

# *Technology Office Outlook*

United States | 2015



TECHNOLOGY CONTINUES TO

**BOOM**

A background graphic featuring a complex network of white lines and dots, resembling a circuit board or a data network. Several white arrows are scattered throughout, pointing in various directions, some following the lines and others pointing independently.

BUT EXACTLY

**WHERE**

MAY SURPRISE YOU...

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# <executive summary>

In the depths of the recession, **SILICON VALLEY AND SAN FRANCISCO** emerged as **bright spots** in an economy that was struggling to recover...

As is typical during downturns, entrepreneurialism and innovation blossomed (as measured by new businesses incorporated and patents registered); the introduction of cloud servers, the smart phone and social media led to a startup boom that has been one of the largest economic drivers of this business cycle. Now, six years and millions of square feet of office space later, technology has become an essential platform for the modern world and one that shows no signs of slowing.

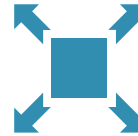
As a result of this rapid expansion, much of which has been concentrated in Silicon Valley and San Francisco, technology companies are trying to identify new markets for opportunity. At the same time that technology tenants look for favorable economics in new markets, investors are also trying to understand which tech markets have the most momentum and longest staying power.

In this report, we explore the technology industry through the lens of location selection.



## THIS REPORT EXAMINES 4 QUESTIONS:

1. Where are companies leasing space and *expanding*?



2. Where is the *real estate cost highest* and where can you find both *value and talent* to grow your company?



3. Where are venture capitalists *placing their bets*?



4. What markets will become the *next hotspots*?



## WHAT WE LEARNED:



**Proximity to a hub is not necessarily enough:** Local markets with an existing tech cluster that are also more affordable than the Bay Area will likely experience accelerated industry growth as firms explore new markets for expansion.



**Secondary markets are quickly catching up:** In 2015, roughly 60% of unicorn companies were located in San Francisco and Silicon Valley, down from almost 76% in 2014.

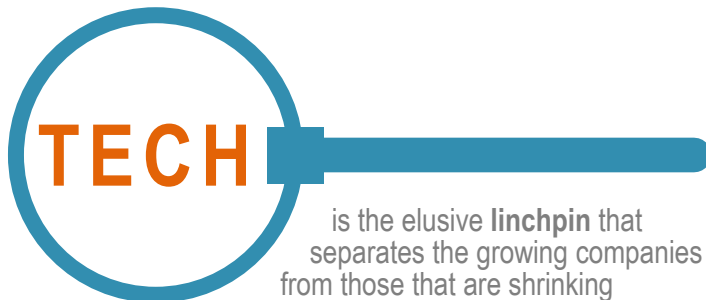


**Startup momentum will cost you:** Markets with the greatest startup momentum, characterized by access to capital, innovation and top talent (such as New York, San Francisco and Silicon Valley), are also the most expensive.

# <executive summary>

## For the technology industry the story remains location, location, location

The technology industry may be strongest in the San Francisco Bay Area, but its pervasive nature continues to impact local economies across the country. Now a required function within nearly all industries, from banking (fin-tech) to marketing (digital) and retail (e-commerce), technology is the elusive linchpin that separates the growing companies from those that are shrinking.



Unsurprisingly, technology companies (over the past four quarters) have been responsible for the largest share of leases 20,000 square feet and larger across the United States, comprising 20.5 percent of all leasing activity and only closely trailed by financial services leasing, which captured 16.3 percent of large block activity. Additionally, 73.0 percent of those technology leases represented occupancy growth — a growth rate 1.6 times higher than that of financial services. This trend is expected to continue over the next several quarters.



73%

of technology leases represented occupancy growth

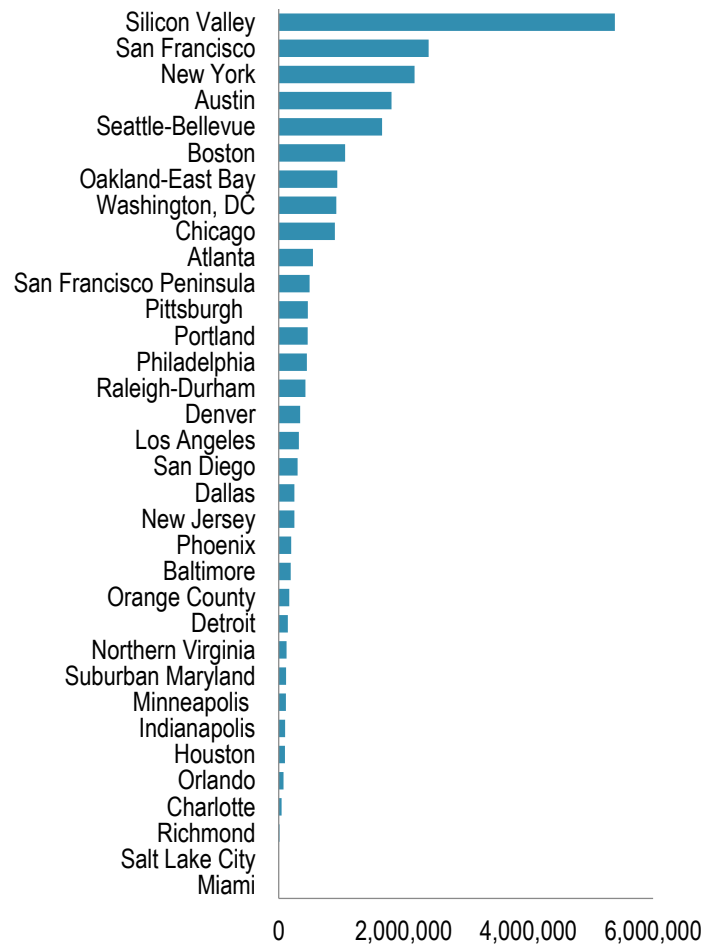
While the obvious markets remain at the top of the ranks for technology leasing activity, smaller markets are emerging to capture demand. Today more and more startup founders consider the viability of their hometown as a business location instead of relocating to San Francisco or Silicon Valley. With relatively low real estate and employee costs in markets like Atlanta, Dallas and Raleigh-Durham (where average rents are in the low \$20s versus the mid-\$50 average you'll find in the Bay Area and New York City), secondary and tertiary markets are looking much more attractive.

## Secondary and tertiary markets are looking much more attractive



to both young and mature companies as industry saturation in the most mature tech hubs has created both competitive and costly leasing environments.

## TOTAL TECH LEASING (S.F.) (Q4 2014 – Q3 2015)



\*Data reflects leasing activity from Q4 2014-Q3 2015 for leases 20,000 square feet and larger  
Source: JLL Research

The timeline to capitalize on opportunistic markets is not infinite, however. As economic and employment conditions continue to improve across the country, rebounding financial, professional and business services companies are beginning to compete for the same talent. Additionally, workplace trends increasingly shifting demand toward creative space is intensifying not only among technology companies but throughout the office-using workforce. As a result, competition for a generally smaller supply of creative office space will begin to push rents at a faster rate over the next 12 to 18 months and reduce tenants' negotiating leverage in even the smallest of markets.

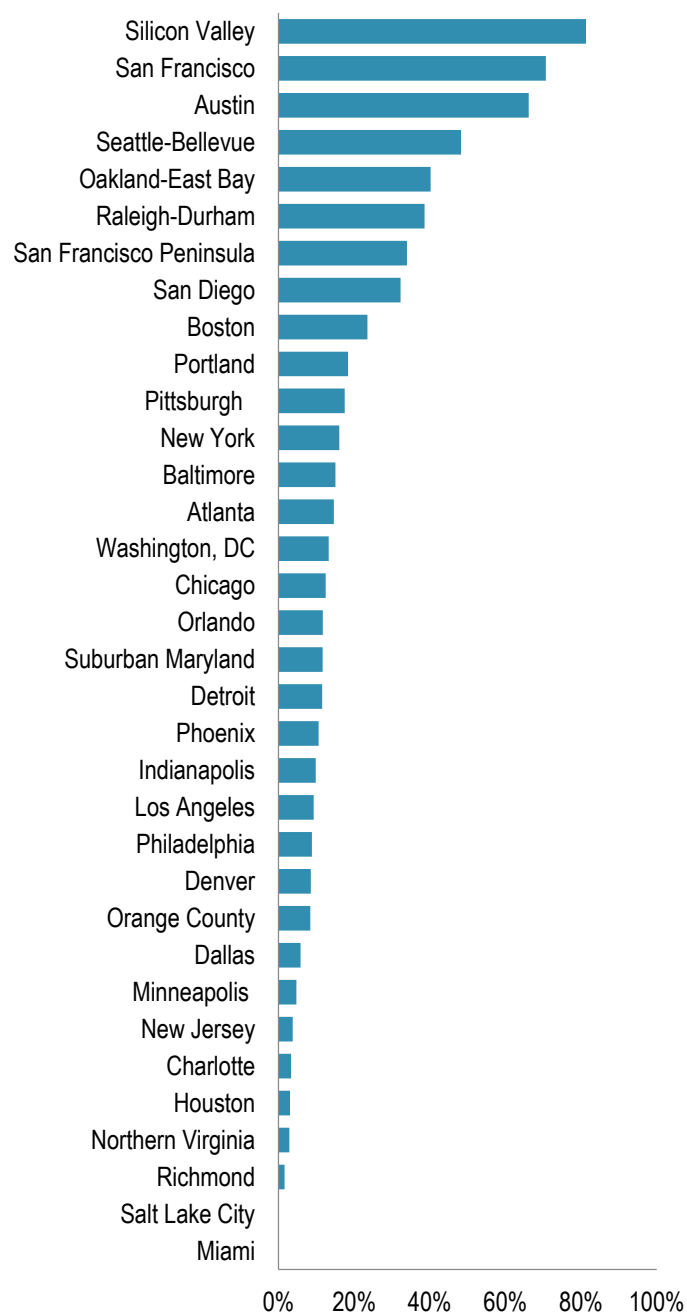
## Demand toward creative space is intensifying



not only among technology companies but throughout the office-using workforce and will begin to push rents at a faster rate.

# <market demand and pricing>

## TECH AS % OF LOCAL LEASING



Within the primary tech hubs, the technology industry's saturation and fast growth has created highly competitive leasing conditions. With bidding wars for office space as well as talent, reduced concessions, and, importantly, the highest rents across the United States. Rents in the most demanded tech submarkets – from Palo Alto in Silicon Valley (where Palantir is headquartered) to Santa Monica on the west side of Los Angeles (where Hulu is based) – average \$73.29 per square foot—140 percent higher than the U.S. average of \$30.59. And landlords aren't expected to budge anytime soon.



With an average vacancy rate of **7.6%** in the 15 most expensive tech submarkets, tech companies in need of those locations must be willing to pay.

## TOP 15

### MOST EXPENSIVE IN-DEMAND TECHNOLOGY SUBMARKETS

Market	Submarket	Average asking rent (Q3 2015)
Silicon Valley	Downtown Palo Alto	\$98.68
Silicon Valley	Downtown Mountain View	\$87.53
San Francisco	Mission Bay/China Basin	\$81.50
New York	Hudson Square	\$81.50
New York	SoHo	\$79.80
New York	Gramercy Park	\$76.58
San Francisco Peninsula	Menlo Park*	\$73.44
San Francisco	South Financial District	\$68.61
San Francisco	North Financial District	\$68.53
Boston	East Cambridge	\$67.21
San Francisco	South of Market	\$66.07
Silicon Valley	Cupertino	\$65.52
San Francisco Peninsula	Redwood City	\$63.06
New York	Greenwich Village	\$61.49
Los Angeles	Santa Monica	\$59.75

\*Excludes Sand Hill Road

*\*Data reflects share of local market leasing activity from Q4 2014-Q3 2015 for leases 20,000 square feet and larger  
Source: JLL Research*

Within the **primary tech hubs**, the technology industry's saturation and fast growth has created **highly competitive leasing conditions**.



While tenant demand and leasing metrics are playing a significant role in the location and growth of technology companies across the United States, it is impossible to overlook the importance of Silicon Valley as a location and its influence on the industry as a whole.

# <market demand and pricing>

## The few, the majority, the Silicon Valley

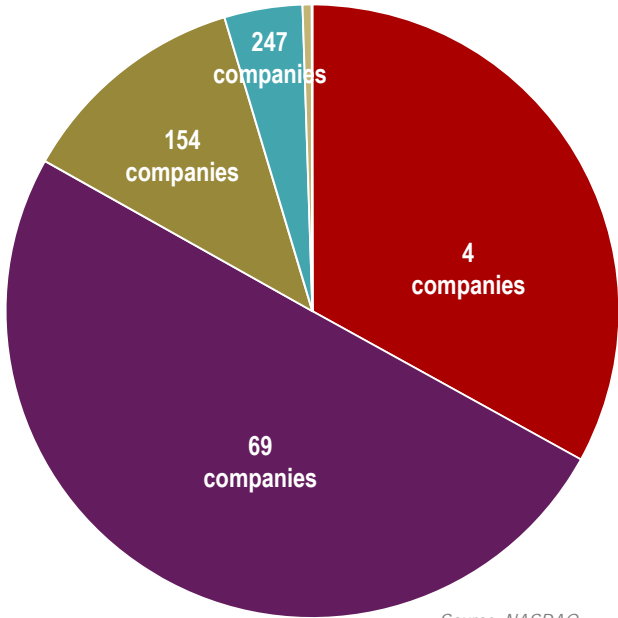
With a total market capitalization of more than \$5.3 trillion, the technology sector is one of the largest on the stock market and continues to generate some of the greatest gains for shareholders. Of the tech sector's total market cap, 83.0 percent of that value exists within just 73 mega and large cap companies (or 10.0 percent of the 716 public technology companies), and of those 73 companies Silicon Valley is home to nearly half. It's no wonder, then, that the market is in a perpetual state of innovation, propelled through public capital and reputation.

Does **concentration** of brand-name headquarter locations present **potential risk** to the market **or** does it simply **affirm** its place as the **epicenter** of the technology industry?



### NASDAQ COMPOSITE BY MARKET CAP

- Mega \$200b +
- Large \$10-\$200b
- Mid \$2-\$10b
- Small \$300m-\$2b
- Micro \$50-\$300m
- Nano <\$50m



Source: NASDAQ

**83%** of the NASDAQ composite lies with just **73** tech companies

# of mega and large cap technology HQs		Total market cap
Silicon Valley	25	\$2,151,240,300,303.46
San Francisco Mid-Peninsula	4	\$397,150,931,958.84
Chicago	4	\$79,506,967,555.90
Boston	3	\$89,782,814,898.36
Northern New Jersey	3	\$81,165,126,709.76
San Francisco	3	\$68,789,917,234.46
New York	3	\$42,055,691,881.64
Stamford	2	\$208,420,969,436.20
San Diego	2	\$144,263,755,709.21
East Bay	2	\$26,495,513,492.10
Seattle	1	\$366,762,291,334.80
Dallas	1	\$51,657,748,144.84
Orange County	1	\$23,412,831,364.80
Kansas City	1	\$19,105,214,519.04
Milwaukee	1	\$15,646,535,660.62
Raleigh-Durham	1	\$10,661,251,367.30
International	16	\$641,044,818,435.93
All others	643	\$895,466,673,458.15
Grand Total	716	\$5,312,629,353,465.43

Source: NASDAQ

Although Silicon Valley is heavily weighted in tech, its position as the industry hub has actually presented growth opportunities for other markets across the United States. Rather than monopolizing the industry (which some might argue is true), its homegrown tech giants are cash-rich and spreading the wealth to more and more markets as talent and office supply become both scarce and expensive locally.

Companies like Google, Apple, Oracle, Yahoo and Facebook—firmly rooted in Silicon Valley – are multiplying outside of the Bay Area. Over the past year, these five companies alone have closed a total of 20 lease transactions of 20,000 square feet or larger across nine markets for a total of 3.5 million square feet. In 16 of these transactions these companies expanded.

The multiplier effect isn't reserved for just the biggest or those based in Silicon Valley, however. During that same period, 34 technology companies opened new locations across 19 markets, expanding into a combined total of more than 2.1 million square feet in markets like Atlanta, Detroit, Orlando and Phoenix.





# <venture capital funding>

## Venture capital remains primary driver of startup expansion

Overall funding volume for the U.S. tech sector grew 41.9 percent on a 12-month cumulative basis from 2014. Year-to-date, the United States has captured \$21.9 billion, representing the sixth consecutive year of investment growth since 2009. Of that total, 72.8 percent was captured in late/expansion rounds, led by Uber, AirBnB and Snapchat, resulting in a steep rise in the number of unicorns (companies valued over \$1.0 billion or more) on the private market. The number of unicorns in the industry has nearly tripled since 2014, to a total of 76. Though many analysts are becoming wary of frothy private valuations, the venture capital community maintains an optimistic outlook on the tech sector.

The number of **unicorns** in the industry has nearly **tripled**



Late-stage and expansion rounds may be increasing, but the volume of seed funding slid from \$445.3 million in 2013 to \$348.3 million in the second quarter of 2015, representing a 21.8 percent decline. But while it appears that seed money is drying up, angel investors, crowdfunding, and incubator programs, such as Y-Combinator, TechStars, and 500 Startups, have been major players in fostering the startup culture through their own seed programs. Additionally, venture-backed heavyweights are also investing in startups, as companies like Flipkart, Snapchat and Twilio manage their own investment funds.

Angel investors, crowdfunding and incubator programs, such as Y-Combinator, TechStars, and 500 Startups, have been major players in

**fostering the startup culture.**



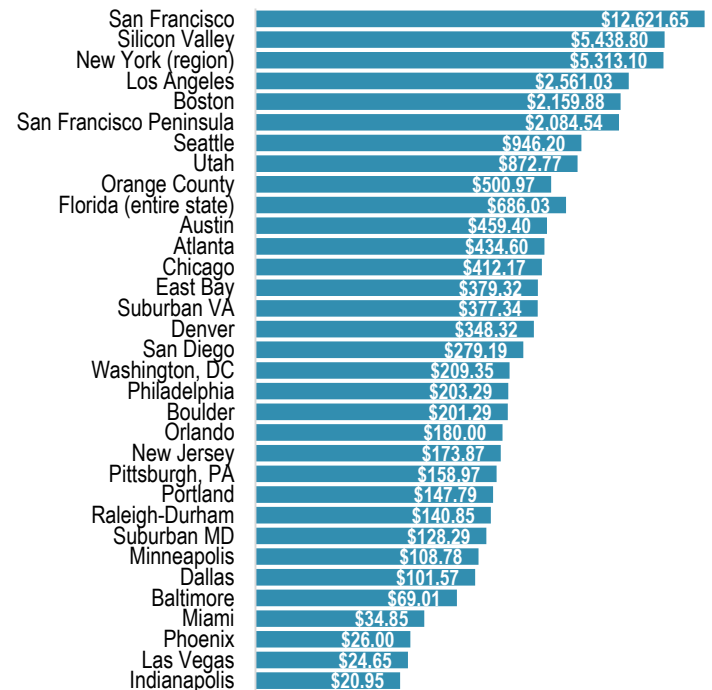
While Bay Area tech startups continue to have the greatest access to capital, high barriers to entry have venture capitalists looking at startups in more diverse markets. New York and Los Angeles have experienced some of the largest gains in private capital, seeing a 96.3 and 197.1 percent increase year-over-year, respectively. Since the beginning of 2015, Orange County has captured \$500.97 million in funding thanks to CrowdStrike's \$100.0 million expansion stage round, contributing to a 39.5 percent year-over-year increase. And in Utah, funding has grown by 103.0 percent year-over-year to \$399.4 million as investors are beginning to take greater interest in Salt Lake City and Provo startups.

The trend of **tech growth in secondary markets** is beginning to dispel the traditional mentality that startups need to locate to the Bay Area in order to have access to private capital.

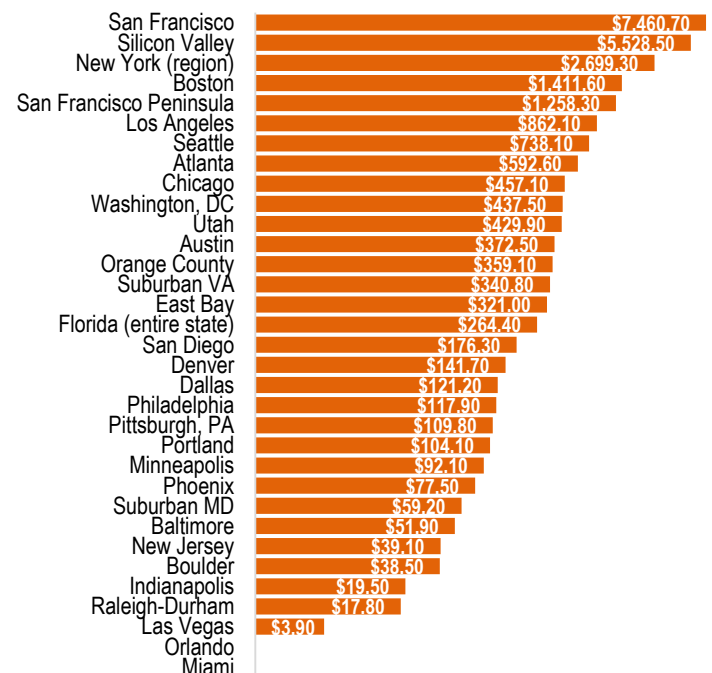


In 2014, 75.8 percent of unicorn companies were located in both San Francisco and Silicon Valley. Today, that number has shrunk to 59.2 percent. The remaining 40.8 percent represent a more diverse list of markets that include Utah, Oakland-East Bay, Boston, Washington, DC, and Orange County, proving that venture capitalists are casting a wider net.

## VENTURE CAPITAL FUNDING (\$ in millions) Q3 2014 – Q2 2015



## VENTURE CAPITAL FUNDING (\$ in millions) Q3 2013 – Q2 2014



Source: PricewaterhouseCoopers

# <the JLL locator matrix>

## Identifying the next growth opportunity



The Locator Matrix is a **tool** for growing startups and established tech firms to determine the **best location** for continued company expansion

We looked at several factors to quantify the best prospects for tech firms when considering their next office location:

### **STARTUP OPPORTUNITY:** ▼ LOW TO HIGH ▲

**FACTORS** include:

- Tech economic opportunity, as measured by employment and wage growth
- Depth of talent, measured by share of Millennial workforce and education levels
- Innovation, measured by patent activity
- Startup agglomeration, or thickness of the startup community, and presence of an existing tech cluster or major tech anchor
- Access to venture capital

### **COST FACTORS:** ▼ LOW TO HIGH ▲

**FACTORS** include:

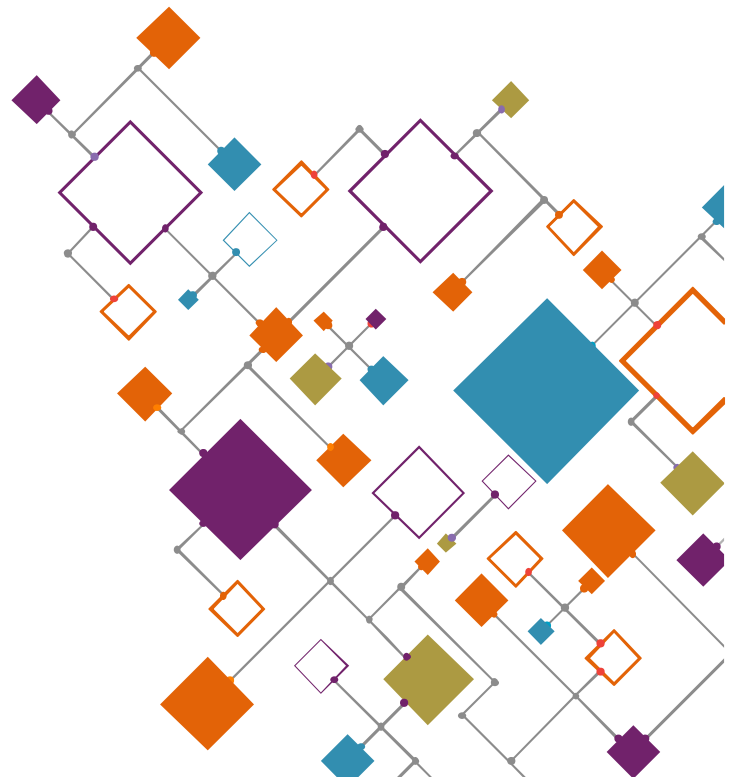
- Average cost of office real estate
- Average cost of housing
- Average tech wage to measure cost of talent

## FOR TECH COMPANIES

If you're a young startup, which markets present the greatest opportunity for growth? You may not be able to stomach the high cost of labor, housing and office space in a place like San Francisco or New York City, but you probably want to be in a market with startup momentum so that you can cross-pollinate with other innovative minds. Or, perhaps your pain points include access to capital and talent, and cost is no concern at all.

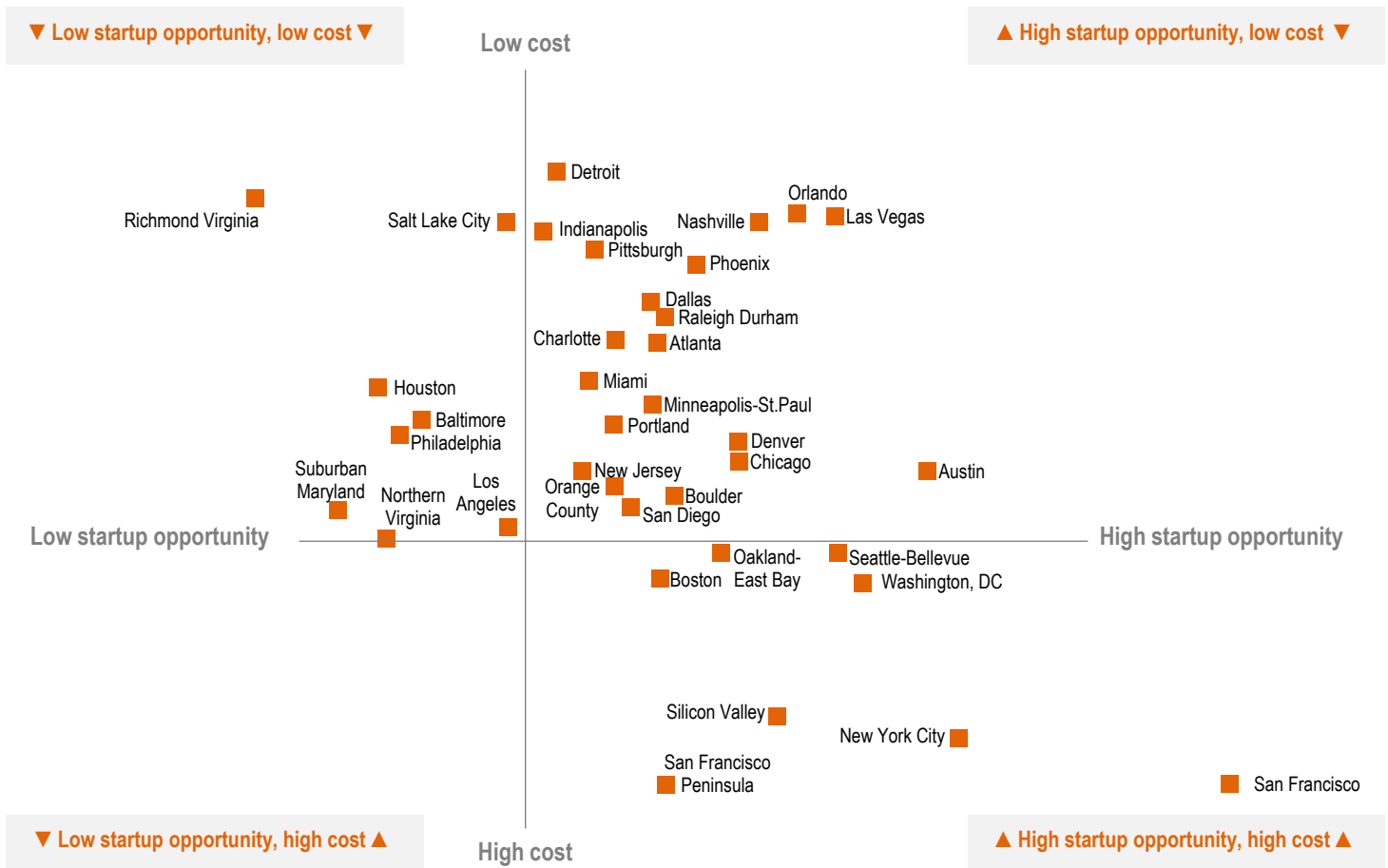


The **results** of our model divide the markets into **four different quadrants**, making it clear which markets present the best opportunity for growth based on the cost and startup momentum.





# <the JLL locator matrix>



## TOP LEFT QUADRANT: LOW STARTUP OPPORTUNITY; LOW COST

This quadrant includes markets where startup opportunity is less abundant but costs are affordable. Markets like Salt Lake City and Los Angeles are in the mid-point of startup opportunity, but could easily move into the top right quadrant as tech momentum grows in these markets.

Improvement toward greater startup opportunity for markets in this quadrant could be achieved through increased venture capital flows, higher share of millennials and higher educational attainment; all of these improvements would lead to a thicker startup community and greater talent pool, which would ultimately make these markets quite favorable for continued tech growth.

## BOTTOM LEFT QUADRANT: LOW STARTUP OPPORTUNITY; HIGH COST

The bottom left quadrant indicates markets where there is less startup opportunity, but also higher costs. None of the markets in our study fell into this quadrant, although markets like Northern Virginia and Suburban Maryland are on the edge given their mid-range costs and their thinner startup community.

## TOP RIGHT QUADRANT: HIGH STARTUP OPPORTUNITY; LOW COST

This is the sweet spot for young companies, especially those with cost top of mind. These markets, which include Nashville, Denver, Austin, Portland and several others, are places where real estate costs and talent are still relatively affordable (but rising), but also have all the elements in place to foster startup and tech company growth.

Markets in this quadrant that are farther to the right are those with the strongest metrics for tech growth, like access to capital, deep talent pool and startup agglomeration, and those higher in the quadrant are those that are also more affordable. Perhaps the market with the greatest opportunity in this part of the matrix is Austin, where startup opportunity is highest, yet costs are still relatively manageable.

## BOTTOM RIGHT QUADRANT: HIGH STARTUP OPPORTUNITY; HIGH COST

Markets listed in the bottom right quadrant, like San Francisco, Silicon Valley and New York, have clear advantages for startups with greater access to capital, higher concentration of innovation, great talent accessibility and an existing tech cluster. However, these markets are also more costly in terms of housing, real estate and wages. For tech companies with less cost sensitivity, these are the best target markets for growth.

# <the JLL market score>



The Market Score is a **tool** for real estate investors to determine momentum and potential **investment opportunity** in a particular market with tech in mind.

## Identifying the investment opportunity: The Market Score

A higher score indicates strong market momentum while a lower score indicates slower momentum. All markets included within this report have been scored based on the following factors:

- **Tech economic momentum:** Job growth and industry growth are used to determine the velocity of tech expansion in a given market.
- **Talent pool:** Educational attainment and the population of 20-34 year olds are used to determine the quality and the depth of the tech talent pool.
- **Startup friendliness:** Several factors are taken into account including startup concentration, innovation measured by patent activity, the level of growth in patents registered, the presence of a major high-tech headquarters company (i.e. Google or Amazon) and access to venture capital funding measured by the share of total funding a local market captures.
- **Market factors:** Last, we considered the costs and benefits inherent in each market. The cost of office space, housing and market dynamism factors are weighed here.

Our ranking model revealed that **San Francisco** provides real estate investors the **best mix of favorable attributes** for those already invested in a tech market or targeting tech markets for acquisition opportunities.

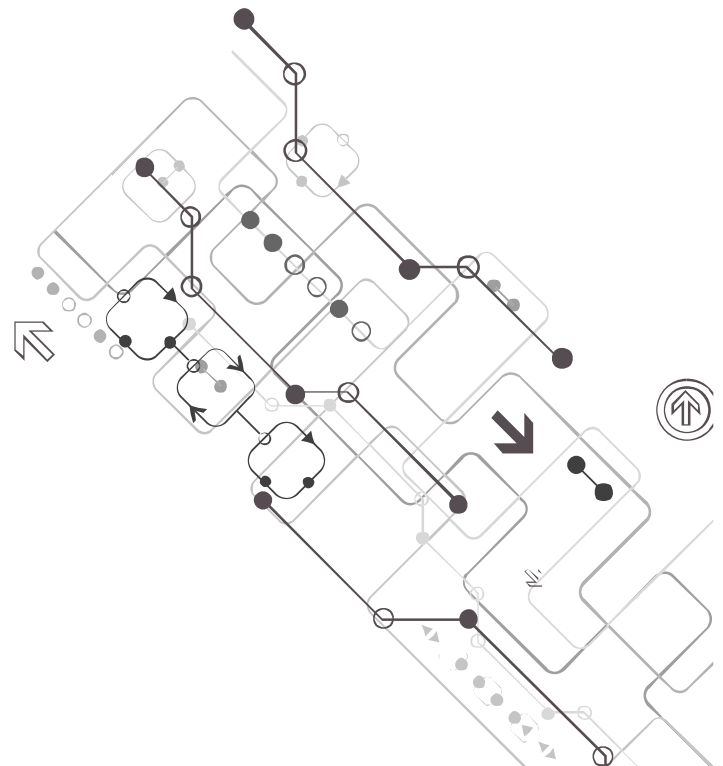


## FOR INVESTORS:

Based on the factors above, our ranking model revealed that San Francisco provides real estate investors the best mix of favorable attributes for those already invested in a tech market or targeting tech markets for acquisition opportunities. Washington, DC, New York, Denver, and Chicago follow, pushed to the top of the rankings because of their highly-educated workforce, high millennial population, access to capital and existing high-tech cluster.

Rounding out the top 10 are Boulder, Nashville, Seattle-Bellevue, Salt Lake City and Northern Virginia. Seattle-Bellevue should be no surprise given its frequent placement among tech markets nationally, but the other markets in this group have made their way toward the top this year because of their strong demographic qualities and their relative affordability. As the traditional tech markets like San Francisco and New York become increasingly unaffordable for younger firms, markets like Denver, Boulder, Nashville and Salt Lake City are poised to capture the next wave of tech demand, and thus provide excellent investment opportunities on the office side.

As the **traditional tech** markets like San Francisco and New York become **increasingly unaffordable** for younger firms, markets like Denver, Boulder, Nashville and Salt Lake City are poised to capture the next wave of tech demand.



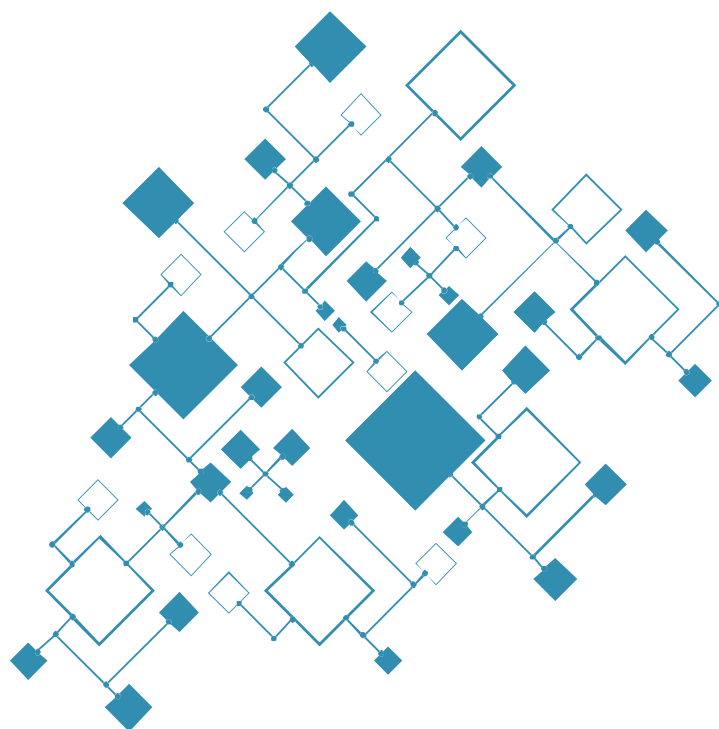
# <the JLL market score>

As for the bottom five markets in this year's ranking, the biggest surprise may be the San Francisco Peninsula's position toward the bottom. While this market is squarely planted in the middle of the tech epicenter, there are factors that create challenges for growing companies, such as the cost of living, the cost of real estate and less favorable demographic conditions.



As for the **bottom** five markets in this year's ranking, the biggest surprise may be the **San Francisco Peninsula's** position toward the bottom.

Market rankings should be considered a tool to determine quickly where the technology industry's saturation and growth is highest for those investors targeting high-growth markets and creative assets. All of the markets included in this report are considered viable tech markets.



## TOTAL WEIGHTED SCORE

San Francisco	93.4
Washington, DC	89.4
New York City	81.9
Denver	79.8
Chicago	79.2
Boulder	79.0
Nashville	78.8
Seattle-Bellevue	78.3
Salt Lake City	77.3
Northern Virginia	75.7
Oakland-East Bay	75.1
Austin	75.0
Atlanta	74.6
Las Vegas	73.9
Raleigh-Durham	73.4
Boston	73.1
Portland	72.1
San Diego	71.9
Silicon Valley	71.8
Los Angeles	71.8
Orlando	71.3
Dallas	71.2
Minneapolis	70.5
Suburban Maryland	70.3
Orange County	68.9
Richmond	68.4
Pittsburgh	68.2
Houston	67.2
Philadelphia	66.8
Miami	66.5
New Jersey	66.0
Indianapolis	65.4
Phoenix	64.6
Charlotte	63.6
San Francisco Peninsula	60.6
Detroit	60.2
Baltimore	60.0

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EACH MARKET HAS A



**STORY**

TO TELL.

**DIVE**

IN TO LEARN MORE...

# ATLANTA

Juliet Potter  
VP, Director of Research



Ryan Harchar  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>133,731,978</b> total inventory (s.f.)	<b>Office cost</b> <b>\$22.32</b> overall direct asking rent	<b>Employee cost</b> <b>\$101,047</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,906</b> annual real estate cost (175 s.f./person)
<b>18.2%</b> total vacancy	<b>9.9%</b> 12-month rent growth	<b>2.2%</b> annual wage growth 2014	<b>\$104,953</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$434.6M</b> total funding Q314-Q215	<b>Population</b> <b>5,614,323</b> total population	<b>Talent pool</b> <b>34.9%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$997</b> average monthly apartment rent
<b>1.3%</b> share of U.S. funding	<b>5.7%</b> unemployment rate	<b>20.7%</b> share of millennials (work age, 20-34)	<b>4</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>NCR Corporate Headquarters   Midtown</b> Tenant: NCR Size: 300,000+/- s.f. Build-to-suit	<b>201 17<sup>th</sup> Street, Atlantic Station   Midtown</b> Tenant: Worldpay Size: 130,000 s.f. New	<b>271 17<sup>th</sup> Street, Atlantic Station   Midtown</b> Tenant: Sage Size: 78,000 s.f. New
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## OPPORTUNITY

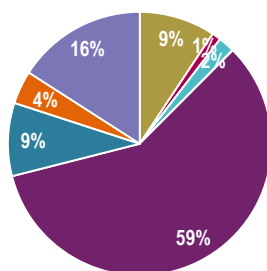
Technology firms seeking access to well-qualified talent find the volume, diversity, and affordability of metro Atlanta's labor pool attractive. Coupled with access to quality office and data center facilities and the ease of international travel, the capital of the south stands out as a viable alternative to other more costly locations.

## CHALLENGE

Market conditions continue to lean increasingly in favor of landlords, particularly in corridors most attractive to the tech sector. Occupiers with requirements are presented with fewer space options, escalating asking rates, and less accommodative concession packages. Delivery of substantial new development to relieve this pressure could be up to 24 to 36 months out, which means conditions will tighten further.

## EMPLOYMENT COMPOSITION

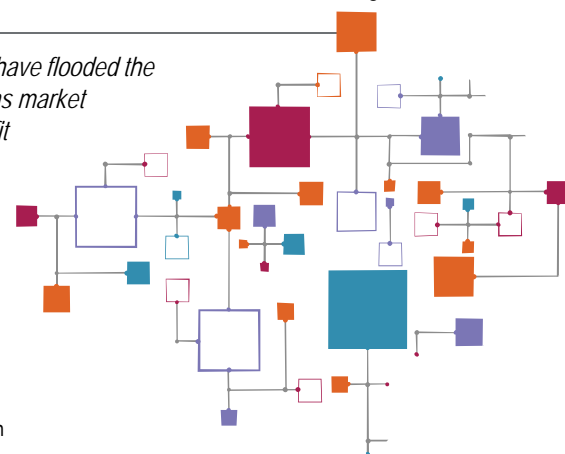
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"Since 2011, Atlanta's tech firms have flooded the market, but the trend could slow as market conditions tighten further to benefit landlords."

- Ryan Harchar  
Senior Research Analyst

<b>Employment</b>
<b>68,414</b>
high-tech employment 2014
<b>3.3%</b>
annual high-tech employment growth

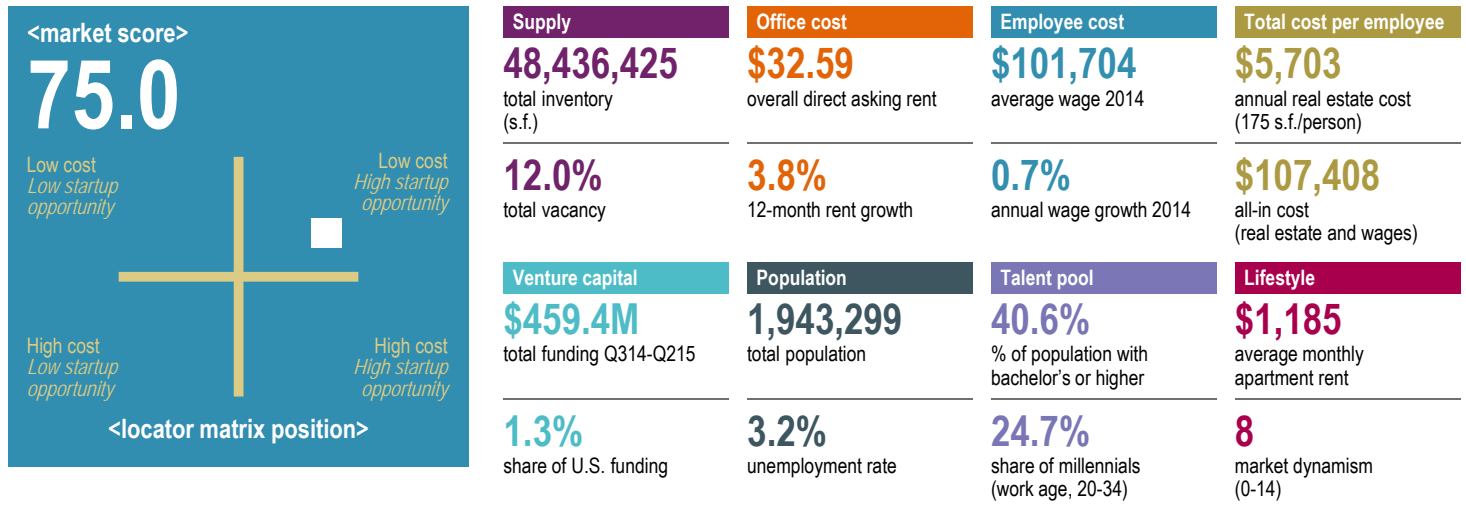


# AUSTIN

Travis Rogers  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>6500 Capital of Texas Hwy   Northwest</b> Tenant: Indeed Size: 198,000 s.f. Expansion within market	<b>500 W 2<sup>nd</sup> Street   CBD</b> Tenant: Google Size: 200,000 s.f. Expansion in market	<b>5707 Southwest Pky   Southwest</b> Tenant: ARM Size: 140,000 s.f. Relocation in market
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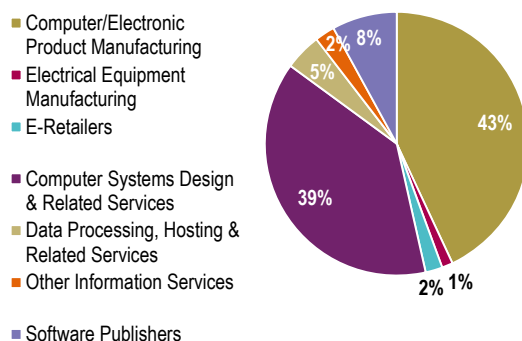
## OPPORTUNITY

Austinites enjoy a fun and relaxed way of life, a resilient economy, a jaw dropping natural setting for living and play, a thriving arts and live music scene and a reasonable cost of living for a big city. High-growth tech companies can utilize Austin's growing national profile as a selling point both locally and nationwide for recruiting and retaining employees. The recently approved UT Dell Medical school, slated to open in 2016, will also shepherd the growth of a new cluster of medical related tech.

## CHALLENGE

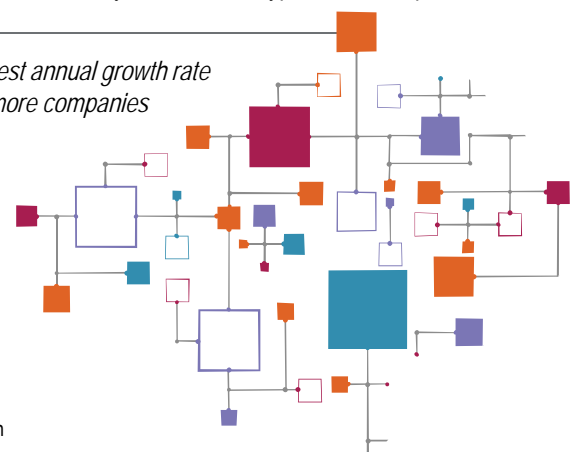
Many tech companies have a difficult time finding short-term lease flexibility. Landlords are holding firm with five-year minimums and pushing for seven and or 10 years. Another challenge is the misconception that a growing tech community means a plethora of older funky or cool buildings. The fact is, Austin is a young city with a dearth of options that can satisfy the cool, non-typical office requirement.

## EMPLOYMENT COMPOSITION



"Austin recorded the second-highest annual growth rate in tech employment last year as more companies and talent flock to the market."

- Travis Rogers  
Research Analyst





# BALTIMORE

Patrick Latimer  
Manager, Research



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>71,153,930</b> total inventory (s.f.)	<b>Office cost</b> <b>\$22.42</b> overall direct asking rent	<b>Employee cost</b> <b>\$107,512</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,924</b> annual real estate cost (175 s.f./person)
<b>13.4%</b> total vacancy	<b>2.4%</b> 12-month rent growth	<b>4.4%</b> annual wage growth 2014	<b>\$111,436</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$69.0M</b> total funding Q314-Q215	<b>Population</b> <b>2,785,874</b> total population	<b>Talent pool</b> <b>15.6%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,251</b> average monthly apartment rent
<b>0.2%</b> share of U.S. funding	<b>5.5%</b> unemployment rate	<b>21.2%</b> share of millennials (work age, 20-34)	<b>7</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### 200 International Circle | I-83 North

Tenant: Zenimax  
Size: 52,273 s.f.  
Renewal

### 9755 Patuxent Woods Drive | Columbia South

Tenant: Fei Systems  
Size: 48,832 s.f.  
Relocation within market

### 3700 O'Donnell Street | Baltimore Southeast

Tenant: Advertising.com  
Size: 46,587 s.f.  
Relocation within market

## OPPORTUNITY

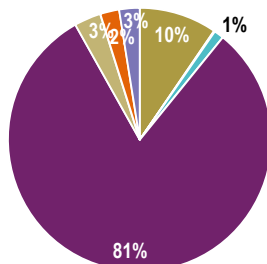
Local institutions such as Johns Hopkins, University of Maryland and Under Armour have aggressively moved to foster a growing tech startup community. At the University of Maryland Biopark, Cambridge Innovation Center will lease more than 100,000 square feet in the park's next building and in South Baltimore, Under Armour has turned a 133,000-square-foot industrial building into an innovation center.

## CHALLENGE

Vacancy in Baltimore Southeast has dropped to 6.9 percent while neighborhoods such as Canton and Federal Hill have nearly zero availability. Finding non-traditional office space in areas where tech tenants have gravitated toward has become increasingly difficult and rental rates have begun to rise accordingly.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"Construction is set to rise in Baltimore Southeast, which will give tenants searching the marketplace needed options in the peripheral neighborhood submarkets of the city where tech companies focus."

- Patrick Latimer  
Manager, Research

### Employment

**34,610**

high-tech employment 2014

**0.6%**

annual high-tech employment growth



# BOSTON

Lisa Strobe  
Research Manager



Wes Simon  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>164,599,510</b> total inventory (s.f.)	<b>Office cost</b> <b>\$33.17</b> overall direct asking rent	<b>Employee cost</b> <b>\$131,278</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,805</b> annual real estate cost (175 s.f./person)
<b>14.3%</b> total vacancy	<b>7.2%</b> 12-month rent growth	<b>3.9%</b> annual wage growth 2014	<b>\$137,083</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$2.2B</b> total funding Q314-Q215	<b>Population</b> <b>4,732,161</b> total population	<b>Talent pool</b> <b>43.4%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$2,112</b> average monthly apartment rent
<b>6.2%</b> share of U.S. funding	<b>4.1%</b> unemployment rate	<b>21.8%</b> share of millennials (work age, 20-34)	<b>7</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>75-125 Binney Street   East Cambridge</b> Tenant: IBM Size: 160,000 s.f. Expansion in market	<b>5 Clock Tower Place   495/North</b> Tenant: Stratus Technologies Size: 102,321 s.f. Expansion in market	<b>2 Canal Park   East Cambridge</b> Tenant: CarGurus Size: 78,059 s.f. Relocation within market
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## OPPORTUNITY

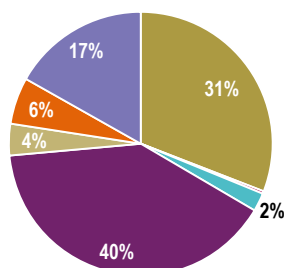
The Boston tech sector employs the second-largest tech workforce behind Silicon Valley. While growth in the market has been diverse, it is particularly strong in software and information technology. Home to 53 higher education institutions, including Harvard and MIT, Boston has a highly-educated workforce that drives private sector expansion. Venture capital firms have invested \$2.2 billion in Greater Boston over the past four quarters.

## CHALLENGE

Limited options in Boston's hottest tech submarkets creates a challenge for growing companies. In Cambridge's Kendall Square and in the Seaport submarket, vacancy rates are below 5.0 percent. Smaller tech companies are stretching the traditional boundaries to find locations to grow as larger, more established companies quickly snap up available space.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers

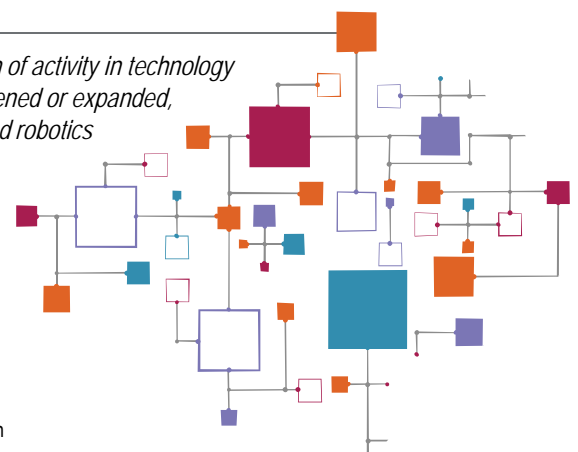


*"Boston has enjoyed an explosion of activity in technology as dozens of companies have opened or expanded, while incubators, accelerators, and robotics centers seem to be popping up everywhere."*

- Lisa Strobe  
Research Manager

**Employment**  
**149,317**  
 high-tech employment 2014

**2.9%**  
 annual high-tech employment growth



# BOULDER

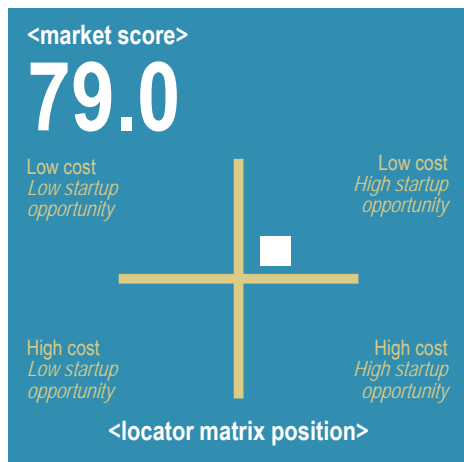
TJ Jaroszewski  
Research Manager



Mandy Seyfried  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>5,611,214</b> total inventory (s.f.)	<b>Office cost</b> <b>\$27.25</b> overall direct asking rent	<b>Employee cost</b> <b>\$107,959</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,769</b> annual real estate cost (175 s.f./person)
<b>6.3%</b> total vacancy	<b>14.1%</b> 12-month rent growth	<b>2.7%</b> annual wage growth 2014	<b>\$112,728</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$201.3M</b> total funding Q314-Q215	<b>Population</b> <b>313,333</b> total population	<b>Talent pool</b> <b>58.3%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,497</b> average monthly apartment rent
<b>0.6%</b> share of U.S. funding	<b>3.2%</b> unemployment rate	<b>24.0%</b> share of millennials (work age, 20-34)	<b>6</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### 1048 Pearl Street | Boulder

Tenant: Solid Fire  
Size: 62,000 s.f.  
Relocation within market

### 1048 Pearl Street | Boulder

Tenant: Galvanize  
Size: 27,000 s.f.  
New to market

### 4780 Pearl East Circle | Boulder

Tenant: LogRhythm  
Size: 22,394 s.f.  
Relocation within market

## OPPORTUNITY

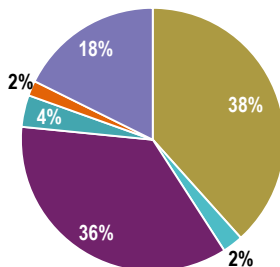
Boulder has historically been a hotspot for large and small tech companies alike. Boulder sees activity from small startups to large companies, like Google, which has proposed a three-building, 300,000-square-foot campus in Central Boulder, expected to break ground before the end of 2015. The market continues to have a high demand for skilled tech workers, and enjoys a deep labor pool with direct access to the University of Colorado.

## CHALLENGE

With a lack of transportation options to and from Boulder, retaining and attracting tech talent remains a challenge. As tech companies have to offer higher pay to keep top talent in place, the cost of real estate is being heavily scrutinized. Not only is Downtown Boulder's Class A vacancy a mere 3.5 percent, but this type of space commands the highest rent in the entire Denver market, forcing companies to locate elsewhere in order to reduce costs.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- E-Retailers
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



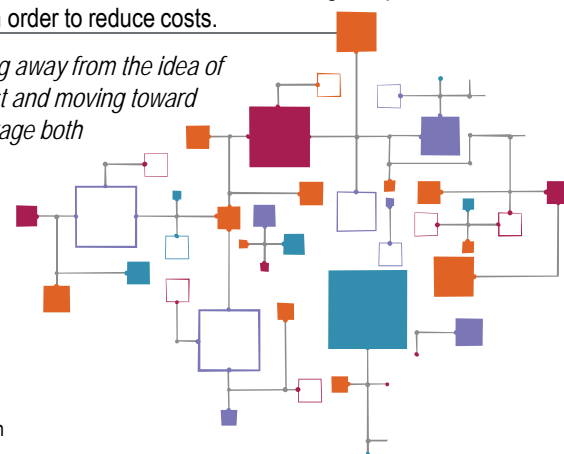
"Companies in Boulder are shifting away from the idea of real estate being an accepted cost and moving toward employing it as a strategic advantage both culturally and economically."

- Mandy Seyfried  
Senior Research Analyst

### Employment

**21,786**  
high-tech employment 2014

**2.5%**  
annual high-tech employment growth

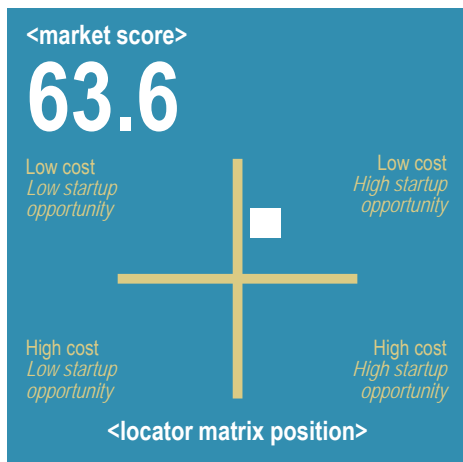


# CHARLOTTE

Patrick Byrnes  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>47,028,843</b> total inventory (s.f.)	<b>Office cost</b> <b>\$22.94</b> overall direct asking rent	<b>Employee cost</b> <b>\$99,708</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,015</b> annual real estate cost (175 s.f./person)
<b>12.1%</b> total vacancy	<b>11.1%</b> 12-month rent growth	<b>1.3%</b> annual wage growth 2014	<b>\$103,722</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$0.0</b> total funding Q314-Q215	<b>Population</b> <b>2,380,314</b> total population	<b>Talent pool</b> <b>30.6%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$969</b> average monthly apartment rent
<b>0.0%</b> share of U.S. funding	<b>5.8%</b> unemployment rate	<b>20.1%</b> share of millennials (work age, 20-34)	<b>5</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>10101 Claude Freeman Drive   University</b> Tenant: Red Ventures Size: 98,000 s.f. Expansion in market	<b>11115 Rushmore Drive   Highway 51 / Ballantyne</b> Tenant: LendingTree Size: 38,000 s.f. New	<b>201 S. College Street   CBD</b> Tenant: AddShoppers Size: 5,192 s.f. New
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## OPPORTUNITY

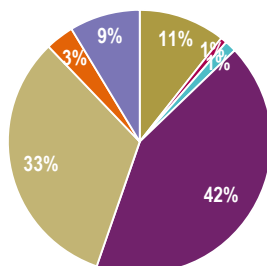
The Charlotte office market has historically been driven by large financial and law firms, especially in the CBD. Most recently there has been a number of large leases signed with tech companies making the move to the Queen City. With these tech groups pioneering the move to Charlotte, there should be more movement within the tech sector for the market moving forward.

## CHALLENGE

The lack of tech-style office product is a major knock on the Charlotte office market. Because of the financial and law firms that dominate the landscape, most of the existing product is structured as traditional office space. However, with submarkets like Midtown and University changing their product to suit tech users, Charlotte could see big change in the foreseeable future.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



*"With Red Ventures, LendingTree, and AvidXchange now calling Charlotte home, more tech companies should be attracted to the growing market."*

- Patrick Byrnes  
Research Analyst

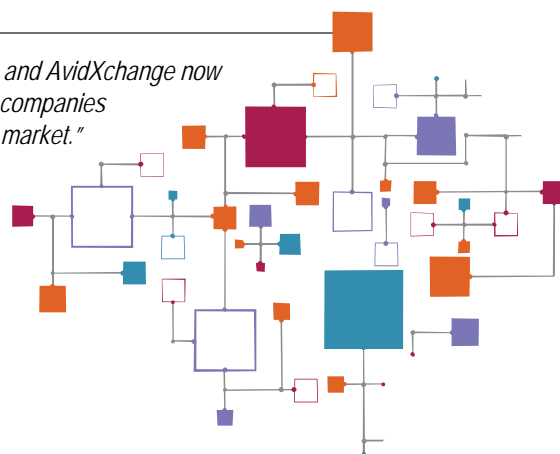
### Employment

**20,179**

high-tech  
employment 2014

**4.8%**

annual high-tech  
employment growth



# CHICAGO

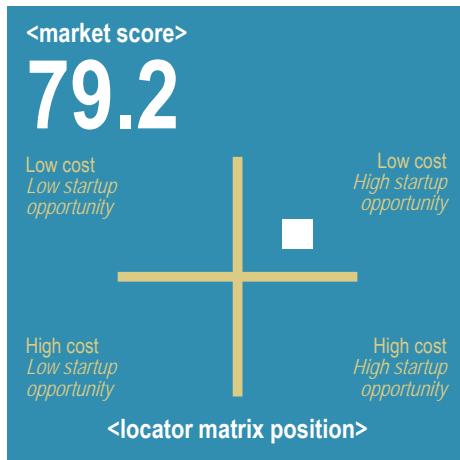
Christian Beaudoin  
SVP, Director of Research



Joe Klosterman  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>136,164,036</b> total inventory (s.f.)	<b>Office cost</b> <b>\$29.91</b> overall direct asking rent	<b>Employee cost</b> <b>\$95,767</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,234</b> annual real estate cost (175 s.f./person)
<b>12.7%</b> total vacancy	<b>1.1%</b> 12-month rent growth	<b>2.7%</b> annual wage growth 2014	<b>\$101,001</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$412.2M</b> total funding Q314-Q215	<b>Population</b> <b>9,554,598</b> total population	<b>Talent pool</b> <b>34.6%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,328</b> average monthly apartment rent
<b>1.2%</b> share of U.S. funding	<b>5.6%</b> unemployment rate	<b>21.2%</b> share of millennials (work age, 20-34)	<b>10</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>600 W Chicago Avenue   River North</b> Tenant: Groupon Size: 380,000 s.f. Renewal with expansion	<b>111 W Washington Boulevard   Central Loop</b> Tenant: GrubHub Size: 128,000 s.f. Renewal with expansion	<b>500 W Monroe Street   West Loop</b> Tenant: Motorola Solutions Size: 150,000 s.f. New to market
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## OPPORTUNITY

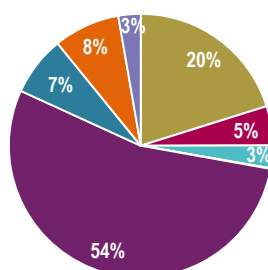
As the tech sector has matured in Chicago, landlords have invested in upgrades to attract that tenant base. Tech tenants are also pushing the historic boundaries of the market by leasing space in Fulton Market, Goose Island, and formerly neglected historic properties in the Loop. All of this suggests that the market views tech users as a viable source of demand and so it has altered office product and expanded its boundaries to accommodate to this new user.

## CHALLENGE

Even though startups in Chicago have become increasingly attractive to investors, there is still stiff competition from firms on either coast for VC funding and acquisition opportunities. On top of that office rents have increased 8.6 percent in the past two years and a surge in residential development has caused a similar spike in apartment rents. This means that tech tenants in Chicago must be more efficient with their investment capital.

## EMPLOYMENT COMPOSITION

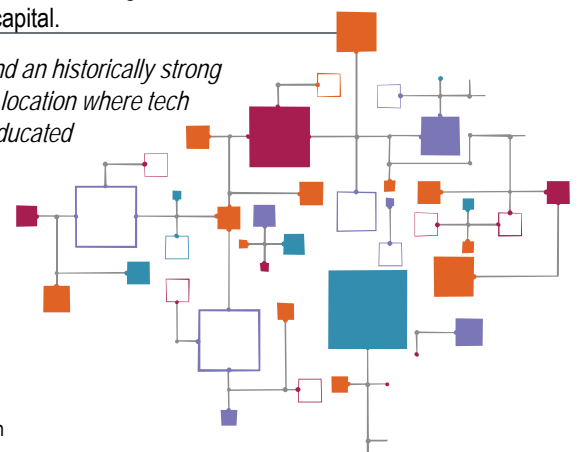
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



*"Lower costs of doing business and an historically strong talent base position Chicago as a location where tech companies can access a highly educated workforce at a lower cost than coastal markets."*

- Joe Klosterman  
Senior Research Analyst

<b>Employment</b>	
<b>104,869</b>	<b>4.3%</b>
high-tech employment 2014	annual high-tech employment growth



# DALLAS

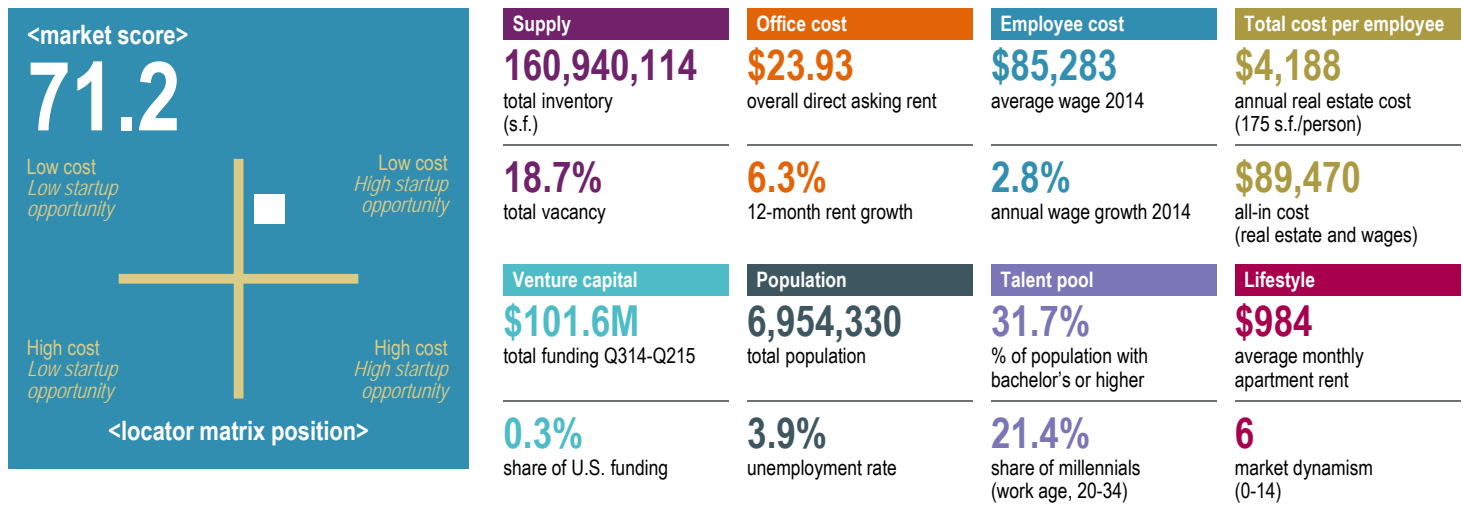
Walter Bialas  
Director of Research



Steve Triolet  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>Royal Ridge V   Las Colinas</b> Tenant: NEC Corporation of America Size: 119,611 s.f. Relocation within market	<b>Tower at Frisco Square   Far North Dallas</b> Tenant: Gearbox Software Size: 90,000 s.f. Relocation within market	<b>LBJ Financial Center   LBJ Freeway</b> Tenant: MyMojo Size: 37,314 s.f. New to market
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## OPPORTUNITY

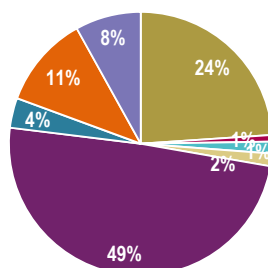
Dallas has a diversified economy with roots in telecom, semiconductors, software, and solutions. Tech continues as a regional economic driver and attracts new companies to the region, as well as other sectors that utilize technology, such as financial and health services. Existing companies, like AT&T, also have developed shared space to incubate future companies. Given the region's job gains, technology will continue to be an important part of north Texas' economy.

## CHALLENGE

DFW's 100,000-plus annual job gains and low unemployment are pressuring the labor market, especially for the tech sector. Talent retention and acquisition are challenging as companies expand and poach talent. Some tech companies have invested heavily to provide unique amenities to promote a strong culture. Gearbox Software, for example, relocated to the new Tower at Frisco Square, which is slated to open a videogame and IT themed bar and restaurant.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



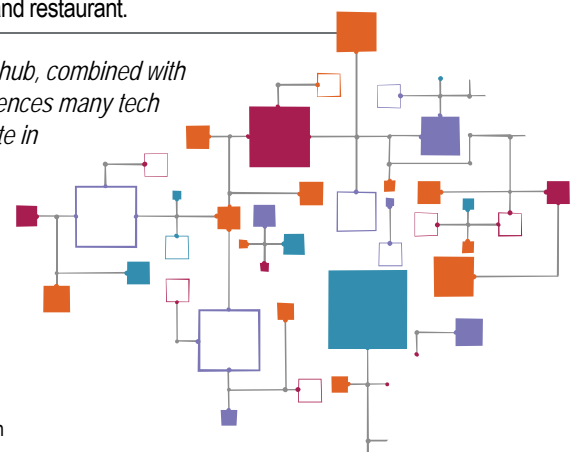
"Dallas' history as a diverse tech hub, combined with its large Fortune 1000 base, influences many tech companies to cluster and co-locate in the region."

## Employment

**147,955**  
high-tech employment 2014

**4.0%**  
annual high-tech employment growth

- Walter Bialas  
Director of Research





# DENVER

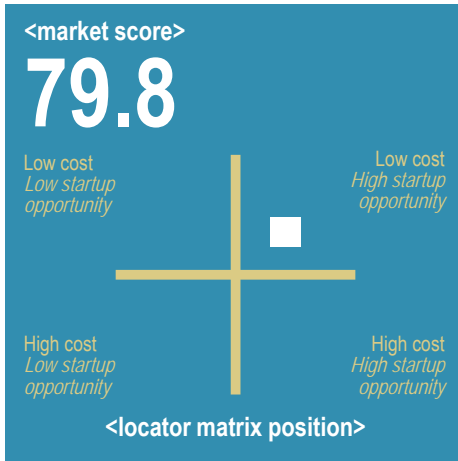
TJ Jaroszewski  
Research Manager



Mandy Seyfried  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>107,083,882</b> total inventory (s.f.)	<b>Office cost</b> <b>\$25.21</b> overall direct asking rent	<b>Employee cost</b> <b>\$96,416</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,412</b> annual real estate cost (175 s.f./person)
<b>13.6%</b> total vacancy	<b>4.4%</b> 12-month rent growth	<b>2.7%</b> annual wage growth 2014	<b>\$100,827</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$348.3M</b> total funding Q314-Q215	<b>Population</b> <b>2,754,258</b> total population	<b>Talent pool</b> <b>39.2%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,278</b> average monthly apartment rent
<b>1.0%</b> share of U.S. funding	<b>3.6%</b> unemployment rate	<b>22.2%</b> share of millennials (work age, 20-34)	<b>7</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Museum Center   Midtown</b> Tenant: Four Winds Interactive Size: 52,000 s.f. Relocation within market	<b>Tuscany Plaza   Southeast Suburban</b> Tenant: Ciber Size: 30,723 s.f. Relocation within market	<b>Denver West #118   West</b> Tenant: Tyler Technologies Size: 25,661 s.f. Relocation within market
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## OPPORTUNITY

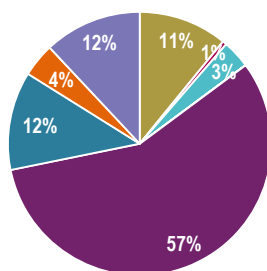
Denver's workforce is highly-educated, with high demand for skilled tech employees as the industry is growing. Historically, Boulder was home to the majority of tech firms, however companies are looking to the CBD, RiNo, Platte Valley and LoHi for more talent, amenities and transportation. In addition, co-location companies such as WeWork, Thrive and Regus are rapidly growing and focused on attracting tech firms with incubator and startup friendly facilities.

## CHALLENGE

One of Denver's biggest challenges has long been retaining and attracting tech talent, specifically computer programmers. Firms are offering more incentives in order to keep the best employees. Record-high rents and lower concessions have created more expenses and the top buildings in the best areas are pricey, forcing young companies to locate in suburban submarkets in order to find value, but the employee base thins out as firms move from the core.

## EMPLOYMENT COMPOSITION

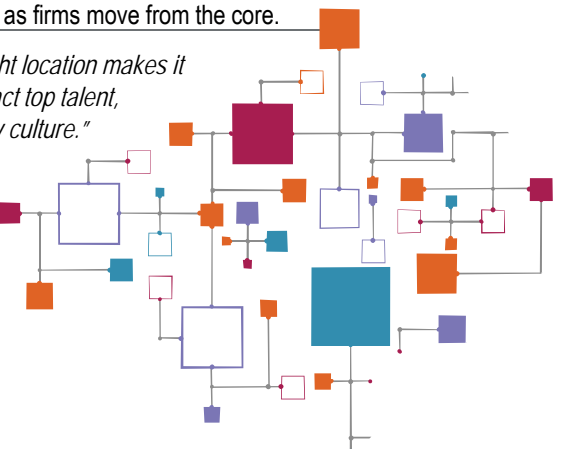
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"In Denver, the right office in the right location makes it much easier to hire, retain and attract top talent, which helps build a strong company culture."

- Mandy Seyfried  
Senior Research Analyst

<b>Employment</b>	
<b>50,998</b>	<b>4.2%</b>
high-tech employment 2014	annual high-tech employment growth



# DETROIT

Aaron Moore  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>61,021,219</b> <small>total inventory (s.f.)</small>	<b>Office cost</b> <b>\$18.23</b> <small>overall direct asking rent</small>	<b>Employee cost</b> <b>\$84,101</b> <small>average wage 2014</small>	<b>Total cost per employee</b> <b>\$3,190</b> <small>annual real estate cost (175 s.f./person)</small>
<b>22.8%</b> <small>total vacancy</small>	<b>3.5%</b> <small>12-month rent growth</small>	<b>3.2%</b> <small>annual wage growth 2014</small>	<b>\$87,291</b> <small>all-in cost (real estate and wages)</small>
<b>Venture capital</b> <b>\$4.6M</b> <small>total funding Q215</small>	<b>Population</b> <b>4,296,611</b> <small>total population</small>	<b>Talent pool</b> <b>28.1%</b> <small>% of population with bachelor's or higher</small>	<b>Lifestyle</b> <b>\$877</b> <small>average monthly apartment rent</small>
<b>0.0%</b> <small>share of U.S. funding</small>	<b>6.2%</b> <small>unemployment rate</small>	<b>18.8%</b> <small>share of millennials (work age, 20-34)</small>	<b>6</b> <small>market dynamism (0-14)</small>

## TOP LEASE TRANSACTIONS

<b>Mars Corporate Center   Southfield</b> <small>Tenant: Griffels</small> <small>Size: 67,934 s.f.</small> <small>Renewal</small>	<b>2600 Telegraph Road   Bloomfield/Bloomfield Hills</b> <small>Tenant: Logicalis</small> <small>Size: 40,500 s.f.</small> <small>Relocation within market</small>	<b>150 W Jefferson Avenue   CBD</b> <small>Tenant: Lochbridge</small> <small>Size: 29,000 s.f.</small> <small>Relocation within market</small>
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## OPPORTUNITY

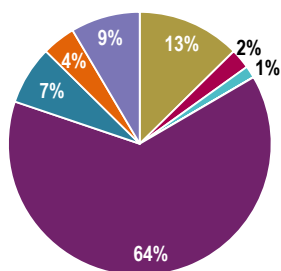
Rocket Fiber, the newly launched startup has built a gigabit internet fiber ring in Downtown Detroit and will offer 100 times faster internet at an affordable price. It's following the Google Fiber model that spurred business and startup activity when it deployed in Kansas City. This infrastructure update could attract more companies, spur innovation, and help Detroit take a giant leap forward after bankruptcy.

## CHALLENGE

The state's workforce is ready and willing to work, but their skills need to better align with the demands of businesses – particularly those in skilled trades. Attracting and retaining talent in Michigan is critical for economic growth, and to ensure it competes fully in a global 21<sup>st</sup> century marketplace.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



*"Rocket Fiber is something that will help with economic development. It will help attract companies and entrepreneurial talent. Talent wants to go where it can move its ideas faster."*

- Aaron Moore  
Research Analyst

<b>Employment</b>	
<b>50,796</b>	<b>4.3%</b>
<small>high-tech employment 2014</small>	<small>annual high-tech employment growth</small>



# HOUSTON

Eli Gilbert  
VP, Director of Research



Graham Hildebrand  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>171,679,171</b> total inventory (s.f.)	<b>Office cost</b> <b>\$29.28</b> overall direct asking rent	<b>Employee cost</b> <b>\$96,239</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,124</b> annual real estate cost (175 s.f./person)
<b>15.8%</b> total vacancy	<b>-5.2%</b> 12-month rent growth	<b>2.5%</b> annual wage growth 2014	<b>\$101,363</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$25.7M</b> total funding Q215	<b>Population</b> <b>5,126,720</b> total population	<b>Talent pool</b> <b>30.1%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$987</b> average monthly apartment rent
<b>0.2%</b> share of U.S. funding	<b>4.6%</b> unemployment rate	<b>22.8%</b> share of millennials (work age, 20-34)	<b>5</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>3 Greenway Plaza   Greenway Plaza</b> Tenant: Quantlab Financial Size: 46,098 s.f. Expansion in market	<b>University Park (9 &amp; 10)   Other</b> Tenant: PMC Sierra Size: 33,370 s.f. Relocation within market	<b>1 Riverway   Galleria/West Loop</b> Tenant: EMC Size: 19,478 s.f. Extension (<36 month term)
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## OPPORTUNITY

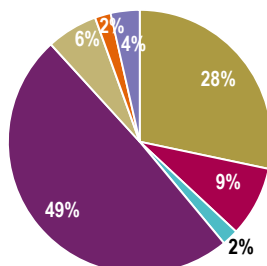
With over 7.3 million square feet of sublease space on the market, Houston tech companies are well-positioned to secure high quality office space at a considerable discount. Coupled with a low cost of doing business, tech companies will benefit greatly from the business friendly environment and favorable market conditions shaping the Houston metro area.

## CHALLENGE

In order to cement its status as an emerging tech market, Houston must continue to grow its network of angel investors in order to provide the seed funding necessary to propel local startups. This will be difficult as many investors continue to face exposure from the reeling energy sector.

## EMPLOYMENT COMPOSITION

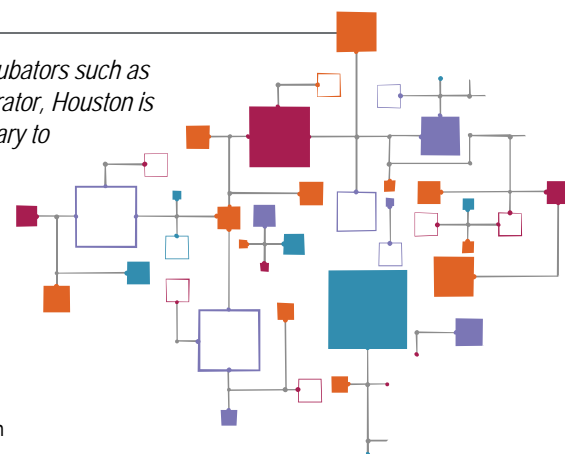
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"Spurred on by the opening of incubators such as the Texas Medical Center Accelerator, Houston is building the infrastructure necessary to become a budding tech hub."

- Eli Gilbert  
VP, Director of Research

<b>Employment</b>
<b>57,565</b>
high-tech employment 2014
<b>-1.3%</b>
annual high-tech employment growth



# INDIANAPOLIS

Mike Cagna  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>31,845,766</b> total inventory (s.f.)	<b>Office cost</b> <b>\$18.91</b> overall direct asking rent	<b>Employee cost</b> <b>\$106,846</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,309</b> annual real estate cost (175 s.f./person)
<b>15.7%</b> total vacancy	<b>6.7%</b> 12-month rent growth	<b>1.4%</b> annual wage growth 2014	<b>\$110,155</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$21.0M</b> total funding Q314-Q215	<b>Population</b> <b>1,971,274</b> total population	<b>Talent pool</b> <b>30.3%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$768</b> average monthly apartment rent
<b>0.1%</b> share of U.S. funding	<b>4.2%</b> unemployment rate	<b>20.7%</b> share of millennials (work age, 20-34)	<b>5</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### Precedent Park | Keystone

Tenant: Defender Direct  
Size: 101,539 s.f.  
Renewal / Expansion

### Market Tower | CBD

Tenant: Emarsys eMarketing Systems  
Size: 15,000 s.f.  
New to market

### Carmel Tech Center | N. Meridian/Carmel

Tenant: Netch  
Size: 14,846 s.f.  
Renewal

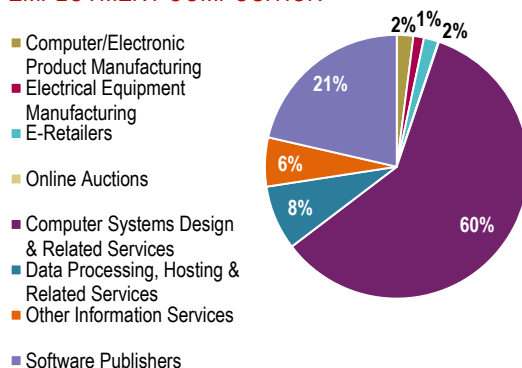
## OPPORTUNITY

Indianapolis is home to several well-regarded institutes of higher learning such as Butler, Indiana University, Purdue and Rose Hulman to name a few. These schools churn out top-level engineering talent on a yearly basis. With a favorable business climate and several incubators and shared-office space companies available for startups, Indianapolis offers everything needed for tech companies to grow and flourish.

## CHALLENGE

Metro Indianapolis is currently lacking in the type of unique office space that tech companies gravitate toward. This is especially true within the urban core. Housing options within the CBD have been restrictive in the past as well, but several options have recently hit the market with more to follow over the next year.

## EMPLOYMENT COMPOSITION



"Due to its available talent, location and hospitality, Indianapolis is gaining recognition as the Silicon Valley of the Midwest."

- Mike Cagna  
Senior Research Analyst

### Employment

**33,581**

high-tech  
employment 2014

**2.7%**

annual high-tech  
employment growth



# LAS VEGAS

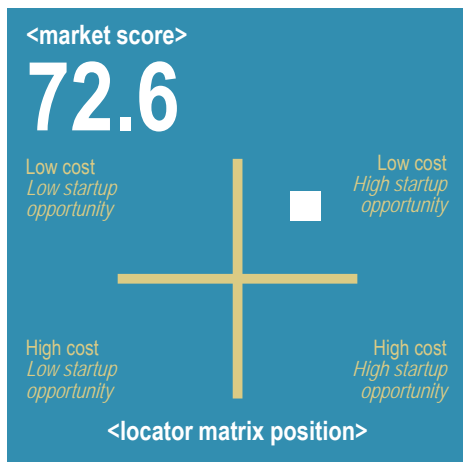
Jared Dienstag  
Senior Research Analyst



Dillon Knight  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>31,159,977</b> <small>total inventory (s.f.)</small>	<b>Office cost</b> <b>\$22.80</b> <small>overall direct asking rent</small>	<b>Employee cost</b> <b>\$79,408</b> <small>average wage 2014</small>	<b>Total cost per employee</b> <b>\$3,990</b> <small>annual real estate cost (175 s.f./person)</small>
<b>20.1%</b> <small>total vacancy</small>	<b>2.0%</b> <small>12-month rent growth</small>	<b>4.1%</b> <small>annual wage growth 2014</small>	<b>\$83,398</b> <small>all-in cost (real estate and wages)</small>
<b>Venture capital</b> <b>\$24.7M</b> <small>total funding Q314-Q215</small>	<b>Population</b> <b>2,069,681</b> <small>total population</small>	<b>Talent pool</b> <b>21.3%</b> <small>% of population with bachelor's or higher</small>	<b>Lifestyle</b> <b>\$825</b> <small>average monthly apartment rent</small>
<b>0.1%</b> <small>share of U.S. funding</small>	<b>7.0%</b> <small>unemployment rate</small>	<b>21.5%</b> <small>share of millennials (work age, 20-34)</small>	<b>3</b> <small>market dynamism (0-14)</small>

## TOP LEASE TRANSACTIONS

<b>1551 Hillshire Drive   Northwest Las Vegas</b> Tenant: Shift4 Size: 70,542 s.f. Relocation within market	<b>2993 Howard Hughes Parkway   Northwest Las Vegas</b> Tenant: Rimini Street Size: 11,000 s.f. Expansion	<b>1140 N Town Center Drive   Northwest Las Vegas</b> Tenant: Kareo Size: 9,181 s.f. New to market
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## OPPORTUNITY

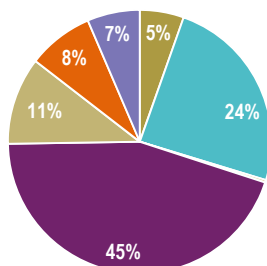
Las Vegas is truly a 24-hour city, fueled by a thriving gaming and hospitality industry. It's walkable Las Vegas Strip supported by nearby affordable housing make it accessible to the masses as well as appealing to young talent seeking both vibrancy and livability. Additionally, its proximate location to the larger hub of Los Angeles make it an ideal location for satellite offices.

## CHALLENGE

Although Zappos anchors the market and growth in the tech sector is hugely supported by Tony Hsieh, Las Vegas remains challenged in attracting additional brand-name tech companies to further grow the sector locally. Additionally, the diminished access to venture capital will continue to make it hard for startups make any considerable expansion in the market.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"A 24-hour city that's amenity-rich and affordable, Las Vegas has all the makings of a millennial town to compete for tech's top talent."

- Jared Dienstag  
Senior Research Analyst

<b>Employment</b>	
<b>9,999</b>	<b>12.7%</b>
<small>high-tech employment 2014</small>	<small>annual high-tech employment growth</small>



# LOS ANGELES

Bryce Mordoff  
VP, Director of Research



Devon Parry  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>188,651,039</b> total inventory (s.f.)	<b>Office cost</b> <b>\$35.27</b> overall direct asking rent	<b>Employee cost</b> <b>\$101,168</b> average wage 2014	<b>Total cost per employee</b> <b>\$6,172</b> annual real estate cost (175 s.f./person)
<b>16.2%</b> total vacancy	<b>4.4%</b> 12-month rent growth	<b>2.6%</b> annual wage growth 2014	<b>\$107,340</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$2.6B</b> total funding Q314-Q215	<b>Population</b> <b>10,116,705</b> total population	<b>Talent pool</b> <b>29.7%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,738</b> average monthly apartment rent
<b>7.4%</b> share of U.S. funding	<b>7.0%</b> unemployment rate	<b>23.3%</b> share of millennials (work age, 20-34)	<b>10</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### The Collective | Westside

Tenant: Yahoo!  
Size: 131,592 s.f.  
Relocation within market

### Colorado Center | Westside

Tenant: Hulu  
Size: 61,673 s.f.  
Relocation within market

### 10900 Wilshire Boulevard | Westside

Tenant: eHarmony  
Size: 50,053 s.f.  
Relocation within market

## OPPORTUNITY

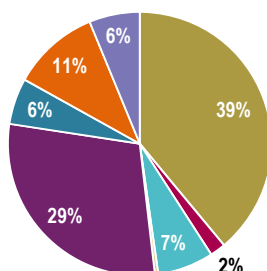
The Los Angeles tech sector is still in its formative years. The market continues to see growth and expansion from heavy hitters from the Bay Area. These large tech powerhouses are tapping into the creative infrastructure already in place due to Los Angeles' position as the entertainment capital of the world. While current growth remains driven by tenants from the north, future growth will be maintained by local talent and ideas, particularly in the social media realm.

## CHALLENGE

Recruitment and retention has become a top priority for large tech companies in the area. The market has yet to see the war for talent happening in Northern California, however the tide is turning and the local workforce is now growing accustomed to high wages and creative office environments. Space requirements and pricing have also become a challenge as almost all tenants are now searching for creative build-outs which command a pricing premium.

## EMPLOYMENT COMPOSITION

- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



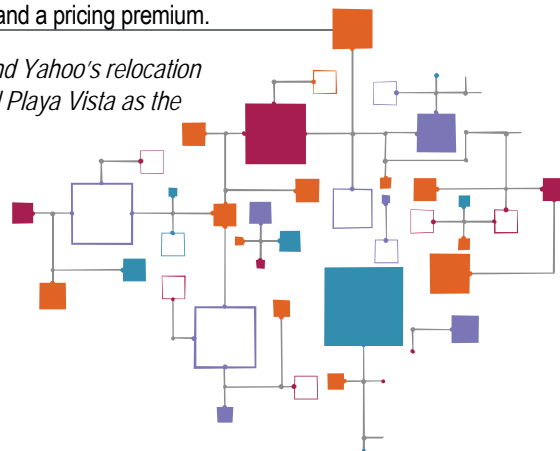
"Google's recent land purchase and Yahoo's relocation from Santa Monica has positioned Playa Vista as the key tech center in Los Angeles."

- Devon Parry  
Senior Research Analyst

### Employment

**98,668**  
high-tech employment 2014

**0.2%**  
annual high-tech employment growth





# MIAMI

Marc L. Miller  
Research Manager



Tim Powers  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>35,576,689</b> total inventory (s.f.)	<b>Office cost</b> <b>\$33.98</b> overall direct asking rent	<b>Employee cost</b> <b>\$70,861</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,947</b> annual real estate cost (175 s.f./person)
<b>13.3%</b> total vacancy	<b>5.3%</b> 12-month rent growth	<b>4.7%</b> annual wage growth 2014	<b>\$76,808</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$34.9M</b> total funding Q115-Q215	<b>Population</b> <b>5,929,819</b> total population	<b>Talent pool</b> <b>28.9%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,470</b> average monthly apartment rent
<b>0.1%</b> share of U.S. funding	<b>5.7%</b> unemployment rate	<b>19.8%</b> share of millennials (work age, 20-34)	<b>6</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>NAP of Americas   Downtown</b> Tenant: Terramark Size: 35,000 s.f. Renewal/expansion	<b>701 Brickell   Brickell</b> Tenant: Expedia.com Size: 23,300 s.f. New	<b>Brickell City Tower   Brickell</b> Tenant: Uber Size: 9,300 s.f. New
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## OPPORTUNITY

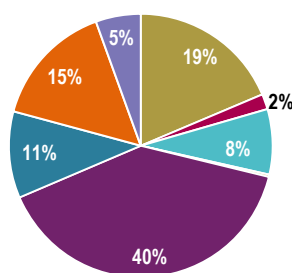
Tech firms have been keeping an eye on South Florida recently, as the technology industry is attempting to create a foothold in the area in an effort to tap into Latin American talent and markets. The tech conference eMerge Americas held its second annual event and drew interest from roughly 10,000 attendees. In addition, Microsoft announced plans to locate its first innovation center in the U.S. in Miami. These should help grow Miami's burgeoning tech scene.

## CHALLENGE

A recurring theme hindering tech growth in South Florida has been the lack of a skilled workforce. One obstacle to attracting talent to Miami is the relative low wages for tech employees compared to other major metropolitan areas across the country. Additionally, the share of Miami's population with at least a bachelor's degree is among the lowest included in this report, making it difficult to acquire home-grown talent; however, both wages and education have been on the rise.

## EMPLOYMENT COMPOSITION

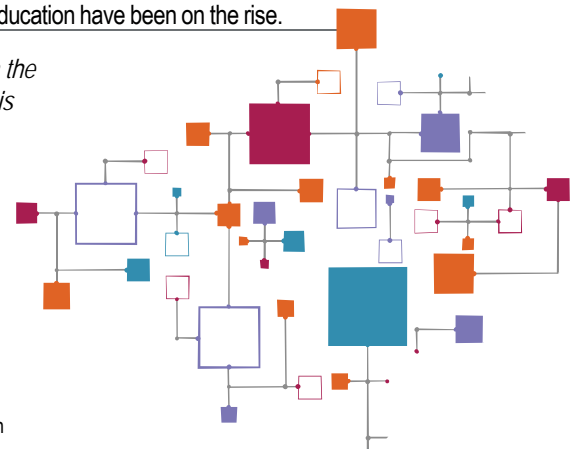
- Computer/Electronic Product Manufacturing
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- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"Miami is on the radar for those in the tech industry, but the scene itself is still in its infancy."

- Tim Powers  
Research Analyst

<b>Employment</b>	
<b>48,080</b>	<b>3.0%</b>
high-tech employment 2014	annual high-tech employment growth

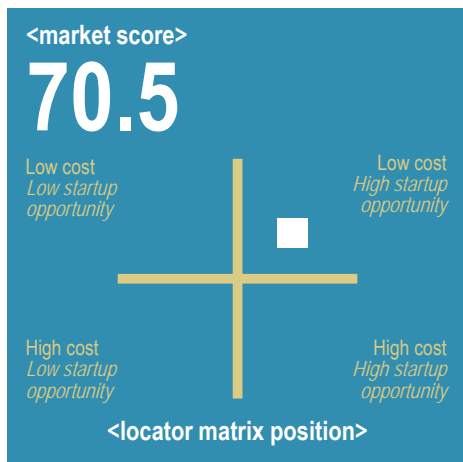


# MINNEAPOLIS

Carolyn Bates  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



Supply	Office cost	Employee cost	Total cost per employee
<b>69,540,401</b> total inventory (s.f.)	<b>\$25.63</b> overall direct asking rent	<b>\$97,749</b> average wage 2014	<b>\$4,485</b> annual real estate cost (175 s.f./person)
<b>15.5%</b> total vacancy	<b>4.9%</b> 12-month rent growth	<b>3.2%</b> annual wage growth 2014	<b>\$102,234</b> all-in cost (real estate and wages)
Venture capital	Population	Talent pool	Lifestyle
<b>\$108.8M</b> total funding Q314-Q215	<b>3,495,176</b> total population	<b>38.4%</b> % of population with bachelor's or higher	<b>\$1,068</b> average monthly apartment rent
<b>0.3%</b> share of U.S. funding	<b>3.3%</b> unemployment rate	<b>21.1%</b> share of millennials (work age, 20-34)	<b>7</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>100 Washington Square   Minneapolis CBD</b> Tenant: Jamf Software Size: 55,808 s.f. Relocation within market	<b>Creekridge Office Center   Southwest</b> Tenant: Siteimprove Size: 42,000 s.f. Relocation within market	<b>111 5<sup>th</sup> Street N   Northeast</b> Tenant: Sport Ngin Size: 30,000 s.f. Relocation within market
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## OPPORTUNITY

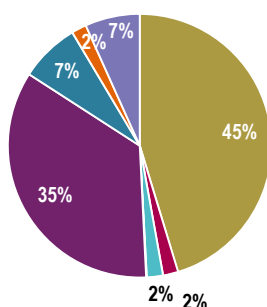
Minneapolis-St. Paul has an established history in computer-based industries and for decades has hosted large employment from firms like IBM, Cray, and Stratasys. Today, the region's Fortune 500 corporations are seeking ways to foster tech entrepreneurship across many non-traditional IT verticals. General Mills is starting a new VC unit for food startups and Target is establishing its own tech-based retail startup accelerator.

## CHALLENGE

Like many Midwest metros, venture capitalists often overlook Minneapolis-St. Paul for high-profile coastal markets. The region is statistically less entrepreneurial due to its unusually high concentration of large employers; startup technology is often acquired by industry biggies instead of spinning off into small enterprises. Until very recently, there were no major incubators to retain a young IT workforce, resulting in a brain drain to those same coastal markets that are attractive to VC.

## EMPLOYMENT COMPOSITION

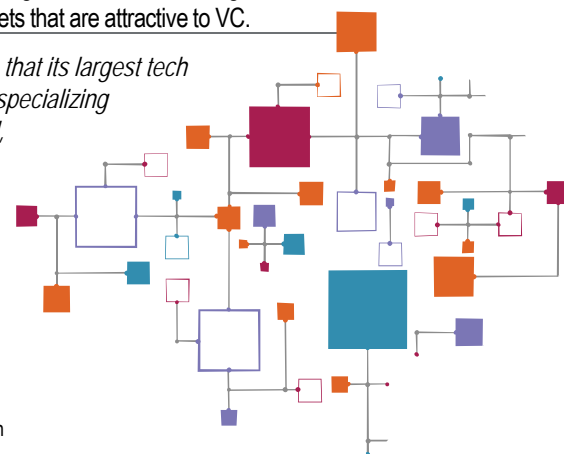
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- E-Retailers
- Online Auctions
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



*"Minneapolis-St. Paul is unique in that its largest tech employers are Fortune 500 firms specializing in health insurance, biotech, retail, and food—signs of truly diverse innovation."*

- Carolyn Bates  
Senior Research Analyst

Employment
<b>77,597</b> high-tech employment 2014
<b>3.6%</b> annual high-tech employment growth

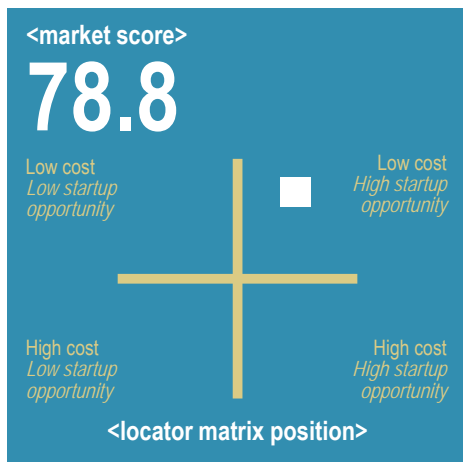


# NASHVILLE

Hensley Loeb  
Brokerage Assistant



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>33,151,566</b> total inventory (s.f.)	<b>Office cost</b> <b>\$21.01</b> overall direct asking rent	<b>Employee cost</b> <b>\$76,715</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,677</b> annual real estate cost (175 s.f./person)
<b>11.4%</b> total vacancy	<b>9.0%</b> 12-month rent growth	<b>1.7%</b> annual wage growth 2014	<b>\$80,392</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$37.4M</b> total funding Q215	<b>Population</b> <b>1,792,649</b> total population	<b>Talent pool</b> <b>30.7%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,007</b> average monthly apartment rent
<b>0.4%</b> share of U.S. funding	<b>4.6%</b> unemployment rate	<b>21.9%</b> share of millennials (work age, 20-34)	<b>5</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>A-01   Airport South</b> Tenant: Dell Size: 185,431 s.f. Relocation within market	<b>2501 McGavock   Airport North</b> Tenant: Automated Health Systems Size: 37,345 s.f. New to market	<b>150 2<sup>nd</sup> Avenue N   Downtown</b> Tenant: Lyft Size: 36,424 s.f. New to market
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## OPPORTUNITY

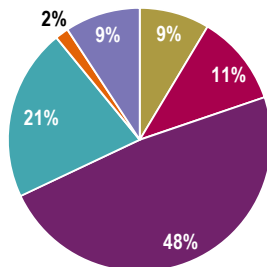
Nashville is uniquely positioned as a regional tech hub for developing talent in the industry thanks to President Barack Obama's selection of Nashville, Chattanooga and Memphis as partner cities for his \$100 million program called TechHire. The Nashville Technology Council will work with the White House to grow technology talent and to fill the roughly 1,300 unfilled technology positions in the city.

## CHALLENGE

Technology's single greatest challenge is the same as that of Nashville's other industries: lack of office space. Nashville's vacancies have reached historical lows, well below the national average. Over 2.0 million square feet of new product will come online by mid-year 2017; however, in the interim, Class A and B space is limited, leaving Class C space as the most viable option to recreate space in the market.

## EMPLOYMENT COMPOSITION

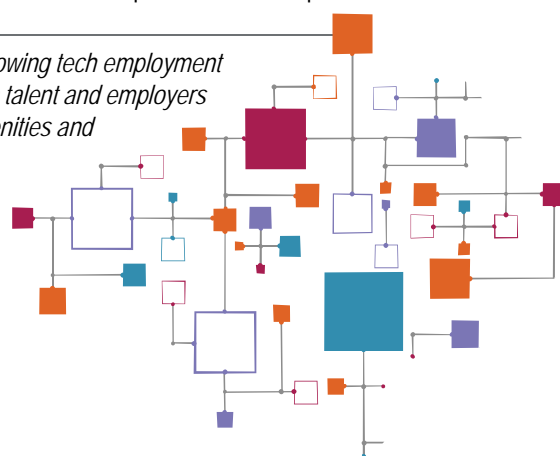
- Computer/Electronic Product Manufacturing
- Electrical Equipment Manufacturing
- Computer Systems Design & Related Services
- Data Processing, Hosting & Related Services
- Other Information Services
- Software Publishers



"Nashville is among the fastest growing tech employment markets in the country, luring both talent and employers to the market for its attractive amenities and high quality of life."

<b>Employment</b>	
<b>15,512</b>	<b>7.1%</b>
high-tech employment 2014	annual high-tech employment growth

- Hensley Loeb  
Brokerage Assistant



# NEW JERSEY

Stephen Jenco  
VP, Director of Research



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>159,327,982</b> total inventory (s.f.)	<b>Office cost</b> <b>\$25.16</b> overall direct asking rent	<b>Employee cost</b> <b>\$106,846</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,403</b> annual real estate cost (175 s.f./person)
<b>24.6%</b> total vacancy	<b>-1.3%</b> 12-month rent growth	<b>1.4%</b> annual wage growth 2014	<b>\$111,249</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$173.9M</b> total funding Q314-Q215	<b>Population</b> <b>8,938,175</b> total population	<b>Talent pool</b> <b>35.8%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,332</b> average monthly apartment rent
<b>0.5%</b> share of U.S. funding	<b>5.5%</b> unemployment rate	<b>19.3%</b> share of millennials (work age, 20-34)	<b>3</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

**295 N Maple Ave | Route 78**  
 Tenant: Verizon Communications  
 Size: 1.4 m.s.f.  
 Sale / leaseback

**194 Wood Ave South | Metropark**  
 Tenant: Medidata Solutions  
 Size: 50,650 s.f.  
 Relocation within market

**Waterfront Corporate Center III | Hudson Waterfront**  
 Tenant: Jet.com  
 Size: 39,990 s.f.  
 New to market

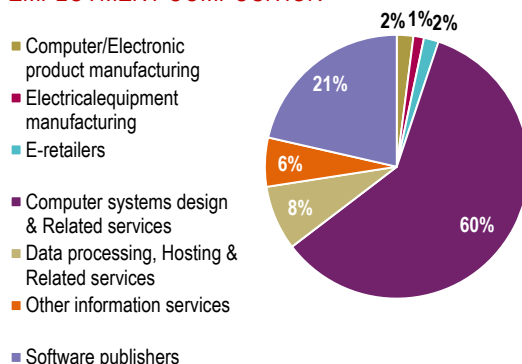
## OPPORTUNITY

New Jersey's employment pool is well stocked with a talent mix that has honed its skills at some of the world's most established companies located in the state. This workforce is continually replenished by a pipeline of graduates from Princeton, Rutgers and Stevens Institute of Technology, to name a few. Proximity to Manhattan, access to Newark Liberty International Airport and locations on Amtrak's Northeast Corridor will help tech companies to reach the global marketplace.

## CHALLENGE

A rapidly aging office inventory will challenge tech companies seeking modern, more efficient buildings to house their operations. Approximately one-half of the office market was developed during the 1980s, with much of this inventory concentrated in suburban areas, rather than the urban environments sought by today's millennials. Companies will also continue to explore lower cost alternatives outside the state in an effort to reduce expenses.

## EMPLOYMENT COMPOSITION



"More than one-quarter of the office leases completed in New Jersey since the beginning of 2015 involved tech companies."

- Stephen Jenco  
VP, Director of Research

**Employment**  
**33,581**  
 high-tech employment 2014

**2.7%**  
 annual high-tech employment growth



# NEW YORK CITY

Tristan Ashby  
VP, Director of Research



Tiffany Ramsay  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>446,774,009</b> total inventory (s.f.)	<b>Office cost</b> <b>\$70.64</b> overall direct asking rent	<b>Employee cost</b> <b>\$135,339</b> average wage 2014	<b>Total cost per employee</b> <b>\$12,362</b> annual real estate cost (175 s.f./person)
<b>9.4%</b> total vacancy	<b>5.0%</b> 12-month rent growth	<b>7.8%</b> annual wage growth 2014	<b>\$147,701</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$5.3B</b> total funding Q314-Q215	<b>Population</b> <b>8,491,079</b> total population	<b>Talent pool</b> <b>33.7%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$2,823</b> average monthly apartment rent
<b>15.3%</b> share of U.S. funding	<b>5.4%</b> unemployment rate	<b>25.1%</b> share of millennials (work age, 20-34)	<b>12</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>85 Tenth Avenue</b> Tenant: Google Size: 180,000 s.f. Expansion in market	<b>919 Third Avenue   Plaza District</b> Tenant: Bloomberg Size: 254,556 s.f. Expansion in market	<b>225 Park Avenue South   Gramercy Park</b> Tenant: Buzzfeed Size: 194,123 s.f. Relocation within market
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## OPPORTUNITY

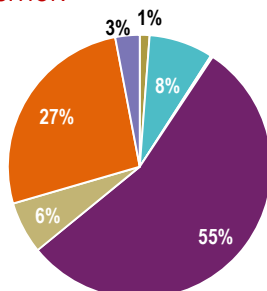
Venture capital funding, currently at its highest level since 2000, continues to pour into the area, largely due to the opportunity for innovation that exists between tech and the city's bedrock industries of finance, fashion, media, and advertising. The state and local government support NYC's tech scene with incentives, while the city's gateway status provides access to talent and clients from around the world.

## CHALLENGE

The city's maturing tech scene has come at a cost to some tenants. Asking rents in Midtown South—the preferred location for tenants seeking to tap into New York's creative talent pool—have persisted at a record high and large blocks remain limited. As a result, some startups have been forced to look elsewhere in Manhattan or the outer boroughs, and others are considering short-term options at coworking space providers like WeWork.

## EMPLOYMENT COMPOSITION

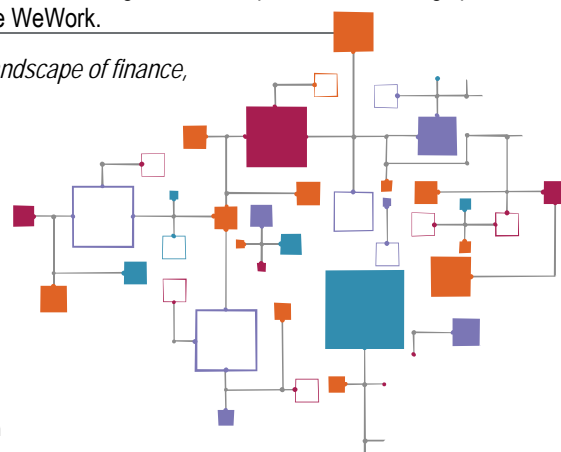
- Computer/Electronic product manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Technology is transforming the landscape of finance, media, and other major traditional industries in NYC."

- Tiffany Ramsay  
Senior Research Analyst

**Employment**  
**101,796** **12.4%**  
 high-tech employment 2014    annual high-tech employment growth

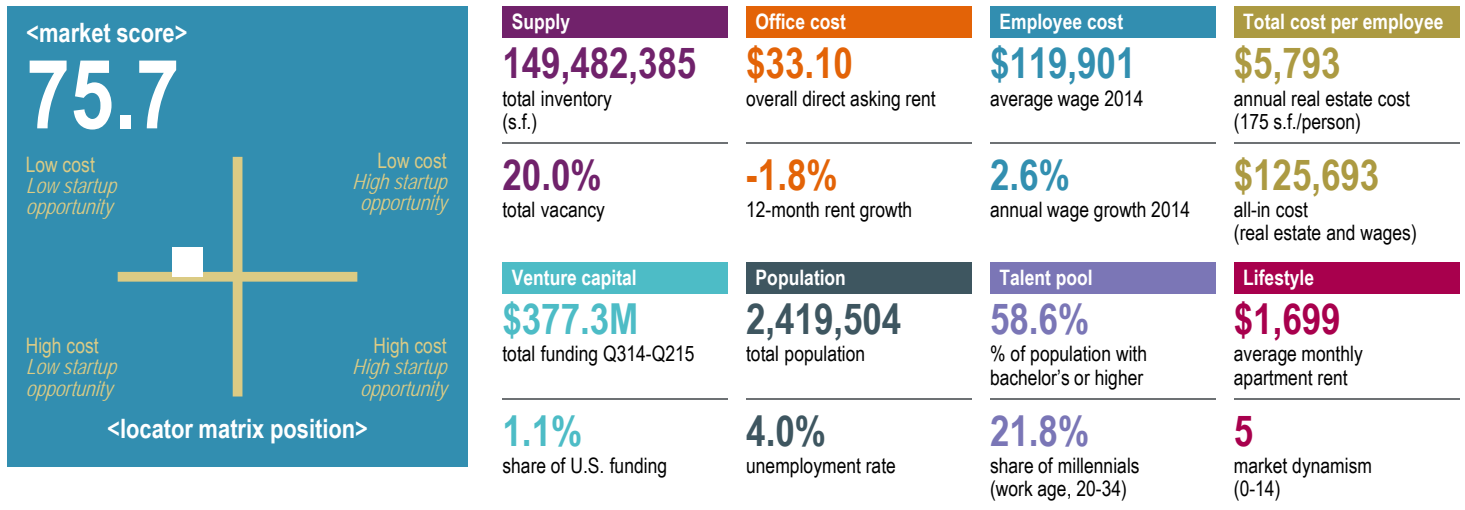


# NORTHERN VIRGINIA

Robert Sapunor  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>RTC West IV   Reston</b> Tenant: Sage Software Size: 41,662 s.f. Relocation within market	<b>2100 Reston Parkway   Reston</b> Tenant: Applied Security Size: 35,000 s.f. Renewal	<b>Lakeview Building A   Route 7 Corridor</b> Tenant: Electronic Transaction Systems Size: 23,700 s.f. Relocation
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## OPPORTUNITY

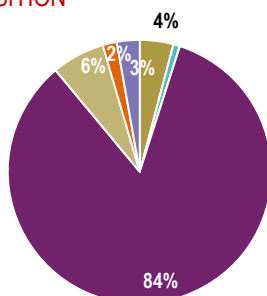
Government agency move-outs and government contractor consolidations have led to record vacancy rates across the region including in the Rosslyn-Ballston Corridor. This has created a prime opportunity for tech companies to move into the most walkable and amenity-rich submarket in Northern Virginia.

## CHALLENGE

While Northern Virginia has one of the most educated workforces in the country, much of the workforce is accustomed to working in more stable environments at government agencies and contractors, and not within a startup environment.

## EMPLOYMENT COMPOSITION

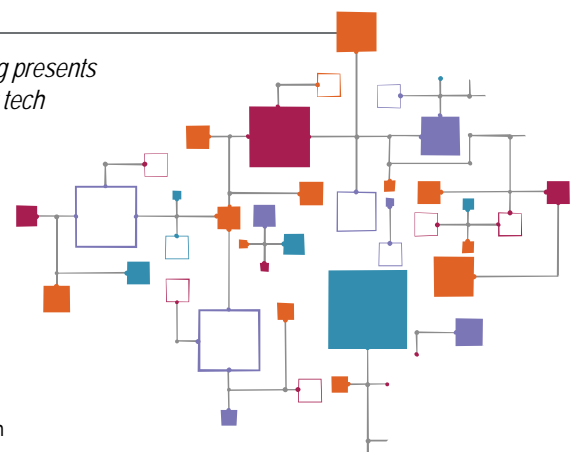
- Computer/Electronic product manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



*"Increased cybersecurity spending presents the biggest growth opportunity for tech companies in Northern Virginia."*

- Robert Sapunor  
Research Analyst

**Employment**  
**120,308**  
 high-tech employment 2014  
**-2.8%**  
 annual high-tech employment growth





Amber Schiada  
VP, Director of Research



Katherine Billingsley  
Research Analyst



# OAKLAND-EAST BAY

## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>55,984,860</b> total inventory (s.f.)	<b>Office cost</b> <b>\$30.83</b> overall direct asking rent	<b>Employee cost</b> <b>\$121,762</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,395</b> annual real estate cost (175 s.f./person)
<b>13.7%</b> total vacancy	<b>9.3%</b> 12-month rent growth	<b>6.0%</b> annual wage growth 2014	<b>\$127,157</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$379.3M</b> total funding Q314-Q215	<b>Population</b> <b>2,722,260</b> total population	<b>Talent pool</b> <b>41.8%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,973</b> average monthly apartment rent
<b>1.1%</b> share of U.S. funding	<b>4.8%</b> unemployment rate	<b>21.1%</b> share of millennials (work age, 20-34)	<b>8</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Pleasanton Corporate Commons   Pleasanton North</b> Tenant: Workday Size: 151,000 s.f. Expansion in market	<b>2600 Camino Ramon   Bishop Ranch</b> Tenant: SAP Size: 150,000 s.f. New to market	<b>2101 Webster Street   Oakland CBD</b> Tenant: Pandora Media Size: 98,872 s.f. Extension (<36 month term)
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## OPPORTUNITY

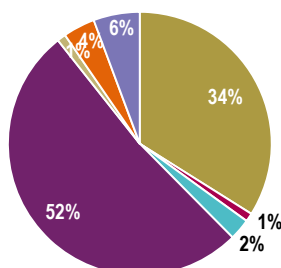
Uber's recent purchase of Uptown Station in Oakland will create more traction in tech-related activity. An increasing number of organizations are popping up across the East Bay, fixating on cultivating talent by offering training services and classes in the tech field. This generates a strong labor pool for companies to penetrate, especially those that are focused on growth. VC funding is increasing, giving companies the ability to expand, translating into a heightened demand for office space.

## CHALLENGE

Landlord flexibility remains one the biggest challenges facing startups in Oakland-East Bay. Landlords are pushing asking rates and have a strong desire for credit worthy tenants. Vacancy rates are at historic lows especially in Oakland's CBD, and prices in surrounding markets such as Emeryville are increasing and will continue to climb as long as startup activity remains strong.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"There are a handful of corporate occupiers anchoring the market and expanding, validating Oakland and the East Bay as locations for tech startups."

- Katherine Billingsley  
Research Analyst

**Employment**  
**50,303**  
high-tech employment 2014  
**4.2%**  
annual high-tech employment growth



# ORANGE COUNTY

Jared Dienstag  
Senior Research Analyst



Dillon Knight  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>95,325,722</b> total inventory (s.f.)	<b>Office cost</b> <b>\$28.59</b> overall direct asking rent	<b>Employee cost</b> <b>\$94,521</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,003</b> annual real estate cost (175 s.f./person)
<b>11.7%</b> total vacancy	<b>12.3%</b> 12-month rent growth	<b>-1.0%</b> annual wage growth 2014	<b>\$99,524</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$500.97M</b> total funding Q314-Q215	<b>Population</b> <b>3,145,515</b> total population	<b>Talent pool</b> <b>36.8%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,807</b> average monthly apartment rent
<b>1.6%</b> share of U.S. funding	<b>4.5%</b> unemployment rate	<b>21.4%</b> share of millennials (work age, 20-34)	<b>3</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>5 Polaris Way   Aliso Viejo</b> Tenant: UST Global Size: 78,703 s.f. Relocation/expansion within market	<b>6501 Irvine Center Drive   Irvine</b> Tenant: Mavenlink Size: 20,452 s.f. Renewal/expansion	<b>30 Enterprise   Aliso Viejo</b> Tenant: Marvell Semiconductors Size: 37,006 s.f. Renewal
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## OPPORTUNITY

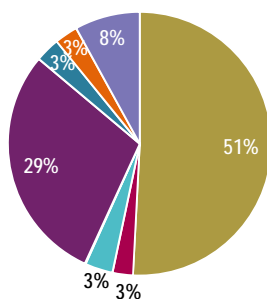
Orange County's economy is growing at a faster pace than the nation and a driving factor is the expanding local tech sector. With a highly educated and talented workforce, tech firms have a large labor pool to build their staff. Orange County has a lower all-in cost per employee compared to other west coast markets, providing a strong attraction to the market.

## CHALLENGE

Declining vacancy brought on by strong occupancy gains is placing upward pressure on rental rates. Rising real estate costs, particularly for startup companies can limit the number of space options to lease with some tenants getting priced out of the tech-centric areas. There will be limited options in 2016, however, the market will open up in 2017 when new supply is delivered.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Orange County is next in the line of office markets that are capitalizing on tenant demand among properties that cater to technology firms."

- Jared Dienstag  
Senior Research Analyst

<b>Employment</b>	
<b>64,991</b>	<b>2.9%</b>
high-tech employment 2014	annual high-tech employment growth



# ORLANDO

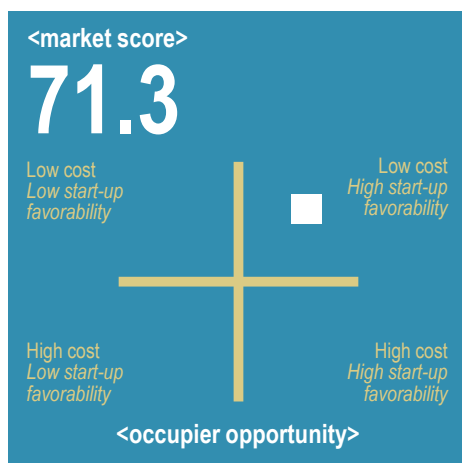
Marc Miller  
Research Manager



Valerie Mnayarij  
Research Analyst



## MARKET RANK AND SCORECARD



<b>Supply</b> <b>28,477,480</b> total inventory (s.f.)	<b>Office cost</b> <b>\$20.52</b> overall direct asking rent	<b>Employee cost</b> <b>\$74,695</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,591</b> annual real estate cost (175 s.f./person)
<b>15.3%</b> total vacancy	<b>2.6%</b> 12-month rent growth	<b>-0.6%</b> annual wage growth 2014	<b>\$78,286</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$180M</b> total funding YTD 2015	<b>Population</b> <b>2,321,418</b> total population	<b>Talent pool</b> <b>28.1%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,035</b> average monthly apartment rent
<b>0.5%</b> share of U.S. funding	<b>5.1%</b> unemployment rate	<b>22.4%</b> share of millennials (work age, 20-34)	<b>9</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

**615 Crescent Executive Court | Lake Mary**  
 Tenant: Paylocity  
 Size: 61,000 s.f.  
 Expansion

**4700 Millenia Boulevard | Southwest**  
 Tenant: AssistRX  
 Size: 22,000 s.f.  
 Renewal

**8529 South Park Circle | Tourist Corridor**  
 Tenant: Booking.com  
 Size: 18,000 s.f.  
 Expansion in building

## OPPORTUNITY

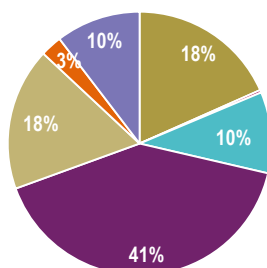
Metro Orlando's population growth supports new and diverse industries, with technology leading the diversification initiative. Combined with a highly skilled labor pool of technology and engineering trained employees and Orlando's low-cost for business operation, the technology industry is projected to grow. New developments such as the Creative Village will provide additional opportunities for technology firms to locate.

## CHALLENGE

A notable challenge for local technology firms is the lack of quality space in desired submarkets such as the Research Park area near UCF and the Downtown CBD. Despite the emergence of planned projects in these core submarkets, built-out space remains to be difficult especially as landlords are tightening concessions.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Orlando's technology community continues to mature as we have seen over \$800.0 million in exits and \$180.0 million in financings for local tech companies this year. More co-working spaces, incubators, and development projects are emerging as technology has solidified its position as the 2<sup>nd</sup> largest industry in Orlando with a \$14.2 billion annual economic impact."

- Valerie Mnayarij, Research Analyst

### Employment

**23,576** **11.8%**  
 high-tech employment 2014      annual high-tech employment growth



# PHILADELPHIA

Lauren Gilchrist  
VP, Director of Research



Clint Randall  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>130,078,648</b> total inventory (s.f.)	<b>Office cost</b> <b>\$23.75</b> overall direct asking rent	<b>Employee cost</b> <b>\$104,294</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,156</b> annual real estate cost (175 s.f./person)
<b>13.2%</b> total vacancy	<b>-0.7%</b> 12-month rent growth	<b>3.9%</b> annual wage growth 2014	<b>\$108,450</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$203.3M</b> total funding Q314-Q215	<b>Population</b> <b>6,051,170</b> total population	<b>Talent pool</b> <b>33.6%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,238</b> average monthly apartment rent
<b>0.6%</b> share of U.S. funding	<b>5.7%</b> unemployment rate	<b>20.8%</b> share of millennials (work age, 20-34)	<b>11</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### 101 Woodcrest Road | Cherry Hill

Tenant: Xerox Business Solution  
Size: 150,859 s.f.  
Extension (<36 month term)

### County Line Commerce Center | Horsham

Tenant: ABB  
Size: 115,000 s.f.  
Renewal

### Three Parkway | Market Street West

Tenant: IBM  
Size: 27,395 s.f.  
Renewal

## OPPORTUNITY

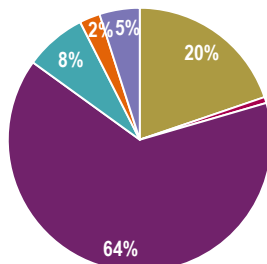
The City of Philadelphia has attracted more than 100,000 millennials since 2006, and a burgeoning Center City tech presence has followed. The region's diversified economy is anchored by eds and meds, led by Drexel University and the University of Pennsylvania. These institutions are investing resources in innovation neighborhoods, incubation spaces, and supportive infrastructure to attract VC and retain talent.

## CHALLENGE

Venture investment in the region remains low despite shifting demographics and local government support. New sources of seed capital and additional angel investor activity will be needed to nurture and grow the existing pool of tech tenants. As a first-generation tech market, Philadelphia has seen relatively few companies exit the startup life-cycle, freeing up talent and funding for second round ventures.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"The expanding network of tech incubator programs, co-working spaces, and government incentives are creating a more attractive landscape for tech companies in Philly."

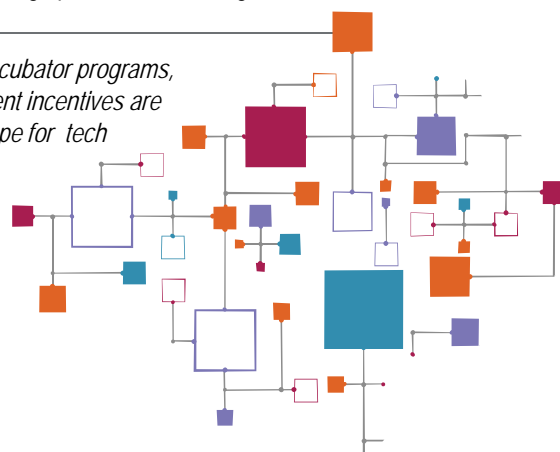
- Clint Randall  
Research Analyst

### Employment

**35,122** **-0.9%**

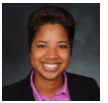
high-tech employment 2014

annual high-tech employment growth



# PHOENIX

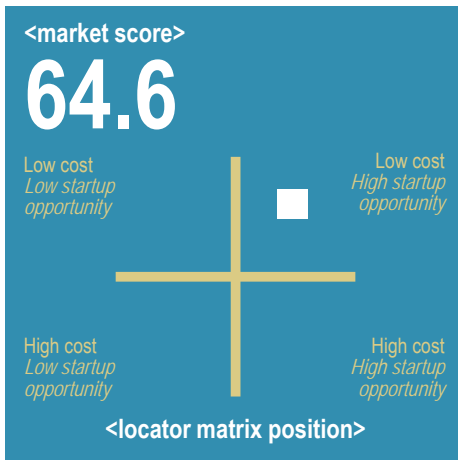
Kiana Cox  
Senior Research Analyst



Keeley Byer  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>80,684,112</b> total inventory (s.f.)	<b>Office cost</b> <b>\$22.49</b> overall direct asking rent	<b>Employee cost</b> <b>\$91,380</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,936</b> annual real estate cost (175 s.f./person)
<b>21.8%</b> total vacancy	<b>4.7%</b> 12-month rent growth	<b>-0.1%</b> annual wage growth 2014	<b>\$95,315</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$26.0M</b> total funding Q314-Q215	<b>Population</b> <b>4,489,109</b> total population	<b>Talent pool</b> <b>28.7%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$841</b> average monthly apartment rent
<b>0.1%</b> share of U.S. funding	<b>5.8%</b> unemployment rate	<b>21.0%</b> share of millennials (work age, 20-34)	<b>8</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Hayden Ferry Lakeside III   Tempe</b> Tenant: Zenefits Size: 135,000 s.f. Expansion in market	<b>Scottsdale Quarter   Scottsdale Airpark</b> Tenant: JDA Software Size: 55,530 s.f. New to market	<b>Collier Center I   Downtown</b> Tenant: Uber Size: 41,570 s.f. New to market
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## OPPORTUNITY

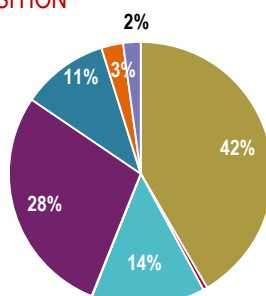
Phoenix features one of the most active development pipelines in the country, with over 3.9 million square feet of office space currently under construction. As developers continue to move toward more open, collaborative floor plates, tech tenants will find competitively priced build-to-suit opportunities and incentives for signing on as an anchor tenant for new speculative development.

## CHALLENGE

The corridor along the Loop 101 Highway has become the heart of the Silicon Desert, where tech tenants are able to attract young, educated and affordable labor from the Southeast Valley and Scottsdale. However, tenants are now having to compete for space within these in-demand submarkets as vacancy tightens, with very few existing options left for large tenants.

## EMPLOYMENT COMPOSITION

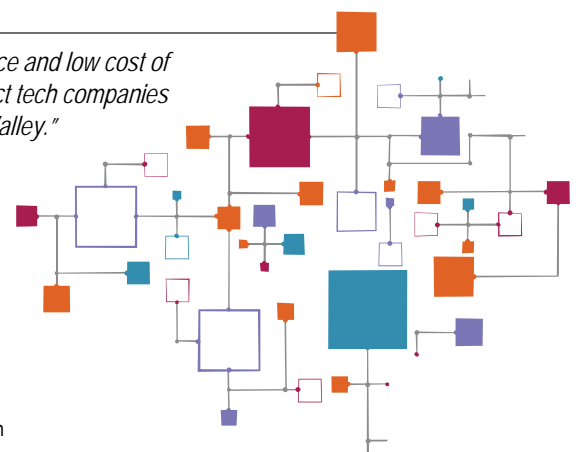
- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



*"Phoenix's well-educated workforce and low cost of doing business continues to attract tech companies expanding and relocating to the Valley."*

- Kiana Cox  
Senior Research Analyst

<b>Employment</b>
<b>74,174</b>
high-tech employment 2014
<b>8.9%</b>
annual high-tech employment growth



# PITTSBURGH

Andrew Batson  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>49,253,558</b> total inventory (s.f.)	<b>Office cost</b> <b>\$22.26</b> overall direct asking rent	<b>Employee cost</b> <b>\$78,772</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,896</b> annual real estate cost (175 s.f./person)
<b>14.2%</b> total vacancy	<b>3.3%</b> 12-month rent growth	<b>2.2%</b> annual wage growth 2014	<b>\$82,668</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$159.0M</b> total funding Q314-Q215	<b>Population</b> <b>2,355,968</b> total population	<b>Talent pool</b> <b>29.9%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$996</b> average monthly apartment rent
<b>0.3%</b> share of U.S. funding	<b>5.5%</b> unemployment rate	<b>19.2%</b> share of millennials (work age, 20-34)	<b>7</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Bakery Square   Oakland / East End</b> Tenant: Google Size: 281,000 s.f. Renewal and expansion	<b>Cranberry Woods   Cranberry</b> Tenant: NetApp Inc. Size: 86,000 s.f. Renewal and expansion	<b>100 32nd Street   Strip District</b> Tenant: Uber Size: 53,000 s.f. New to market
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## OPPORTUNITY

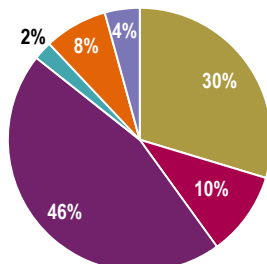
A number of corporate consolidations set to transpire over the next three years in addition to a robust development pipeline will create additional space options for tenants and shift negotiating leverage. Pittsburgh tech tenants will continue to cluster in the city's urban core as well as the Oakland/East End submarket due to its proximity to the University of Pittsburgh and Carnegie Mellon University.

## CHALLENGE

Office landlords in Pittsburgh have enjoyed sustained rent growth in recent years. Rent gains traversed product class and geography as landlords held leverage and market fundamentals tightened. Rent gains in Pittsburgh have surpassed those recorded in peer Midwest markets competing for tech tenants. Over the coming year, look for further rent appreciation, especially in key tech submarkets.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Low costs and a highly educated workforce have made Pittsburgh an attractive option for tech companies looking to expand operations outside of primary tech markets. Google, Uber and NetApp have all recently established or expanded their operations within the metro."

- Andrew Batson  
Research Manager

<b>Employment</b>	
<b>25,580</b>	<b>3.2%</b>
high-tech employment 2014	annual high-tech employment growth



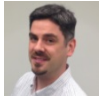


# PORTLAND

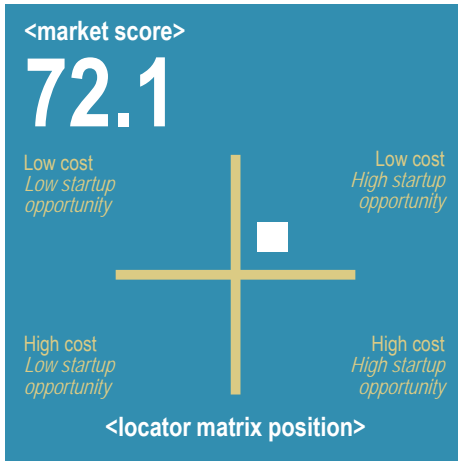
Patricia Raicht  
SVP, Director of Research



Geoff Falkenberg  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>58,492,643</b> total inventory (s.f.)	<b>Office cost</b> <b>\$24.08</b> overall direct asking rent	<b>Employee cost</b> <b>\$112,185</b> average wage 2014	<b>Total cost per employee</b> <b>\$4,214</b> annual real estate cost (175 s.f./person)
<b>9.1%</b> total vacancy	<b>9.8%</b> 12-month rent growth	<b>7.8%</b> annual wage growth 2014	<b>\$116,399</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$147.8M</b> total funding Q314-Q215	<b>Population</b> <b>2,348,247</b> total population	<b>Talent pool</b> <b>34.5%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,146</b> average monthly apartment rent
<b>0.4%</b> share of U.S. funding	<b>5.5%</b> unemployment rate	<b>21.2%</b> share of millennials (work age, 20-34)	<b>11</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Pearl West   CBD</b> Tenant: Wacom Size: 53,010 s.f. Relocation within the market	<b>Historic US National Bank Block   CBD</b> Tenant: Google Size: 30,000 s.f. Expansion within the market	<b>Pine Street Market   CBD</b> Tenant: Guidespark Size: 19,700 s.f. New to market
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## OPPORTUNITY

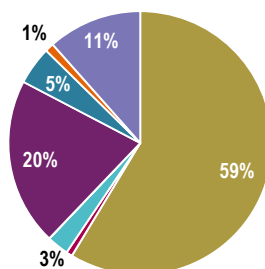
Demand from Portland's office market has been driving vacancies to historic lows, and the response from developers will deliver over 1.5 million square feet of office space to the market in the next six to 18 months. As new space comes online, tech tenants willing to plan early will have an opportunity to secure large blocks of space in the newest, most amenity-rich buildings.

## CHALLENGE

Area tech companies will have to look 18 to 36 months out for larger spaces and are facing an environment of rapidly rising rents and dwindling concessions. Though tech tenants expanding into Portland from other markets find the Portland market a relative bargain, home-grown companies used to relatively low asking rates are experiencing sticker shock when renewing or relocating within the market.

## EMPLOYMENT COMPOSITION

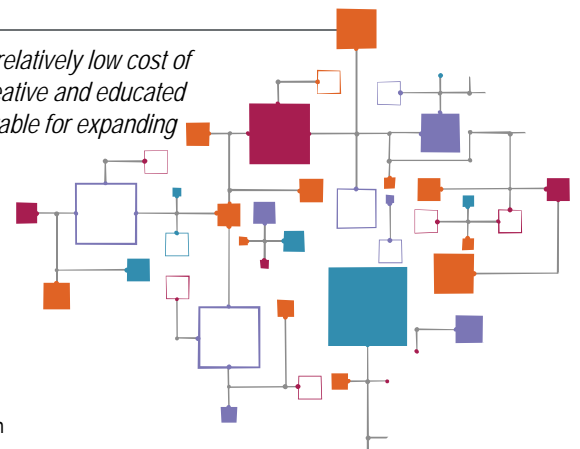
- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Portland's high amenity lifestyle, relatively low cost of business, and concentration of creative and educated workers make the city highly desirable for expanding tech companies."

- Geoff Falkenberg  
Research Analyst

<b>Employment</b>	
<b>60,017</b>	<b>2.6%</b>
high-tech employment 2014	annual high-tech employment growth





# RALEIGH-DURHAM

Mehtab Randhawa  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>44,382,427</b> total inventory (s.f.)	<b>Office cost</b> <b>\$20.62</b> overall direct asking rent	<b>Employee cost</b> <b>\$106,028</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,609</b> annual real estate cost (175 s.f./person)
<b>12.8%</b> total vacancy	<b>1.9%</b> 12-month rent growth	<b>-2.2%</b> annual wage growth 2014	<b>\$109,637</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$140.9M</b> total funding Q314-Q215	<b>Population</b> <b>1,785,684</b> total population	<b>Talent pool</b> <b>45.2%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$984</b> average monthly apartment rent
<b>0.4%</b> share of U.S. funding	<b>5.2%</b> unemployment rate	<b>21.4%</b> share of millennials (work age, 20-34)	<b>5</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

**200 Lucent Lane | Cary**  
 Tenant: HCL Technologies  
 Size: 124,800 s.f.  
 Expansion in market

**Berrington Center | RTP/RDU**  
 Tenant: Genband  
 Size: 71,253 s.f.  
 Relocation within market

**2635 Meridian Parkway | South Durham**  
 Tenant: VCE Company  
 Size: 51,790 s.f.  
 Expansion in building

## OPPORTUNITY

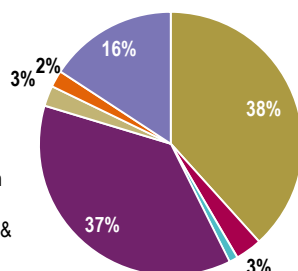
With rental, land and purchase values below first tier office markets like San Francisco, New York and Chicago, this rapidly gentrifying market makes the short list for companies looking to establish new operations. Becoming a popular back-office market for tech, over the next year, office absorption will be led by the technology units of financial firms like Fidelity and Credit Suisse that are expanding and creating new tech jobs.

## CHALLENGE

Although the market has an impressive lineup of big tech corporations, the region's venture capital support does not compare to Silicon Valley. This could eventually lead to a natural talent drain as entrepreneurs move to the Bay Area for new opportunities. From a real estate perspective, local tech companies compete with life sciences and back-office operations firms for office space.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



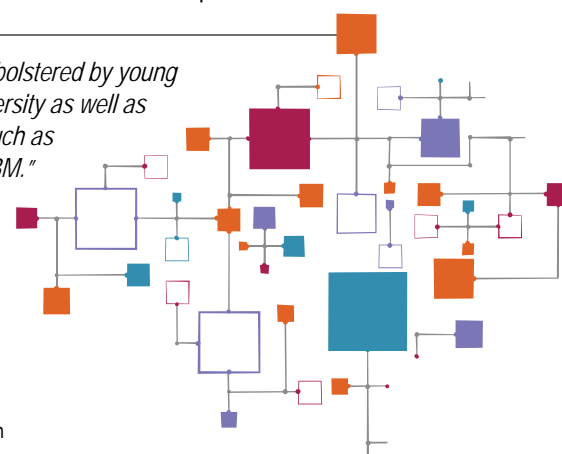
*"Raleigh's tech scene is growing, bolstered by young talent coming from NC State University as well as organic growth from companies such as Red Hat, Cisco, Qualcomm and IBM."*

- Mehtab Randhawa  
Research Manager

### Employment

**53,665**  
high-tech employment 2014

**3.7%**  
annual high-tech employment growth



# RICHMOND

Geoff Thomas  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>25,001,056</b> total inventory (s.f.)	<b>Office cost</b> <b>\$18.82</b> overall direct asking rent	<b>Employee cost</b> <b>\$83,528</b> average wage 2014	<b>Total cost per employee</b> <b>\$3,294</b> annual real estate cost (175 s.f./person)
<b>14.5%</b> total vacancy	<b>4.5%</b> 12-month rent growth	<b>3.0%</b> annual wage growth 2014	<b>\$86,821</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$0.0</b> total funding Q314-Q215	<b>Population</b> <b>1,260,029</b> total population	<b>Talent pool</b> <b>32.7%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$952</b> average monthly apartment rent
<b>0.0%</b> share of U.S. funding	<b>4.7%</b> unemployment rate	<b>20.9%</b> share of millennials (work age, 20-34)	<b>3</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

### Westmark Two | Innsbrook

Tenant: Retail Data  
Size: 42,539 s.f.  
Relocation within market

### Westerre II | Innsbrook

Tenant: Veracity Consulting  
Size: 5,612 s.f.  
Relocation within market

### Turing Basin | CBD

Tenant: Dynamic Web Solutions  
Size: 5,529 s.f.  
Relocation within market

## OPPORTUNITY

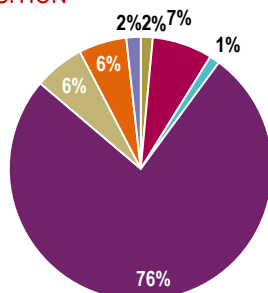
Richmond's low-cost real estate in a historic urban setting caters to start ups that thrive in creative environments and provide alternatives to high-cost markets such as Washington, DC and the North Carolina Research Triangle. Several private and public universities in the immediate area offer a stable labor pool for future talent.

## CHALLENGE

Proximity to well-established tech markets lures top talent and major tech firms away from Richmond. Developers are shifting from apartment conversions to historic office redevelopments, but the existing stock of creative office buildings is low with few availabilities for larger firms. Funding from venture capital is sporadic compared to steady streams found in other Virginia metros.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Low-cost alternative to other major tech markets, but challenged by proximity to North Carolina's Research Triangle and Washington DC which capture most VC funding and attract top talent."

- Geoff Thomas  
Senior Research Analyst

### Employment

**8,153**  
high-tech employment 2014

**-3.3%**  
annual high-tech employment growth



# SALT LAKE CITY

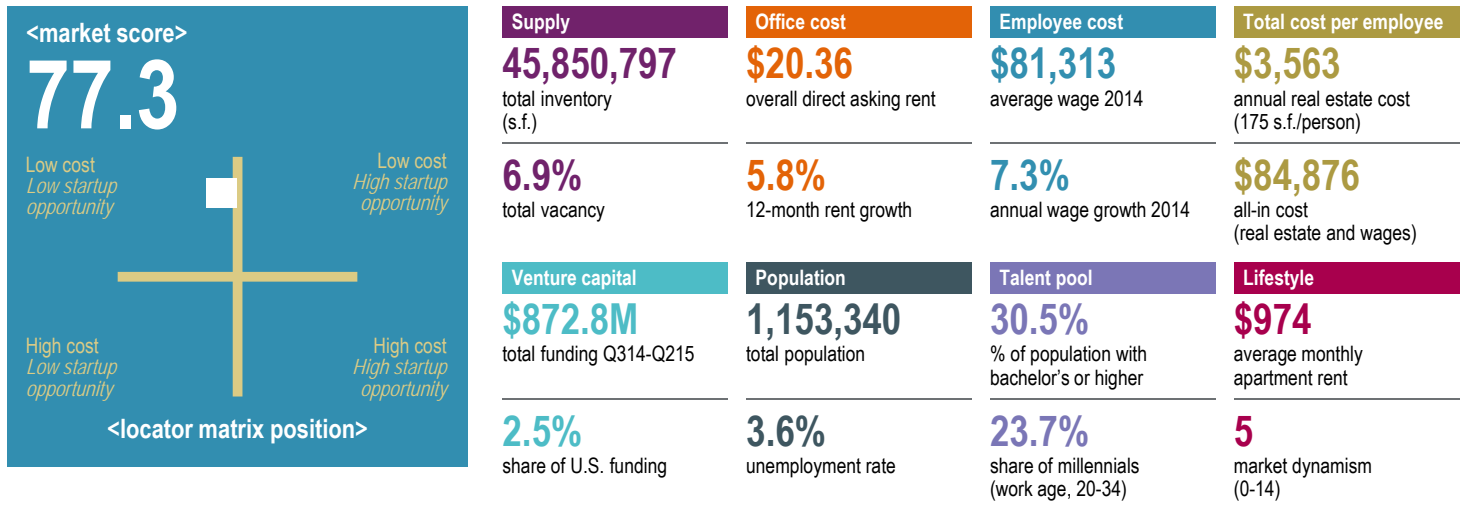
TJ Jaroszewski  
Research Manager



Christian Forbes  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>Thanksgiving Station 4   Utah County</b> Tenant: Prosper Healthcare Lending Size: 61,594 s.f. Expansion in market	<b>RiverPark XII   Southwest Valley</b> Tenant: Hirevue Size: 50,787 s.f. Renewal/expansion in building	<b>Vista Station   Draper</b> Tenant: Thumbtack Size: 50,000 s.f. New to market
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## OPPORTUNITY

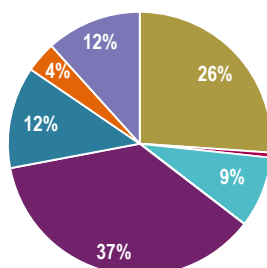
Its talent pool deep, young and highly educated, SLC'S favorable demographics keep it poised to remain one of the nation's top targets for tech-oriented companies. The metro finds itself in its third generation as home to some of tech's most proven and innovative players, which, in turn, further solidifies it as a go-to destination for venture capital. Comparatively, office real estate and labor costs remain on the low side.

## CHALLENGE

The rate at which available office space is being absorbed is slashing vacancy rates. In turn, new-to-market users, as well as rapidly expanding companies, are finding available options shrinking more quickly than new development can keep up. Largely seeking creative space, the tech industry—particularly so for the emerging businesses and start-ups—finds itself facing a shortage of this kind of build-out.

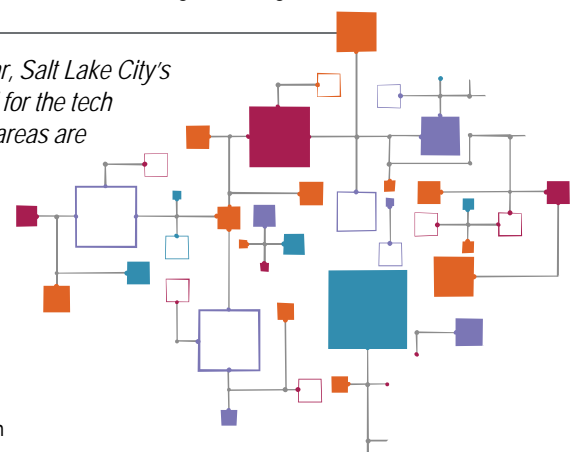
## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



*"Having long flown under the radar, Salt Lake City's success has fast made it a model for the tech future that countless other metro areas are quickly trying to replicate."*

- TJ Jaroszewski  
Research Manager

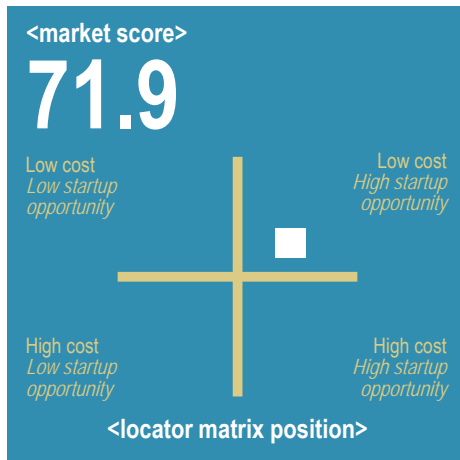


# SAN DIEGO

Joshua Brant  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>78,565,256</b> total inventory (s.f.)	<b>Office cost</b> <b>\$29.52</b> overall direct asking rent	<b>Employee cost</b> <b>\$107,023</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,166</b> annual real estate cost (175 s.f./person)
<b>14.5%</b> total vacancy	<b>7.4%</b> 12-month rent growth	<b>0.9%</b> annual wage growth 2014	<b>\$112,189</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$279.2M</b> total funding Q314-Q215	<b>Population</b> <b>3,263,431</b> total population	<b>Talent pool</b> <b>34.6%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,575</b> average monthly apartment rent
<b>0.8%</b> share of U.S. funding	<b>5.1%</b> unemployment rate	<b>24.5%</b> share of millennials (work age, 20-34)	<b>3</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>Carmel Corporate Plaza   Rancho Bernardo</b> Tenant: Daybreak Solutions Size: 69,967 s.f. Relocation within market	<b>MAKE   Carlsbad</b> Tenant: GoPro Size: 45,282 s.f. Relocation within market	<b>Scripps Northridge Corp   Scripps Ranch</b> Tenant: Intel Size: 45,000 s.f. Expansion in building
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## OPPORTUNITY

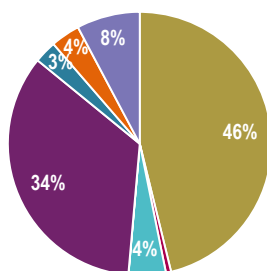
San Diego is home to a number of high-tech companies, such as the North American headquarters of Sony Electronics and Qualcomm. The latter accounts for one of the two Fortune 500 companies based in San Diego County. Current opportunities include the forthcoming Qualcomm layoffs, which will inject skilled workers into the marketplace along with office space availability in the region's primary tech submarket.

## CHALLENGE

The San Diego market faces the same challenges as many of the other markets in the west, such as high rental rates for office space and high cost of living for employees. Challenges specific to the San Diego market include the market's distance from a major port and the lack of international flights at the San Diego airport.

## EMPLOYMENT COMPOSITION

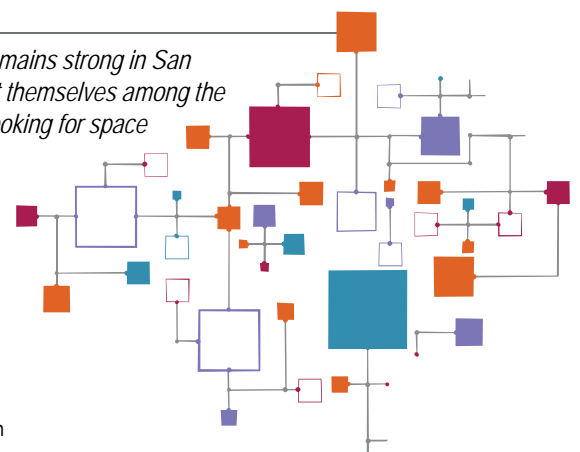
- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Demand from tech companies remains strong in San Diego. Lumedyne and Fitbit count themselves among the many tech companies currently looking for space in the market."

- Joshua Brant  
Senior Research Analyst

<b>Employment</b>	
<b>52,951</b>	<b>2.7%</b>
high-tech employment 2014	annual high-tech employment growth

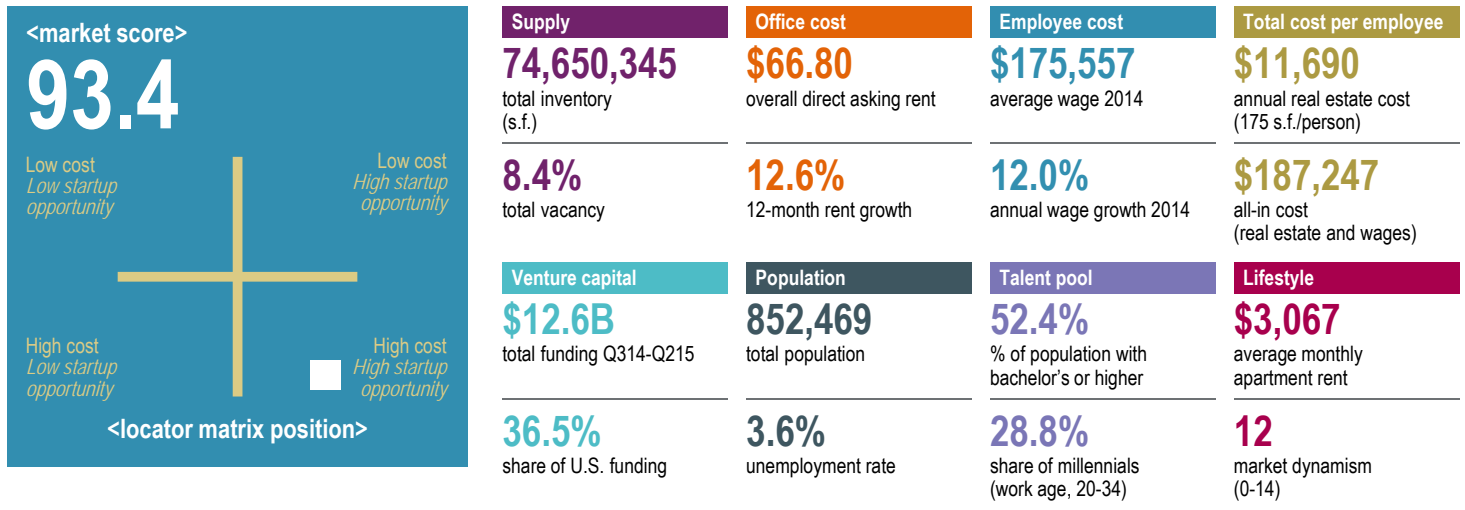


# SAN FRANCISCO

Amber Schiada  
VP, Director of Research



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>510 Townsend Street  </b> <b>South of Market</b> Tenant: Stripe Size: 300,000 s.f. Expansion in market	<b>555 Market Street  </b> <b>South Financial District</b> Tenant: Uber Size: 172,838 s.f. Expansion in market	<b>199 Fremont Street  </b> <b>South Financial District</b> Tenant: Fitbit Size: 163,628 s.f. Expansion in market
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## OPPORTUNITY

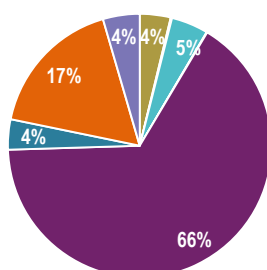
San Francisco remains one of the technology industry's most coveted office locations in the United States. Access to talent that's drawn to the city's lifestyle and amenities is one of the leading factors keeping companies within city limits, but it's cluster of brand-name technology companies, access to capital, incubators and accelerators, and its bootstrap mentality also support this booming hub.

## CHALLENGE

The dynamics between supply and demand, and the exorbitant cost born out of that imbalance has elevated San Francisco to a new echelon in the real estate market from both a commercial and residential perspective. As a result, both occupiers and residents are considering whether the benefits outweigh the costs while employers increasingly look to lower cost markets where talent is migrating.

## EMPLOYMENT COMPOSITION

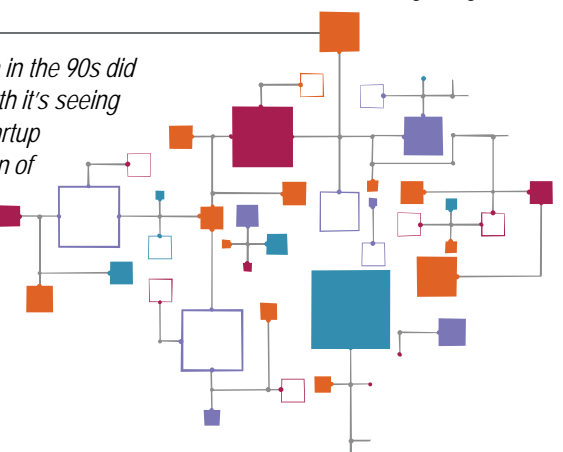
- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Not even during the dot-com boom in the 90s did San Francisco see the kind of growth it's seeing today. It's not just the velocity of startup activity, but the continued expansion of the city's anchor tech tenants that's driving growth."

- Amber Schiada  
VP, Director of Research

**Employment**  
**59,616**  
high-tech employment 2014  
**20.9%**  
annual high-tech employment growth

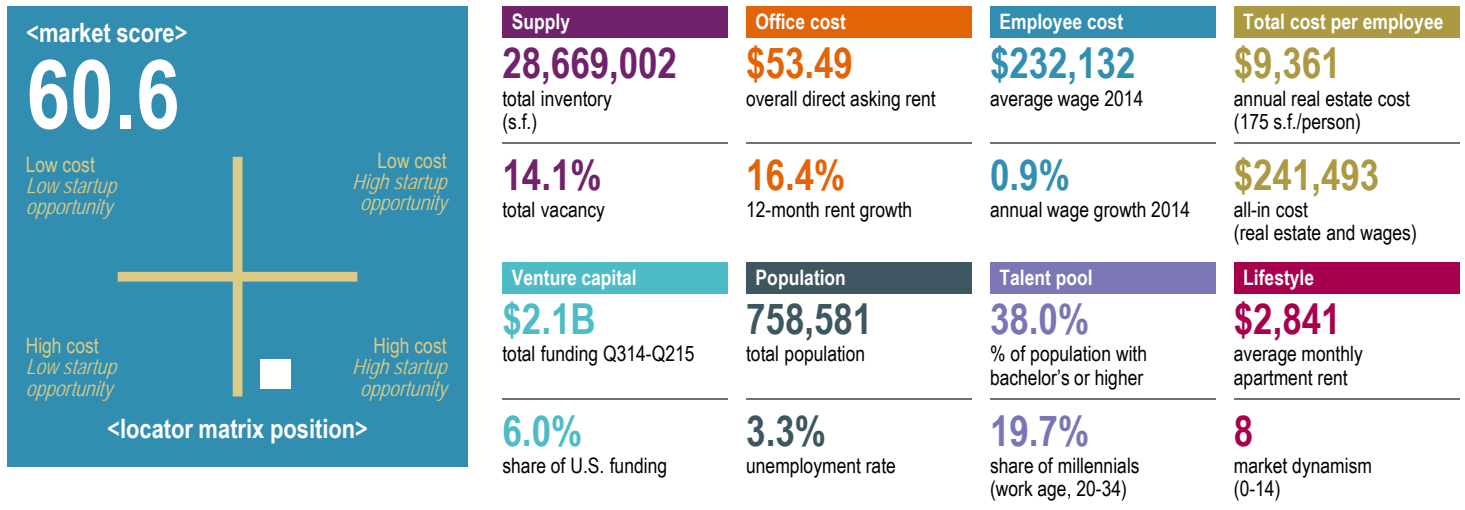


# SAN FRANCISCO PENINSULA

Christian Basconcillo  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>162 Jefferson Drive   Menlo Park</b> Tenant: EMC Size: 270,614 s.f. New to market	<b>Bay Meadows (Station 4)   San Mateo</b> Tenant: SurveyMonkey Size: 210,000 s.f. New to market	<b>1400 Seaport Boulevard   Redwood City</b> Tenant: GuideSpark Size: 79,954 s.f. Sublease
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## OPPORTUNITY

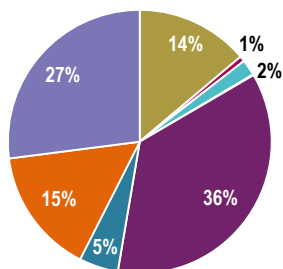
With demand in core Silicon Valley submarkets driving rent growth, tenants can still find quality product at less expensive rates in the Mid-Peninsula. Additionally, a more favorable development environment has prompted speculative office construction, especially in areas served by Caltrain. As more tech companies begin to migrate to the Mid-Peninsula, the region will attract more top talent to its emerging innovation hubs and promote future growth.

## CHALLENGE

The South County submarket has been the first to see an inflow of tenant migration away from the Valley, resulting in significant rent growth. Available large block supply is leasing quickly and well-funded tech companies and professional service firms are now targeting proposed development. This is creating a more competitive leasing environment for tenants and is pushing leasing activity and rents upward.

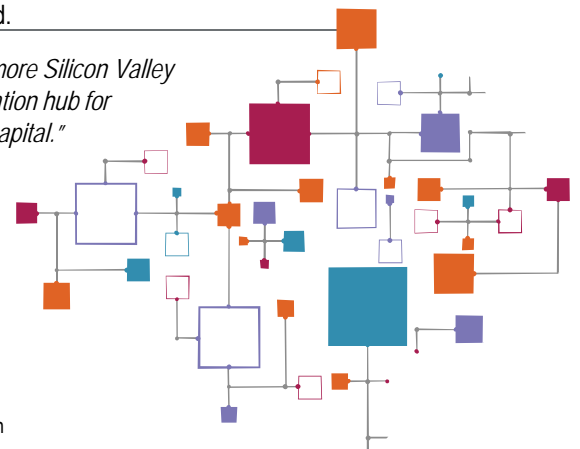
## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Online auctions
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"The Mid-Peninsula is attracting more Silicon Valley tenants, becoming a major innovation hub for tech start-ups and attracting VC capital."

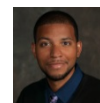
- Christian Basconcillo  
Research Manager





# SEATTLE-BELLEVUE

Alex Muir  
Research Manager



Aida Zain  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>91,217,671</b> total inventory (s.f.)	<b>Office cost</b> <b>\$33.70</b> overall direct asking rent	<b>Employee cost</b> <b>\$154,390</b> average wage 2014	<b>Total cost per employee</b> <b>\$5,898</b> annual real estate cost (175 s.f./person)
<b>10.2%</b> total vacancy	<b>7.9%</b> 12-month rent growth	<b>7.4%</b> annual wage growth 2014	<b>\$160,288</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$946.2M</b> total funding Q314-Q215	<b>Population</b> <b>3,671,478</b> total population	<b>Talent pool</b> <b>44.4%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,399</b> average monthly apartment rent
<b>2.7%</b> share of U.S. funding	<b>3.7%</b> unemployment rate	<b>22.7%</b> share of millennials (work age, 20-34)	<b>10</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

**Sunset North – Building IV | I-90 Corridor**  
 Tenant: Intellectual Ventures  
 Size: 152,633 s.f.  
 Renewal

**Dexter Station | Lake Union**  
 Tenant: Facebook  
 Size: 273,460 s.f.  
 Expansion in market

**NorthEdge | Lake Union**  
 Tenant: Tableau Software  
 Size: 209,000 s.f.  
 Expansion in market

## OPPORTUNITY

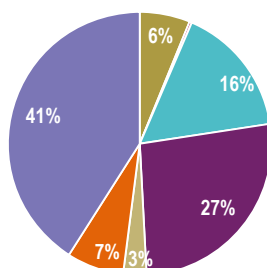
The Seattle-Bellevue area is a prime location for tech companies to grow, as it offers a wealth of young talent, quality real estate, and a high quality of life. Despite strong rent growth, for both commercial and residential property, in the last five years, it remains an affordable place to open an office and live. With several million square feet of office space set to deliver in the next 24 months, tenants looking to grow in the market will have access to much needed premier inventory.

## CHALLENGE

Metro Seattle is experiencing a supply and demand issue. An estimated 25,000 job openings in the local tech industry have gone unfilled for more than six months, as the state struggles to train enough workers. As a result, Washington recruits more high-tech workers than any other state. Additionally, there is a lack of available large blocks of space, particularly in traditionally sought after creative submarkets.

## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers

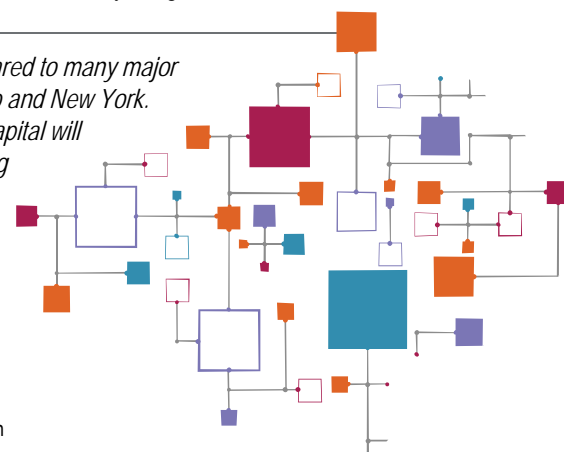


*"Seattle remains a bargain compared to many major tech hubs, such as San Francisco and New York. Companies seeking intellectual capital will continue migrating to, and growing in, the market."*

- Alex Muir  
Research Manager

**Employment**  
**131,187**  
 high-tech employment 2014

**8.8%**  
 annual high-tech employment growth



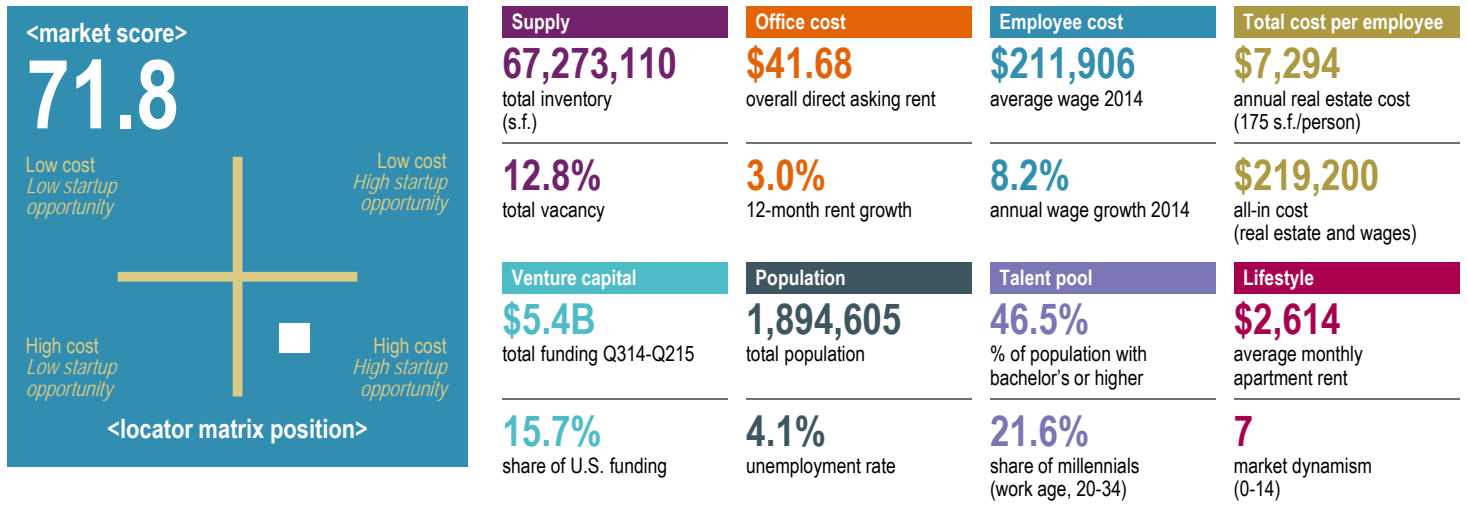


# SILICON VALLEY

Christian Basconcillo  
Research Manager



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>3325-3333 Scott Boulevard   Santa Clara</b> Tenant: Palo Alto Networks Size: 1,021,953 s.f. Expansion in market	<b>Moffett Gateway Phase I   Sunnyvale</b> Tenant: Google Size: 945,816 s.f. Expansion in market	<b>Central@Wolfe   Sunnyvale</b> Tenant: Apple Size: 777,000 s.f. Expansion in market
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## OPPORTUNITY

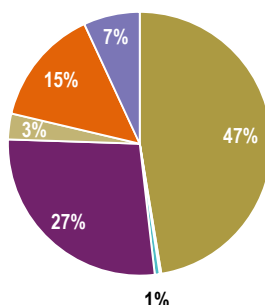
The Valley's reputation in the tech sector and access to venture capital continues to foster innovation. Despite the high cost of entry, aspiring start-ups and established tech companies have been expanding at an aggressive rate, prompting new development and the revitalization of older areas of the Valley like North San Jose. This is creating additional future expansion opportunities for tenants that area looking to grow their presence in the Valley.

## CHALLENGE

The supply-demand imbalance in areas like Palo Alto and Mountain View are making it difficult for tech tenants wanting to locate in hot innovation hubs. Big name tech companies like Google and LinkedIn have been aggressively leasing large blocks of space, pushing tenants south along the 101 corridor. New construction is pre-leasing quickly and offering little relief to strong demand.

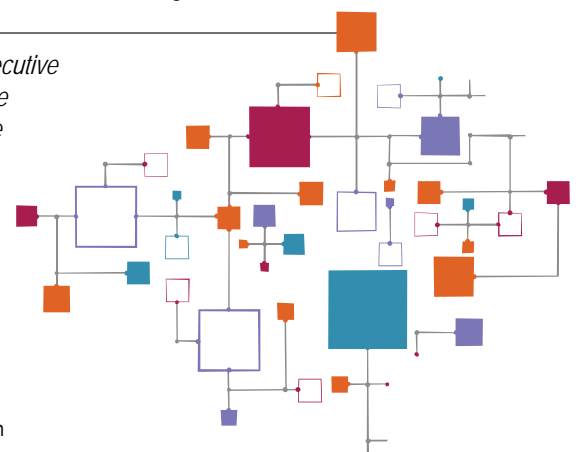
## EMPLOYMENT COMPOSITION

- Computer/Electronic product manufacturing
- Electrical/equipment manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Silicon Valley has seen 19 consecutive quarters in occupancy gains, more than what was recorded during the dot.com boom."

- Christian Basconcillo  
Research Manager

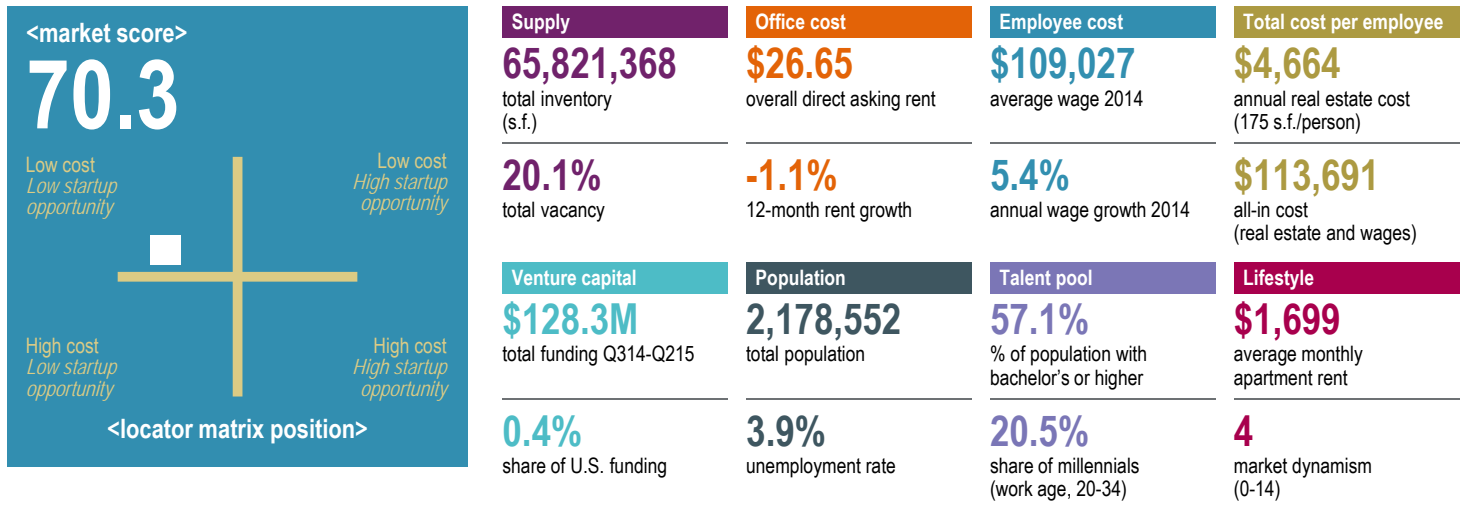


# SUBURBAN MARYLAND

Sara Hines  
Senior Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



## TOP LEASE TRANSACTIONS

<b>1700 Rockville Pike   Rockville Pike</b> Tenant: Dovel Technologies Size: 27,465 s.f. Renewal	<b>One Research Court   Shady Grove</b> Tenant: CTIS Size: 26,000 s.f. Renewal	<b>2273 Research Boulevard   Shady Grove</b> Tenant: Turning Point Global Solutions Size: 22,782 s.f. Relocation within market
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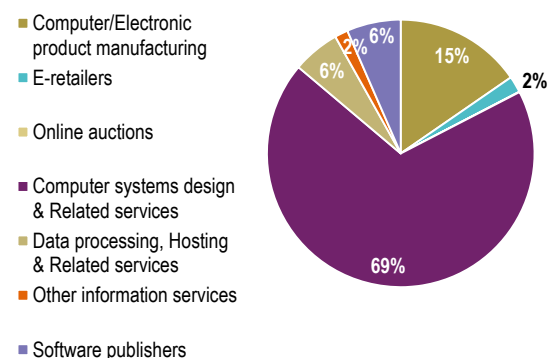
## OPPORTUNITY

Private sector companies in the region evolve out of the area's universities and the presences of federal agencies, particularly National Institute of Standards and Technology (NIST) and Intelligence Advanced Research Projects Activity (IARPA), which creates opportunities for potential expansion in the field of technology. Suburban Maryland employment composition is led by companies that offer computer system design which is essential to cyber security.

## CHALLENGE

The challenge to Suburban Maryland is the lack of catalyst in the region to increase the size of computer systems design companies. Even though the sector captures 68.7 percent of the employment composition, the average size of a firm in Maryland is only 10 employees. The region can increase its position as a cyber security leader by growing its business prospects, such as creating more effective incubators.

## EMPLOYMENT COMPOSITION



"Though the computer systems design sector captures the majority of employment, companies average only 10 employees."

- Sara Hines  
Senior Research Analyst



# WASHINGTON, DC

Scott Homa  
VP, Director of Research



Carl Caputo  
Research Analyst



## MARKET SCORE AND LOCATOR MATRIX POSITION



<b>Supply</b> <b>114,878,675</b> total inventory (s.f.)	<b>Office cost</b> <b>\$53.75</b> overall direct asking rent	<b>Employee cost</b> <b>\$105,858</b> average wage 2014	<b>Total cost per employee</b> <b>\$9,406</b> annual real estate cost (175 s.f./person)
<b>11.5%</b> total vacancy	<b>2.8%</b> 12-month rent growth	<b>5.0%</b> annual wage growth 2014	<b>\$115,264</b> all-in cost (real estate and wages)
<b>Venture capital</b> <b>\$209.3M</b> total funding Q314-Q215	<b>Population</b> <b>658,893</b> total population	<b>Talent pool</b> <b>52.4%</b> % of population with bachelor's or higher	<b>Lifestyle</b> <b>\$1,699</b> average monthly apartment rent
<b>0.6%</b> share of U.S. funding	<b>7.1%</b> unemployment rate	<b>31.6%</b> share of millennials (work age, 20-34)	<b>12</b> market dynamism (0-14)

## TOP LEASE TRANSACTIONS

<b>655 New York Avenue NW   East End</b> Tenant: Advisory Board Company Size: 500,000 s.f. Relocation within market	<b>1717 Rhode Island Avenue NW   CBD</b> Tenant: Uber Size: 72,905 s.f. Relocation within market	<b>1111 19<sup>th</sup> Street NW   CBD</b> Tenant: Blackboard Size: 70,482 s.f. Relocation within market
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## OPPORTUNITY

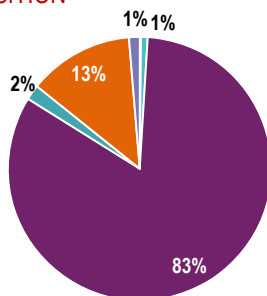
Proximity to a number of universities and a high concentration of millennials with bachelor's degrees or higher offers an immense talent pool to help foster startup and tech companies. The growing diversification of the tenant base and emergence of vibrant residential neighborhoods proximate to the core of the office market is creating highly desirable pockets where tech companies can thrive.

## CHALLENGE

A lack of unique supply and the growing demand among numerous sectors for creative space is causing increased competition. The Class B segment of the market in the core is tightening, limiting options for tenants looking for space priced below \$50 per square foot full service. Opportunities to secure truly creative supply are limited given the city's lack of boutique and readapted product.

## EMPLOYMENT COMPOSITION

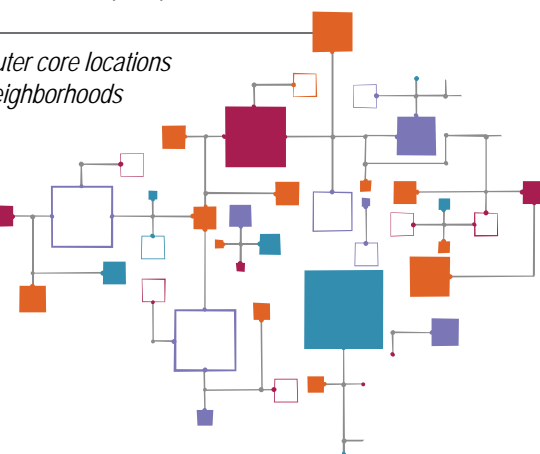
- Computer/Electronic product manufacturing
- E-retailers
- Computer systems design & Related services
- Data processing, Hosting & Related services
- Other information services
- Software publishers



"Tech companies are migrating to outer core locations proximate to emerging residential neighborhoods that offer vibrant amenities."

<b>Employment</b>
<b>25,761</b>
high-tech employment 2014
<b>5.8%</b>
annual high-tech employment growth

- Carl Caputo  
Research Analyst



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CURIOUS ABOUT THE



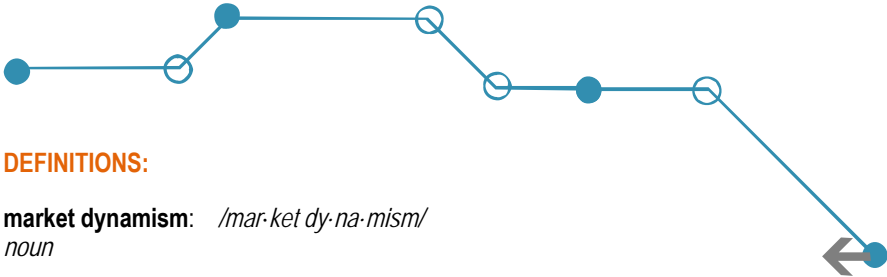
DETAILS

REACH OUT TO THE

**CONTACTS**

FOR MORE INFORMATION

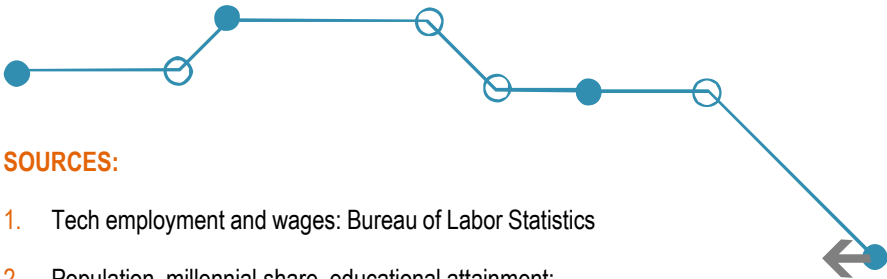
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## DEFINITIONS:

**market dynamism:** /mar-ket dy-na-mizm/  
noun

1. This is a metric that quantifies the vibrancy of a given market based on factors including density, transit, walkability, real estate mix, and existing creative cluster.



## SOURCES:

1. Tech employment and wages: Bureau of Labor Statistics
2. Population, millennial share, educational attainment: Census Bureau
3. Patents: United States Patent and Trade Office
4. VC Funding: PriceWaterhouseCoopers MoneyTree



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