reiling, Phoenix General Manager**

Opendoor built an online platform to buy, sell or trade in a home to simplify the home buying process. Opendoor has expertise in buying homes in Phoenix, given that Phoenix was the company's first homebuying market in 2014. Operations in Phoenix started with 15 employees in a north Phoenix home. Over the past five years, it has rapidly expanded. Shortly after raising $300 million in early 2019, Opendoor announced its consolidation of over 20 offices to the Phoenix market with plans to increase its workforce to 1,000 in the Valley over the next few years.

## JDA Software

| Established Arizona Operations | 1987 |
|---|---|
| Local Operations | Scottsdale (HQ) |
| Greater Phoenix Employment | 425 |

*"We have been based in the Phoenix area since 1987, in large part due to that supply chain talent pipeline as well as the business-friendly corporate tax environment that exists in Arizona. There is an abundance of supply chain talent and expertise in the Phoenix area. I believe that Scottsdale's lifestyle, quality of life and reputation as a future technology hub are key reasons why great software companies like JDA are choosing to stay or relocate their operations to our great community."*
**Kevin Iaquinto, Chief Marketing Officer**

JDA Software relocated its company headquarters to Scottsdale in 1987 with just a few dozen employees. It is now the leading AI-driven supply chain management platform with over 4,000 customers and 70 locations globally. JDA Software was named "Top Companies to Work for in Arizona" by AZ Central three consecutive years due in large to its company culture and core values. JDA associates worldwide embrace the 'Sonoran Spirit' which embraces collaboration, customer values and fosters an ecosystem of partners, customers and associates.
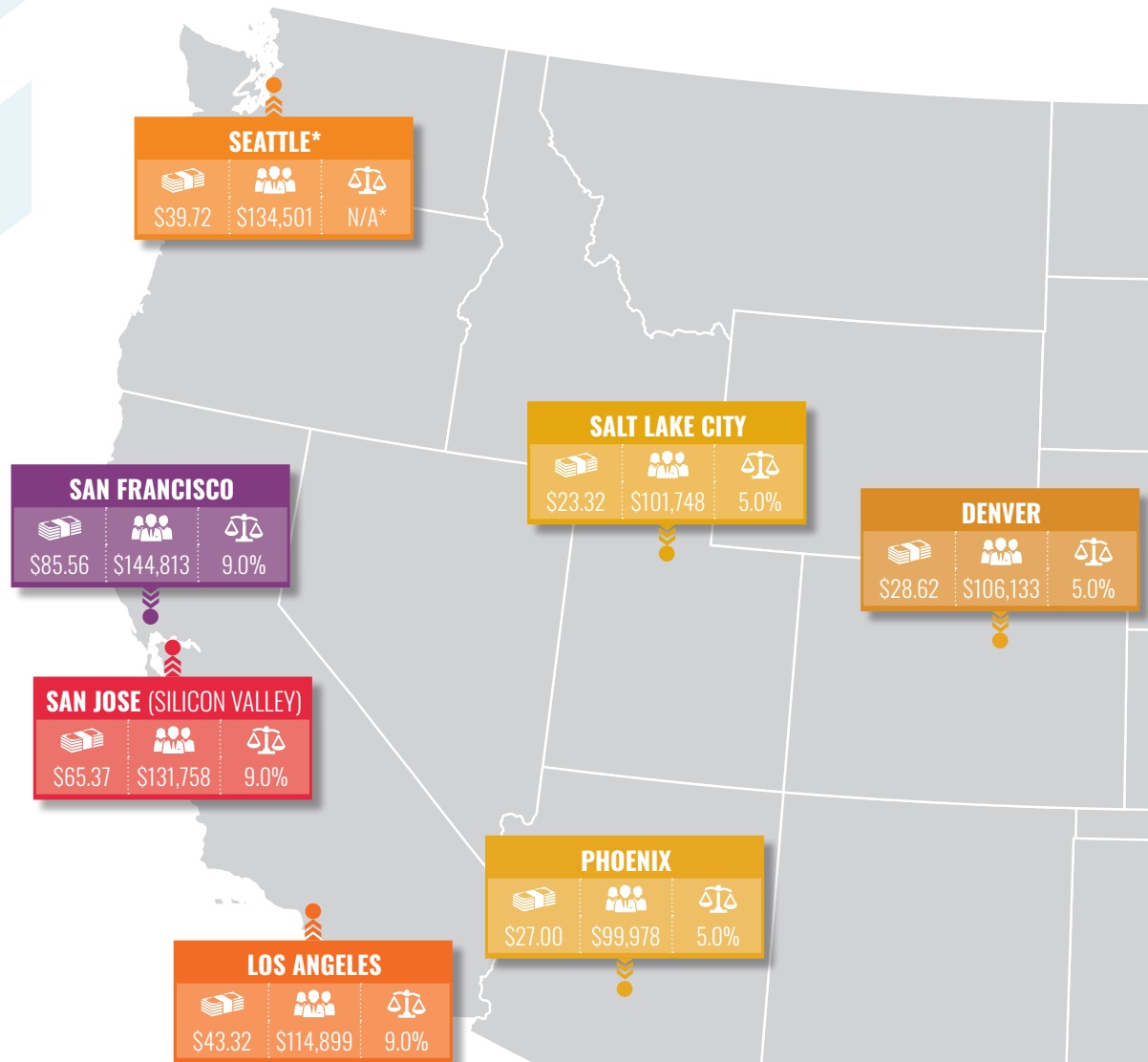
## Keap

| Founded | 2001 |
|---|---|
| Local Operations | Chandler (HQ) |
| Greater Phoenix Employment | 450 |

*"We invested a great deal of time in our search for the ideal home for Infusionsoft [rebranded as Keap] as we continue this next phase of explosive growth... Chandler's Price Corridor represents a budding center for tech companies and talent. In the City of Chandler and the Arizona Commerce Authority, we've found true partners committed to our expansion, and to the success of our small business customers."*
**Clate Mask, Founder and CEO**

Keap, formerly Infusionsoft, works to simplify growth for small business worldwide though its all-in-one CRM, sales and marketing platform. Since its founding, Keap has raised $145 million in funding and attracted several high-profile executives from Silicon Valley companies like Oracle and Intuit. Earlier this year, the Greater Phoenix startup rebranded to Keap and introduced a simplified version of its platform aimed at providing its services to an even larger market of small businesses. Keap's focus on small business growth makes it a valuable asset to Greater Phoenix's entrepreneurial tech scene.

# COST OF DOING BUSINESS:
## A Comparison of Major Tech Hubs

**SEATTLE***
$39.72 | $134,501 | N/A*

**SALT LAKE CITY**
$23.32 | $101,748 | 5.0%

**SAN FRANCISCO**
$85.56 | $144,813 | 9.0%

**DENVER**
$28.62 | $106,133 | 5.0%

**SAN JOSE** (SILICON VALLEY)
$65.37 | $131,758 | 9.0%

**PHOENIX**
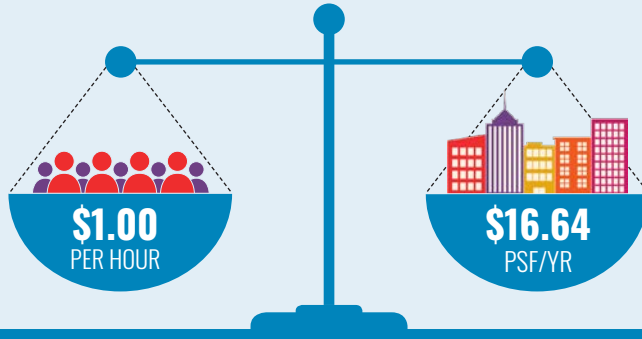$27.00 | $99,978 | 5.0%

**LOS ANGELES**
$43.32 | $114,899 | 9.0%

## LEGEND

- Average Office Asking Rents (Q4 2019, FSG per sq. ft.)

- Labor Cost: Software Engineer

- Average Corporate Tax Rate

*Texas and Washington do not have a corporate income tax but do have a gross receipts tax.
Source: CBRE Research, Q4 2019; Bureau of Labor Statistics, Tax Foundation, 2019.

# Two Ways to Save $1M*

**$1.00** PER HOUR

**$16.64** PSF/YR

## Small Change Creates **HUGE** Impact

Source: CBRE Labor Analytics.

*Based on 500 employees at 125 sq. ft. each.

**BOSTON**
$39.80 | $112,233 | 8.0%

**CHICAGO**
$32.16 | $99,015 | 10.0%

**NEW YORK**
$80.43 | $120,283 | 7.0%

**CHARLOTTE**
$29.81 | $108,064 | 3.0%

**DALLAS**
$25.17 | $111,673 | N/A

**ATLANTA**
$28.18 | $108,062 | 6.0%

**AUSTIN***
$38.89 | $108,411 | N/A*

## RENT SCALE

Least Expensive
($20 PSF)

Most Expensive
($90 PSF)
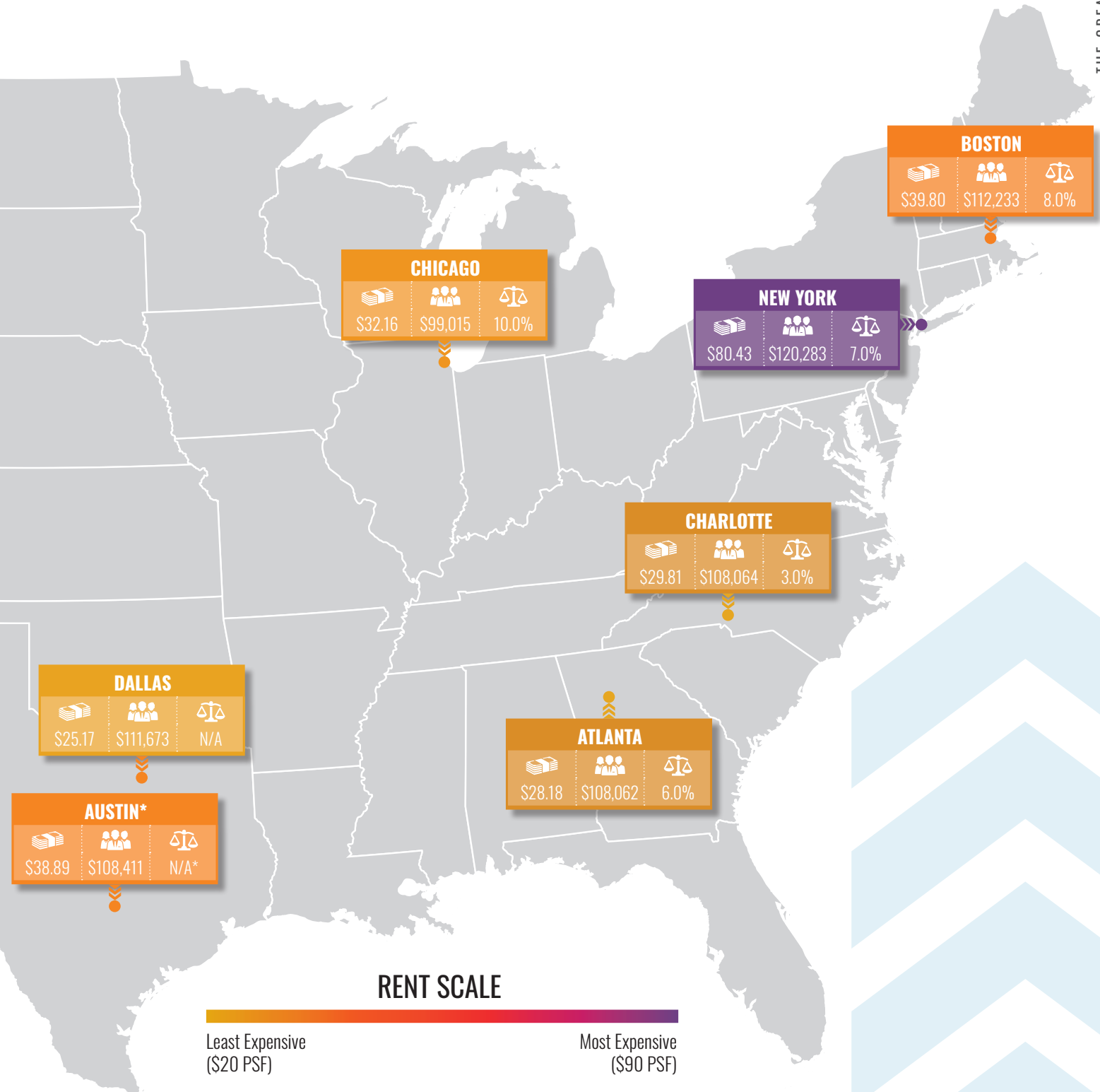
# VENTURE CAPITAL AND PRIVATE EQUITY

## Greater Phoenix Tech Capital Funding

**■ Funding Raised**
**— Total Deals**
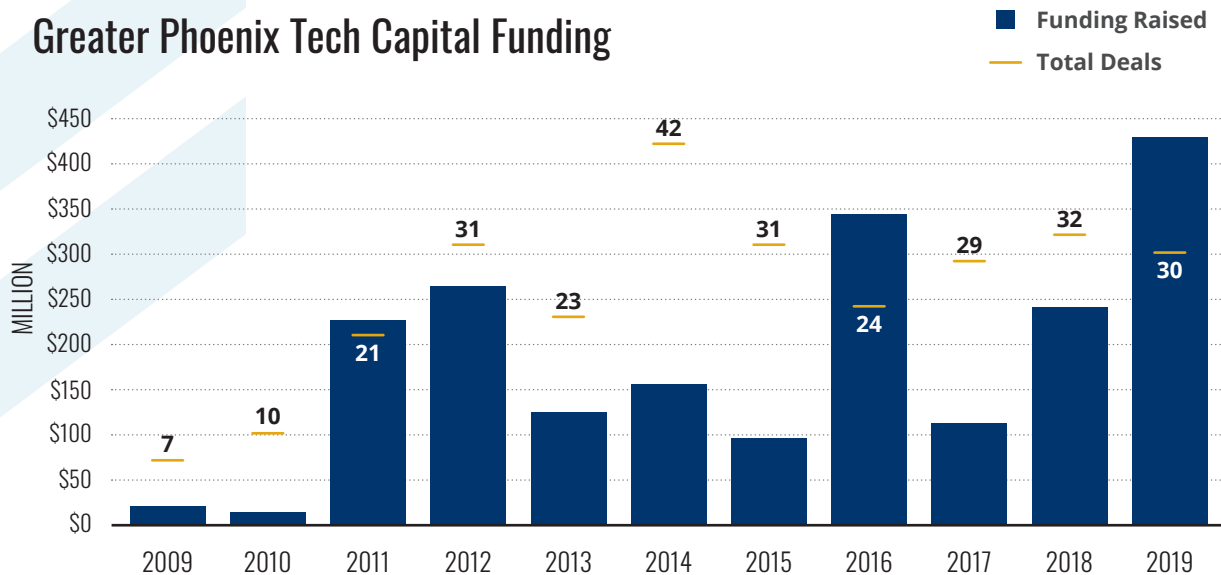


## Notable Tech Capital Deals by Total Funding Raised

| Company | Location | Total Funding Raised (Million) |
|---------|----------|-------------------------------|
| IO Data Centers* | Phoenix | $1,216.0 |
| Carvana | Tempe | $935.0 |
| Indecomm Digital | Scottsdale | $200.0 |
| Keap | Chandler | $155.4 |
| AFS Technologies | Phoenix | $127.4 |
| Solera Health | Phoenix | $82.3 |
| Prevalent | Phoenix | $82.2 |
| Parchment | Scottsdale | $78.6 |
| Integrate | Phoenix | $73.4 |
| CampusLogic | Chandler | $72.5 |

Private capital investment in Greater Phoenix tech companies is on the rise. In the last ten years, there has been 280 deals accounting for approximately $2.03 billion in total funding. This includes $430 million raised in 2019, beating the previous high of $344 million in 2016. The steady growth trend is attributable to a thriving ecosystem of quality startups in Greater Phoenix bolstered by a collaborative entrepreneurial culture. Unhindered access to industry knowledge, institutional support and other resources make Greater Phoenix a desirable location for innovators and entrepreneurs.

Source: CB Insights; total funding related to Seed/Angel, Series A-E+, Private Equity, Growth Equity, Other Venture Capital, and IPO stage deals in eCommerce, internet software and services, computer networking equipment, computer storage and peripherals, gaming, handheld computers & accessories, IT services, personal computers & notebooks, servers & mainframes, specialty computer hardware, supercomputers, workstations & thin clients, software, mobile commerce, mobile software & services, business-related electronic equipment and components, chips & semiconductors, electrical products, electrical components, electronic manufacturing services, electronic test measurement & monitoring, and technical & scientific instrumentation within 50mi of Phoenix city center, 2009-2019.

*Acquired by Iron Mountain.

# REGULATORY POLICY

## Arizona Works to Enable New Technology Adoption

Arizona's regulatory environment is intentionally pro-business, fostering a culture of innovation and growth in the state. Whether encouraging research and development into autonomous vehicles or working to make sure that ride-share drivers have protections under the law, Arizona is embracing the future. The reduction of regulatory burdens on existing and prospective companies in Arizona will continue to attract new companies and create jobs in the state.

### Self-Driving Testing and Piloting in the State of Arizona (2015)
In 2015, Governor Ducey signed Executive Order 2015-09, which allows for the testing of autonomous vehicles in Arizona. The order explicitly encouraged state agencies to support the development of autonomous vehicles and set basic safety parameters under which testing should occur. It also established the Self-Driving Vehicle Oversight Committee, which is charged with advising relevant stakeholders on the matter.

It should come as no surprise that in the years following the implementation of this Executive Order, Greater Phoenix has developed a robust autonomous vehicle development environment. Companies like Uber, Waymo, Cruise Automation and Local Motors are all testing and developing autonomous vehicle technology in Greater Phoenix.

### Enabling Electronic Transactions Utilizing Blockchain Technology (2017)
House Bill 2417 recognizes smart contracts, which are secured through blockchain, as valid forms of contracts in Arizona. Governor Ducey and the State Legislature, through this bill and others, are working to show that Arizona recognizes and embraces new technologies. This forward-thinking legislation places Arizona among a handful of states that have enacted legislation that recognizes and utilizes the security benefits of blockchain technology.

### FinTech Sandbox (2018)
House Bill 2434 was signed into law in March 2018, establishing Arizona as the first statewide FinTech "sandbox" in the U.S. This groundbreaking policy allows entrepreneurs the opportunity to test new products and innovations on the open market without incurring the regulatory costs and burdens that are commonly imposed. The policy allows products to be tested for up to two years and reach a customer base of 10,000 before requiring businesses to apply for formal licensure. The new regulation also allows the state to enter into reciprocity agreements with other jurisdictions that choose to establish their own sandbox programs. With H.B. 2434, Arizona remains committed to innovation and positions itself as a leader in the face of potentially disruptive technologies such as blockchain and cryptocurrency.

### PropTech Sandbox (2019)
House Bill 2673 was signed into law in March 2019 and allows for the limited market testing of technology products and services in the residential real estate market. Similar to H.B. 2434 signed in 2018, this new regulation allows entrepreneurs to test innovations for up to two years without obtaining standard regulatory authorizations, alleviating cost and time burdens that may stifle innovation. As disruptive companies such as Offerpad and Zillow transform Greater Phoenix real estate market, Arizona policy ensures that the region is prepared to capitalize on the opportunity to secure a competitive position in the economy of the future.

# OPERATIONAL AFFORDABILITY

Thanks to a simplified tax structure and affordable real estate, Greater Phoenix offers a favorable business environment compared to other competitor markets. As the following business operating cost analysis shows, a mid-size software company based in Silicon Valley could pay nearly 35 percent more in operating costs compared to a similar company in Greater Phoenix.

## Assumptions

» $2.5 million personal property investment
» 10,000 square foot office in central business district
» Utilities included in lease

## Workforce

| | |
|---|---|
| Software Developers, Applications | 15 |
| Web Developers | 15 |
| Software Developers, Systems Software | 10 |
| Computer Network Architects | 5 |
| Computer and Information Systems Managers | 2 |
| Computer Network Support Specialists | 2 |
| General and Operations Managers | 1 |
| **TOTAL** | **50** |

| Metro Area | Employee Payroll | Fringe and Mandated Benefits | Building/Lease Payments | Property Tax | Total Operating Cost | Local Index |
|---|---|---|---|---|---|---|
| **Phoenix** | **$4,664,753.60** | **$1,104,615.00** | **$276,300.00** | **$55,935.00** | **$6,101,603.60** | **100.0%** |
| Dallas-Fort Worth | $5,034,744.00 | $1,195,296.00 | $274,400.00 | $67,978.00 | $6,572,418.00 | 107.7% |
| Denver | $5,049,158.40 | $1,196,278.00 | $361,800.00 | $55,916.00 | $6,663,152.40 | 109.2% |
| Seattle | $5,521,068.80 | $1,319,572.00 | $465,000.00 | $25,951.00 | $7,331,591.80 | 120.2% |
| San Jose | $6,211,753.60 | $1,493,414.00 | $472,800.00 | $29,975.00 | $8,207,942.60 | 134.5% |

Source: Applied Economics Metrocomp, 2018.

# TAX PROGRAMS

## Relevant Tax Credit Programs in Arizona

### RESEARCH & DEVELOPMENT TAX CREDIT

Provides an Arizona income tax credit for increased research and development activities conducted in the state, including research conducted at a state university and funded by the company. It applies to both corporations and individuals and is equal to 24 percent of the first $2.5 million in qualifying expenses plus 15 percent of the qualifying expenses in excess of $2.5 million.

### QUALITY JOBS TAX CREDIT

Provides tax credits to employers creating a minimum number of net new quality jobs and making a minimum capital investment in Arizona. The program offers up to $9,000 of Arizona income or premium tax credits spread over a three-year period for each net new quality job.

### ANGEL INVESTOR TAX CREDIT

Provides tax credits to investors who make investments in targeted small businesses certified by the Arizona Commerce Authority (ACA). The ACA can authorize $10 million in tax credits against qualified investments made in qualified small businesses through June 30, 2021. No more than $2.5 million in tax credits may be authorized per calendar year.

### MICROENTERPRISES FUND DEDICATION

Requires the ACA to reserve up to $1 million of the Arizona Competes Fund (ACF) for grants to advance microenterprise development (companies based in Arizona with 10 or fewer employees, including start-up, home-based and self-employed businesses).

# QUALITY OF LIFE

Greater Phoenix offers an array of amenities and attractions expected of a bustling urban and suburban region. From unique art galleries and hip eateries, to major sporting events and breathtaking hiking spots, Greater Phoenix offers something for everyone.

## ARTS AND CULTURE

Arizona Opera
ArtLink First Fridays
Ballet Arizona
Chandler Museum
Desert Botanical Gardens
Frank Lloyd Wright's Taliesin West
Gammage Auditorium
Heard Museum
Mesa Arts Center
Musical Instrument Museum
Orpheum Theater
Phoenix Art Museum
Phoenix Symphony
Phoenix Zoo
Scottsdale Museum of Contemporary Art
South Mountain Park and Preserve
Tempe Beach Park
WestWorld
Wonderspaces

## MAJOR SPORTS EVENTS

6 professional sports teams including the NFL,
MLB, NHL, NBA, WNBA and USL
College Football National Championship (2016)
Fiesta Bowl
Cheez-It Bowl
MLB Spring Training
NCAA Final Four ('17, '24)
Super Bowl ('96, '08, '15, '23)
Waste Management Phoenix Open

## LOCAL COFFEE SHOPS

A Shot of Java
Be Coffee
Belhaus
Berdena's Fine Coffee & Food
Bergies Coffee Roast House
Cartel Coffee Lab
Copper Star Coffee
Driftwood Coffee Co.
Fair Trade Café
Fillmore Coffee Co.
Giant Coffee
Gold Bar Espresso
Jobot Coffee
King Coffee
Lakeview Coffee

Lola Coffee Bar
Lost Dutchman Coffee Roasters
Lux Central
Maverick Coffee
Nami
Peixoto Coffee Roasters
Press Coffee Roasters
Provision Coffee Bar
Regroup Coffee + Bicycles
Royal Coffee Bar
Serafina Coffee Roasters
Songbird Coffee & Tea
The Refuge Café
Urban Beans

## LOCAL BREWERIES

12 West Brewing Co.
8-Bit Aleworks
Arizona Wilderness Brewing Co.
Desert Eagle Brewing Company
Throne Brewing Co.
Fate Brewing Company
Flying Basset Brewing
Four Peaks Brewing Co.
Freak'N Brewing Company
Goldwater Brewing Co.
Grand Avenue Brewing Company
Helio Basin Brewing Co.
Helton Brewing Co.
Huss Brewing Co.
Lochiel Brewing
Mother Bunch Brewing
North Mountain Brewing
O.H.S.O. Brewery + Distillery
Oro Brewing Co.
Pedal Haus Brewery
Peoria Artisan Brewery
PHX Beer Co.
Richter Aleworks
Saddle Mountain Brewing Company
SanTan Brewing Company
Scottsdale Beer Company
Sleepy Dog Brewing
Sonoran Brewing Co.
State 48 Brewery
SunUp Brewing Co.
The Beer Research Institute
The Perch Brewery
The Shop Beer Co.
Uncle Bear's Brewery
Wren House Brewing Co.

## OTHER EVENTS

Arizona Jazz Festival
Arizona Renaissance Festival
Arizona State Fair
Arizona Taco Festival
Barrett-Jackson Auction
Country Thunder
First Fridays Art Walk
McDowell Mountain Music Festival
Pat's Run
Phoenix Film Festival
Real Wild & Woody Beer Festival
Rock 'n' Roll Marathon
Scottsdale Arabian Horse Show
Scottsdale Arts Festival
Street Eats Food Truck Festival
Viva PHX
Wickenburg Gold Rush Days
ZooLights

## LOCAL RESTAURANTS

Anhelo
Barrio Café
Binkley's
Blanco Tacos + Tequila
Bourbon & Bones
Chestnut
Churn
Citizen Public House
Cotton & Copper
Craft 64
Crujiente Tacos
Culinary Dropout
Doughbird
Durant's
El Chorro
Famous 48
Fat Ox
Federal Pizza
Flower Child
FnB
Gallo Blanco
Garcia's Mexican Restaurant
Ghost Ranch
Glai Baan
Hob Nobs Food & Spirits
Hot Noodles Cold Sake
House of Tricks
Joe's Farm Grill
Joe's Real BBQ
Joyride Taco House
Kai

La Grand Orange
Liberty Market
Little Miss BBQ
Lo-Lo's Chicken & Waffles
Matt's Big Breakfast
Morning Glory Café
Noble Eatery
Nobuo at Teeter House
North Italia
Olive & Ivy
Otro Café
Pa'La
Phoenix Public Market Café
Pizzeria Bianco
Pomo Pizzeria
Postino
Quiessence
Rancho Pinot
Restaurant Progress
Shaanxi Garden
Shady Park
Tacos Chiwas
Talavera
Tarbell's
Tempe Public Market Café
The Arrogant Butcher
The Breadfruit and Rum Bar
The Churchill
The Dhaba
The Farm Kitchen
The Fry Bread House
The Gladly
The Greene House
The Henry
The House Brasserie
The Mission
The Stockyards
Tratto
True Food Kitchen
Vincent on Camelback
Virtù Honest Craft
Wasted Grain
Welcome Diner
Windsor
Worth Takeaway
Zinburger Wine & Burger Bar
Zinc Bistro

The Cost of Living Index measures relative price levels for consumer goods and services. The national average is 100, and each index is read as a percentage of the national average.

# COST OF LIVING

| 99.4 | 101.1 | 101.5 | 112.8 | 159.4 | 200.1 |
|:---:|:---:|:---:|:---:|:---:|:---:|
| Phoenix | Austin | Salt Lake City | Denver | Seattle | San Francisco |

Source: C2ER Cost of Living Index Calculator, Q3 2019.

## Rent to Income Ratio

| Metro | Monthly Rent | Household Income | Rent to Income Ratio* |
|---|---|---|---|
| Salt Lake City | $1,027.07 | $74,089.08 | 16.6% |
| Dallas | $1,066.67 | $72,490.57 | 17.7% |
| Austin | $1,183.30 | $78,968.09 | 18.0% |
| **Phoenix** | **$1,045.12** | **$65,246.38** | **19.2%** |
| Charlotte | $1,049.02 | $64,114.78 | 19.6% |
| Atlanta | $1,132.35 | $67,127.84 | 20.2% |
| Denver | $1,388.39 | $80,769.59 | 20.6% |
| Seattle | $1,630.19 | $85,566.25 | 22.9% |
| Chicago | $1,454.45 | $72,860.36 | 24.0% |
| San Jose | $2,675.83 | $126,246.81 | 25.4% |
| Boston | $2,094.60 | $90,310.73 | 27.8% |
| Los Angeles | $2,110.07 | $73,850.88 | 34.3% |
| San Francisco | $3,219.17 | $108,607.63 | 35.6% |
| New York | $2,717.43 | $78,292.58 | 41.7% |

Source: CBRE EA; Moody's Analytics, Q3 2019.
*Based on average rent for a one bedroom apartment (CBRE EA) and median household income (Moody's).

# HOUSING AFFORDABILITY

The Housing Opportunity Index (HOI) for each market is defined as the percent of homes sold in that area that would have been affordable to a family earning the metro area median income, based on standard mortgage underwriting criteria.

Nationwide, **63.6%** of new and existing homes sold in Q3 2019 were affordable to families earning the U.S. median income of $61,937 with a national median housing price of $280,000.

## Percentages of Homes that are Affordable

**73.2**%
### Charlotte
Median Price          $254,000

**72.1**%
### Atlanta
Median Price          $248,000

**68.0**%
### Phoenix
Median Price          278,000

**66.9**%
### Chicago
Median Price          $253,000

**66.4**%
### Austin
Median Price          $319,000

**62.8**%
### Salt Lake City
Median Price          $351,000

**57.6**%
### Dallas
Median Price          $300,000

**55.3**%
### Denver
Median Price          $421,000

**47.3**%
### Boston
Median Price          $495,000

**46.5**%
### Seattle
Median Price          $535,000

**35.0**%
### New York*
Median Price          $467,000

**18.4**%
### Silicon Valley
Median Price          $1,003,000

**11.5**%
### Los Angeles
Median Price          $635,000

**8.4**%
### San Francisco
Median Price          $1,350,000

Source: National Association of Home Builders, Q3 2019.

*New York-Jersey City-White Plains, NY-NJ.

## Report Credits

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