TALENT

WHERE SAN DIEGO STANDS

A Comparison of US Metros

PRODUCED BY
SAN DIEGO REGIONAL EDC

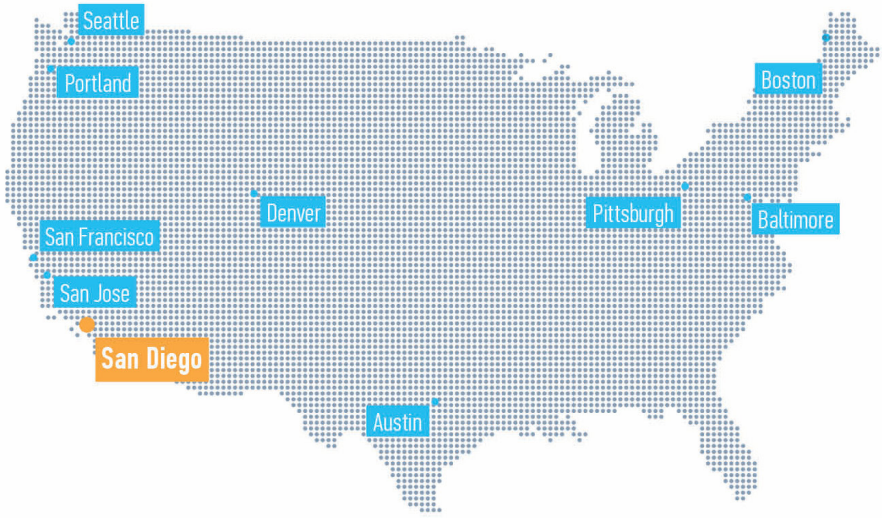
EXECUTIVE SUMMARY

TALENT IS THE CORNERSTONE OF TODAY'S GLOBAL ECONOMY.

It drives corporate location decisions, encourages innovative urban planning and inspires entrepreneurship. In essence, talent is the key to economic growth. If regions – such as San Diego – want to get ahead, they must have the workforce to compete.

This study looks at San Diego's standing among peer US metropolitan regions with regard to highly-skilled scientific, engineering and tech talent. By analyzing its strengths and addressing challenges, San Diego can better improve its edge in attracting and retaining talent and investment.

PEER METROS



Sponsored By

iboss CYBERSECURITY

KILROY REALTY CORPORATION

Supported By

CBRE

For a copy of the complete study, please visit **sandiegobusiness.org/research**

THIS STUDY WAS RELEASED IN JANUARY 2016

WHY SAN DIEGO?

Workforce assets that companies look for when making location and investment decisions:

A GROWING POOL OF YOUNG TALENT

Ranked 2nd
percent growth rate of degree-holding millennials.

More than 60%
of people who migrate to San Diego hold a college degree.

AN EXPERIENCED & EDUCATED TALENT BASE

Experienced professionals ages **45+** make up a larger share of San Diego's talent base compared to peers.

Ranked 2nd
concentration of workforce in science and engineering jobs, with over 63,000 professionals in these occupations.

LOW EMPLOYEE TURNOVER

Ranked 1st
lowest turnover rate in tech and scientific R&D.

DEGREE ADVANTAGE

San Diego gained **72,000** degree holders in 2014 alone – more than any other major metro area.

WHAT TALENT WANTS.

When looking for a place to start or continue a career, talent is demanding change. Infrastructure and creative office design are becoming critical requirements. Innovative workspaces, lifestyle, competitive wages and economic opportunity matter.

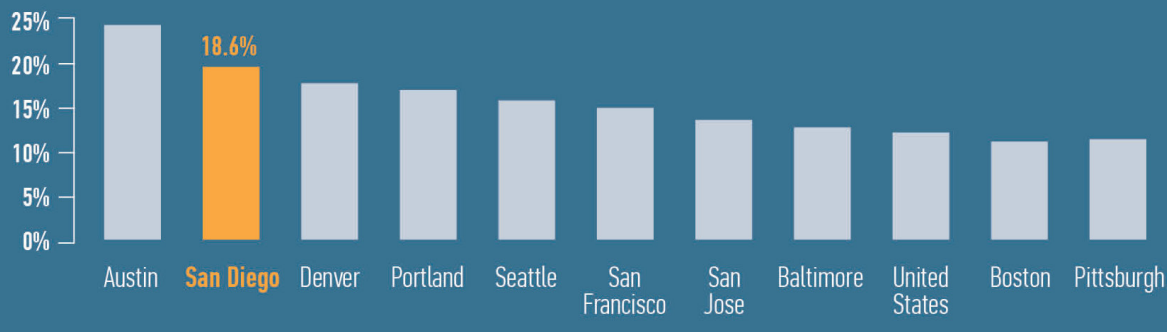
RANKED 1ST LOWEST AVERAGE COMMUTE TIMES

RANKED 2ND AVERAGE ANNUAL PAY FOR R&D EMPLOYEES

$176,000 average annual wage of workers in San Diego's scientific R&D industry, which includes many biotech, cleantech, defense and aerospace jobs.

RANKED 3RD TOTAL NUMBER OF SCIENTIFIC R&D FIRMS

%CHANGE IN POPULATION 25+ WITH A BACHELOR'S DEGREE OR HIGHER



BEST PRACTICES AND ACTION ITEMS

The following recommendations can be scaled to tackle talent attraction and retention challenges.

STRENGTHEN INDUSTRY-UNIVERSITY PARTNERSHIPS

In 2013, Johns Hopkins University in Baltimore developed a bi-annual event called HopHacks, which invites students from universities anywhere in the country to compete for prizes in a 36 hour coding and programming competition.

San Diego action: Scale existing programs like SD Hacks and Link2 that expose students to career opportunities and leverage those programs for internships and jobs with San Diego-based companies.

LEVERAGE MAJOR EVENTS TO GET MESSAGE TO NEW AUDIENCES

Austin leverages South by Southwest (SXSW), turning the popular music, film, and technology festival into a global networking event that exposes the world to Austin's unique culture and economy.

San Diego action: San Diego Comic-Con attracts more than 100,000 people from around the world, which offers the opportunity to market San Diego's own unique culture and economic opportunity.

DEVELOP A DEDICATED WEB PRESENCE AND UTILIZE SOCIAL MEDIA TOOLS

ImaginePittsburgh.com serves as a virtual concierge for talent, showcasing Pittsburgh as a top international destination to work and live.

San Diego action: The region has several sites that detail economic opportunities for businesses and investors. San Diego needs a site that exclusively tells a regional story through the lens of its talented workforce.

ENGAGE YOUTH IN STEM EDUCATION

Qualcomm's Thinkabit Lab is a combination of a lab and makerspace for local middle school students to explore STEM careers.

San Diego action: Regional leaders should replicate and scale "Thinkabit" style labs by working with priority sector firms and school districts to expand this successful model.

EXPOSE K-12 STUDENTS TO SUMMER JOBS AND INTERNSHIPS

Boston puts more than 3,000 students to work every summer as a way to engage students in growing sectors of the STEM economy. Boston has sustained these efforts for more than a decade, using both public and private resources and leadership.

San Diego action: Regional leaders should set a goal for youth employment and create a long-term campaign towards increasing youth engagement in summer jobs and internships.

IMPLEMENT CREATIVE TAX AND ZONING POLICIES TO INCENTIVIZE REDEVELOPMENT

Though New York City was not a peer in this study, the 125th Street Revitalization is a partnership between the NYCEDC and several NYC departments to identify a shared vision for "Harlem's Main Street." The partnership with the city led to a complete rezoning of the area, incentivizing mixed-use development to create a world-class arts and entertainment district.

San Diego action: Create economic incentives for priority sector businesses to open and expand in low-moderate income neighborhoods like City Heights and Southeastern San Diego. This could involve expedited permitting, waiving of fees or taxes and possible collaboration with neighborhood philanthropic organizations such as the Jacobs Center and Price Philanthropies.

TABLE OF CONTENTS

AUTHORED BY MICHAEL COMBS

WITH RESEARCH SUPPORT FROM JOE BIRD, SEAN MILES, and CBRE SAN DIEGO

WINTER 2016

INTRODUCTION

Regions best positioned to attract, retain and grow talent with the skills needed by the companies of today and tomorrow will thrive in the 21st Century. National research indicates that successful economic regions are able to attract, retain and grow talented, skilled and educated people. In two recent surveys by Area Development Magazine, availability of skilled labor is the most important factor to both site selectors and CEOs when determining where to locate a business.[1, 2]

San Diego is endowed with both natural (climate, geography, diverse populace) and planned (strong industries, universities, research institutions) advantages that, if nurtured, place the region in a position to compete effectively with any other region to attract, retain and grow a talented workforce.

Compared to peers across the nation, San Diego is currently one of the most talented, when looking at measures such as concentration and quality of educated residents. However, recent data show San Diego is lagging key regional peers in some commonly used talent indicators, while excelling in others. In order to lead the way in the next generation economy, civic planners and leadership must understand the areas of advantage, opportunities for improvement, and effective strategies to exploit both.

This study explores the attraction, retention, and growth of talent within the perspective of economic growth since the end of the Great Recession, and puts this in the context of national and global trends. A talented workforce is vital to both growing existing firms and attracting new firms to the region. In some areas of talent, some of San Diego's peer regions are more successful at luring, keeping, and growing their talented people, and thus developing key growth industries. By examining the accomplishments of the region's peer metros, this study offers strategies to enhance San Diego's existing advantages.

Defining Talent

This study focuses on skilled employees in advanced industries, or oftentimes referred to as San Diego's "Innovation Economy."[3] These occupations generally fall within the STEM category definition (Science, Technology, Engineering, and Mathematics).[4] These skilled professionals are the lifeblood of the region's innovation clusters, such as biotechnology, information technology, cybersecurity, communications, defense, aerospace, and other STEM-based clusters.

Talent in this case most typically includes degree holders, and this classification will often serve as a measurement proxy throughout. This study also includes STEM-based occupations that typically require degrees, but may include many middle-skill positions. Middle-skills—those that require some technical training, but less than a 4-year degree—are becoming increasingly relevant to innovation economy firms. In 2015, the San Diego Workforce Partnership, San Diego Regional EDC, and JP Morgan Chase released a special report on the growing importance of middle-skills in information and communications technologies, healthcare, and advanced manufacturing.[5] When possible, this study incorporates those positions when referring to STEM talent, but also isolates degree holders, since site selectors and firms most commonly seek degree attainment as a comparative measurement of a region's talent base.[6]

1 Area Development Magazine, "10th Annual Survey of Site Selection Consultants." Q1 2014. http://www.areadevelopment.com/Corporate-Consultants-Survey-Results/Q1-2014/10th-site-selection-consultants-corporate-RE-survey-1167098.shtml

2 Area Development Magazine, "27th Annual Survey of Corporate Executives." Q1 2013. http://www.areadevelopment.com/Corporate-Consultants-Survey-Results/Q1-2013/27th-Corporate-Executive-RE-survey-results-37376241.shtml

3 http://www.sandiegobusiness.org/industry

4 http://www.cde.ca.gov/pd/ca/sc/stemintrod.asp

5 http://www.sandiegobusiness.org/sites/default/files/Middle-Skill%20Jobs%20Gaps%20and%20Opportunities_2015.pdf

6 Good, Larry and Jeannine La Prad, "Educational Attainment as an Economic Driver for States, Regions and Communities." 2013. http://www.reicenter.org/upload/documents/colearning/good2013_report.pdf

INTRODUCTION

Age Cohorts

This study uses four main age cohorts to delineate demographic figures for the 25 and older population, and occasionally uses the following titles to refer to those cohorts:

- Age 25-34: Millennials
- Age 35-44 and 45-64: Mid-Professionals
- Age 65+: Senior Professionals and Retirees

The 25 and older population is used instead of more traditional working age populations, such as 15 or 18 and older. This is because the under 25 population is most concentrated with students and members of the armed forces, which can skew figures like education attainment as it relates to the workforce. Other industry and occupation figures are not restricted by age

Peers

To evaluate the region's standing, a set of peers for comparison purposes was established based on one or more of the following factors: relative size, geographic proximity, similar industrial makeup (innovation-based), and similar existing talent profile, based on attainment level above the U.S. average.

Using this criteria, San Diego's core peers are:

- Austin-Round Rock, TX
- Baltimore-Columbia-Towson, MD
- Boston-Cambridge-Newton, MA-NH
- Denver-Aurora-Lakewood, CO
- Pittsburgh, PA
- Portland-Vancouver-Hillsboro, OR-WA
- San Francisco-Oakland-Hayward, CA
- San Jose-Sunnyvale-Santa Clara, CA
- Seattle-Tacoma-Bellevue, WA

Peers are generally referred to by their principal city name throughout the report (e.g. Austin), but the facts and figures are exclusively about the metropolitan statistical area (MSA) as defined by the U.S. Census Bureau.

PART I: FACTORS FOR BUSINESS

The San Diego region is one of the most talent rich metropolitan areas in the United States, and talent is often cited as one of the region's key competitive advantages. Among the 25 most populous U.S. metros, the region ranks in the top ten in percentage of population with bachelor's degrees, advanced degrees, and doctoral degrees.[1] However, when focused on a more precise peer group, and when broken down by age and other metrics, San Diego's standing among peers becomes more nuanced. This section focuses on the key talent indicators that are important to site selectors, firms, and investors when making location decisions, going beyond traditional measures like current education attainment.

This section will look at five key factors for businesses and site selectors when measuring the talent in a region:

- Degree Attainment and Growth
- Migration
- International Diversity
- STEM and Management Talent
- Employee Retention

1 Economic Indicators Dashboard: http://www.sandiegobusiness.org/research

DEGREE ATTAINMENT

When comparing metropolitan areas, site selectors and firms typically use degree attainment metrics as a proxy for the talent base. While this approach makes intuitive sense, degree attainment is not an all-encompassing measure of the availability of talent in the region, but is certainly an important component of measuring a region's talent base. High degree attainment is also associated with economic measures like high productivity and higher wages, which are important components for regional economic health.[2]

According to a 2014 study by Burning Glass, college degrees are quickly becoming a must to fill positions even when those positions do not necessarily demand skills taught in college.[3] Even many jobs traditionally classified as "middle skill" are now requiring a minimum of a bachelor's degree. In many technical fields, advanced degrees are required. It is apparent why site selectors and firms are interested in regions where they have access to a large pool of educated workers.

Current Standings

Nationally, San Diego is one of the most educated regions in terms of degree attainment, but when compared to peers, San Diego leads only Portland and Pittsburgh in both bachelor's and advanced degree attainment (figures 2.2 and 2.3). Advanced degrees are typically Master's level, but include other professional degrees like Juris Doctorates (J.D.) and Doctor of Medicine (M.D.).[4] The region also trails the peer average rather substantially in both of these metrics.

Likely due in large part to the region's large health and life sciences cluster, the region ranks higher among peers in percentage of the adult population with a doctorate degree (figure 1.3). The region only trails other life science hubs in the Bay Area and Boston, and falls roughly around the peer average.

Figure 1.1: Bachelor's Degree Attainment by MSA

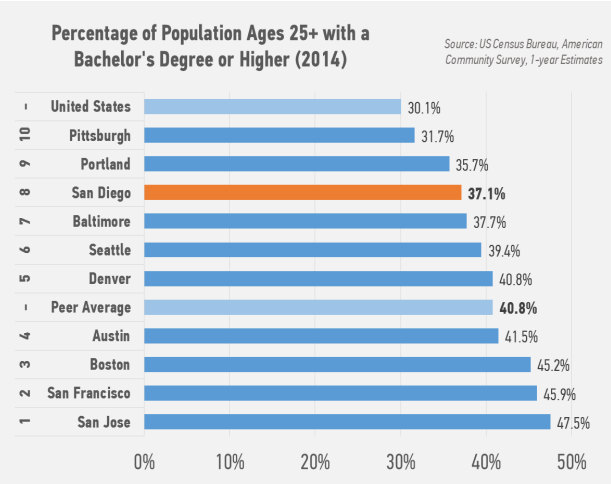


Figure 1.2: Advanced Degree Attainment by MSA

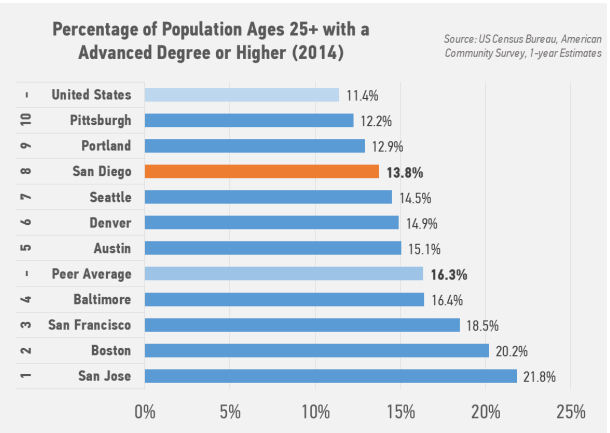
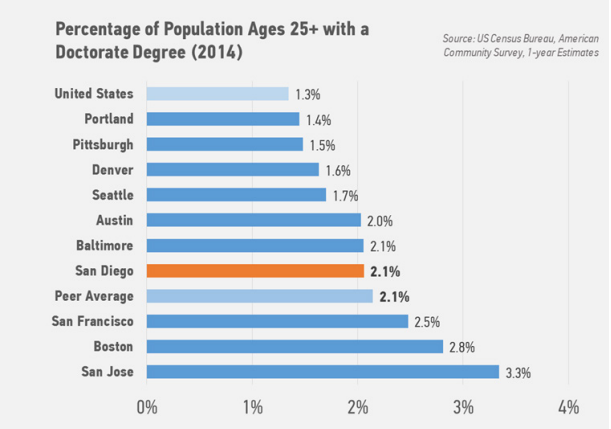


Figure 1.3: Doctorate Degree Attainment by MSA



2 Good, Larry and Jeannine La Prad, "Educational Attainment as an Economic Driver for States, Regions and Communities." 2013. http://www.reicenter.org/upload/documents/colearning/good2013_report.pdf

3 Burning Glass. "Moving the Goalposts: How Demand for a Bachelor's Degree Is Reshaping the Workforce." September 2014. http://burning-glass.com/wp-content/uploads/Moving_the_Goalposts.pdf

4 http://www2.census.gov/programs-surveys/acs/about/qbyqfact/EducationalAttainment_FieldofDegree.pdf

DEGREE ATTAINMENT (cont.)

Attainment and Age

Young professionals have become essential to the tech industry in particular. Digital marketing and social media, for instance, rely on a younger workforce who were inundated with these technologies at a younger age, lowering the learning curve. Generally speaking, those over the age of 45 likely spent at least a part of their professional lives without the internet, while those under 35 have likely always been required to use computers and internet technologies in their daily work. Additionally, younger people tend to be more likely to migrate, especially those who are college educated,[5] given that they have less roots in a community due to tenure and generally more economic opportunity due to education.

Figure 1.4: Degree Attainment by Age Cohort

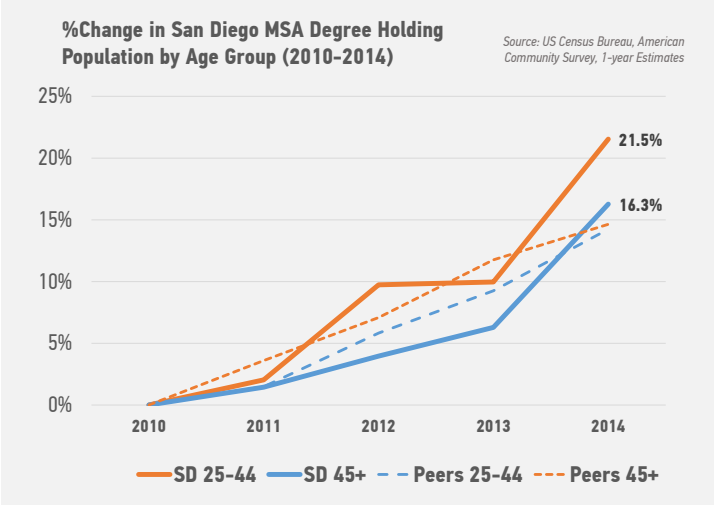
Age Cohort	25-34	35-44	45-64	65+
% of Total Degree Holding Population	24.6%	21.4%	36.4%	17.6%
Rank Among Peers	8	8	6	1

100%

Source: US Census Bureau, American Community Survey, 2014

As of 2014, San Diego's degree holding population skewed older than nearly all peers, ranking eighth out of 10 in percentage of degree holding population ages 25 to 34 and 35 to 44 (figure 1.4). The region ranks first in share of its degree holding population ages 65 and older. While there are many benefits to having a more experienced educated workforce, many people in the 65 and older age cohort are nearly or already retired. Given San Diego's climate and amenities, it is a popular retirement destination, likely skewing the data. Retirees are obviously not in the workforce, which means San Diego's talent pool for firms may be smaller than shown.

Figure 1.5: Degree Holder Growth by Age



While the degree holding population remains older, recent trends indicate that this balance is shifting. From 2010 to 2014, growth has been driven by degree holders under the age of 45 (figure 1.5). San Diego's peers have not collectively experienced this same effect as younger and older cohorts have grown at roughly the same pace.

5 U.S. Census Bureau, Current Population Survey, 2014-2015.

DEGREE ATTAINMENT (cont.)

Attainment Growth

The share of the population ages 25 or older with bachelor's degrees has grown from 33.7 percent in 2010 to 37.1 percent in 2014—a promising sign for the region (figure 1.6).

Most of this growth came in 2014 when the region added 72,500 degree holders from the year before (figure 1.7). Since 2010, the region has added more than 125,000 degree holders to the region, over half of whom are under 45.

This growth can largely be explained by two phenomena. First, the region has been educating more people than previous years. In 2010—the year when most new grads in 2014 would have enrolled—the region had more than 304,000 residents enrolled in undergraduate and graduate programs, compared to roughly 275,000 in 2010 (figure 1.8). While not all enrollees graduate on time or at all, nor do all stay in the region, this 29,000 student increase that occurred four years before a spike in degree holders likely explains some of the 2014 increase.

Second, the region experienced a major influx of college graduates from migration. From 2013 to 2014, the region added 45,000 college educated residents. This trend is explained in more detail on page 9. The large growth of enrollees in 2010 combined with the large migration of graduates likely explains this surge in degree holders in 2014.

This outstanding raw growth was compounded by little or negative change in non-degree holders, which helps explain the jump in percentage shown in figure 1.6. From 2010 to 2014, the region experienced 18.6 percent growth in its 25 and older degree holding population, while non-degree holders only grew by 2.4 percent. This trend is amplified when isolating 35-44 year olds in particular. Degree holders in that age group grew by 19.4 percent over that same period, while non-degree holders actually fell by 6.8 percent.

The most likely explanation is that those who do not have degrees decided to migrate elsewhere due to costs or inability to find employment. This study explores some possible explanations for that in Part II by looking at location factors for talent, such as cost of living and economic opportunities.

Figure 1.6: Degree Attainment by Year

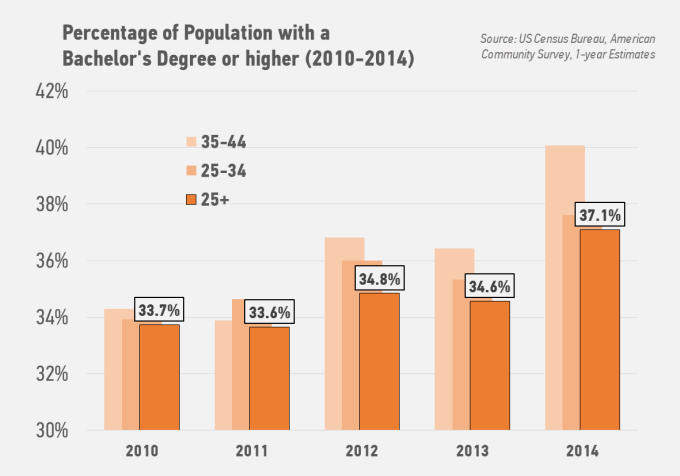


Figure 1.7: Change in Number of Degree Holders

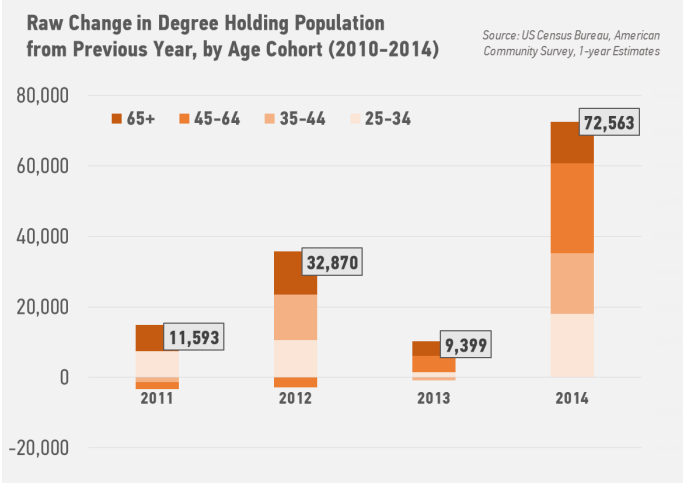
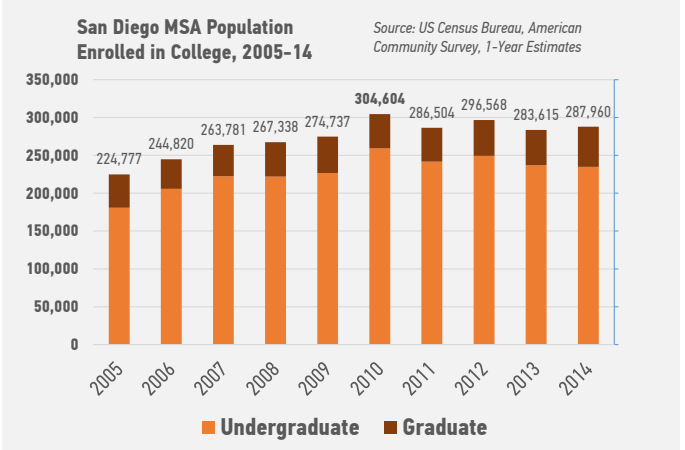


Figure 1.8: College Enrollment by Year



DEGREE ATTAINMENT (cont.)

Comparing Growth

While San Diego's standing among peers in 2014 is near the bottom, trends indicate that the region is gaining significant ground in terms of attracting, retaining, and growing degree holders. The 3.5 percentage point jump in degree holders shown in figure 1.6 was the highest among peers measured in this study.

When looking at growth rates in degree holder population, the region experienced the second highest growth rate from 2010 to 2014 (figure 1.9). This trend holds when looking at the young degree-holding population. From 2010 to 2014, the region added more than 37,000 25-34 year old degree holders, a 23.4 percent change (figure 1.10). This measure was second only to Pittsburgh, and well above the 19.5 percent peer group average.

The largest percentage change in degree holders came from the 65 and older population—a trend that has been reflected nationally and among peers. From 2010 to 2014, the region's 65 and older degree-holding population grew by more than 35,000—a 33.7% change (figure 1.11). This was the fifth highest change among peers and roughly at the peer and national averages.

This trend can mostly be attributed to the aging baby boomer population. That age group experienced the highest growth regardless of education attainment nationally and locally, and most likely reflects a broader demographic trend. This trend does however suggest an out-migration of non-degree holding seniors. More than half of the growth in the 65 and older population came from degree holders, while degree holders only make up 34.1 percent of that age cohort. Unless seniors are obtaining degrees later in life at an astounding rate, this figure suggests that boomers without degrees are moving elsewhere and being replaced by degree holders in that age group.

Figure 1.9: Degree Attainment Growth by MSA

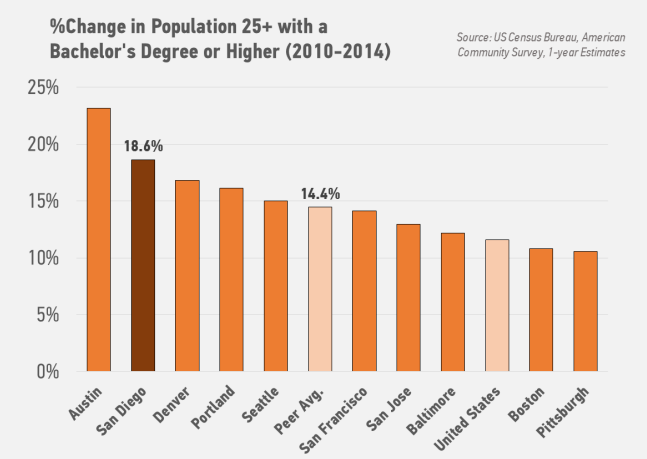


Figure 1.10: Growth in Millennial Degree Holders by MSA

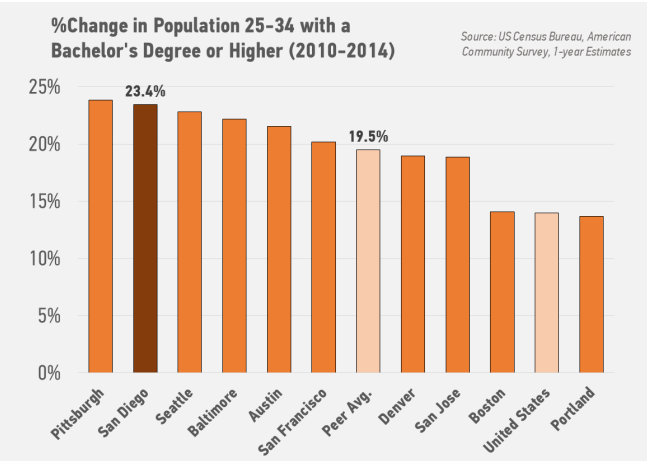
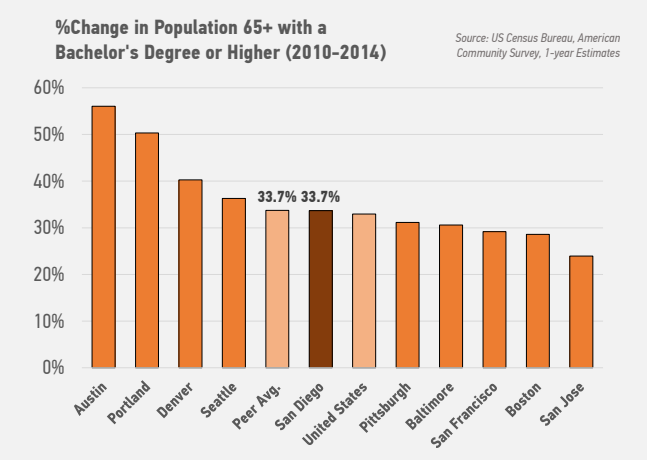


Figure 1.11: Growth in Senior Degree Holders by MSA

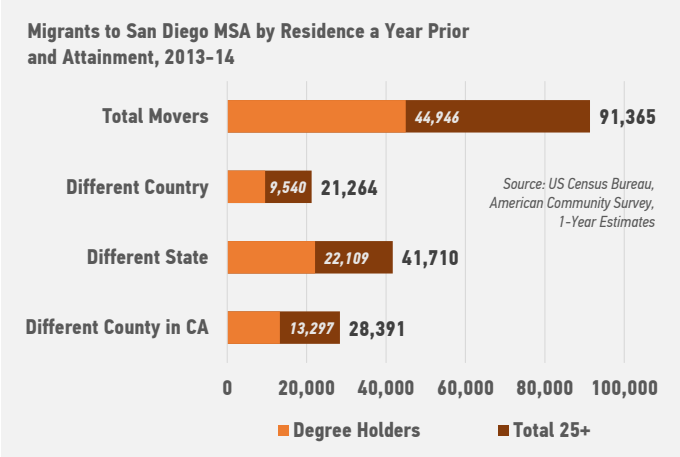


MIGRATION

Inward Migration

San Diego has experienced positive momentum of inward migration in recent years. From 2013 to 2014, the region added 161,000 migrants from another region, 91,000 of whom were over the age of 25. Of those in-migrants who were over the age of 25, about 49.2 percent had at least a bachelor's degree—far higher than the 37.1 percent population average. This equated to approximately 45,000 in-migrant college grads (figure 1.12). As noted on page 7, the region's degree-holding population grew by about 72,500 from 2013 to 2014, so we cannot conclude that this jump was due entirely to in-migration, since this figure says nothing about the number of college graduates who have left the region.

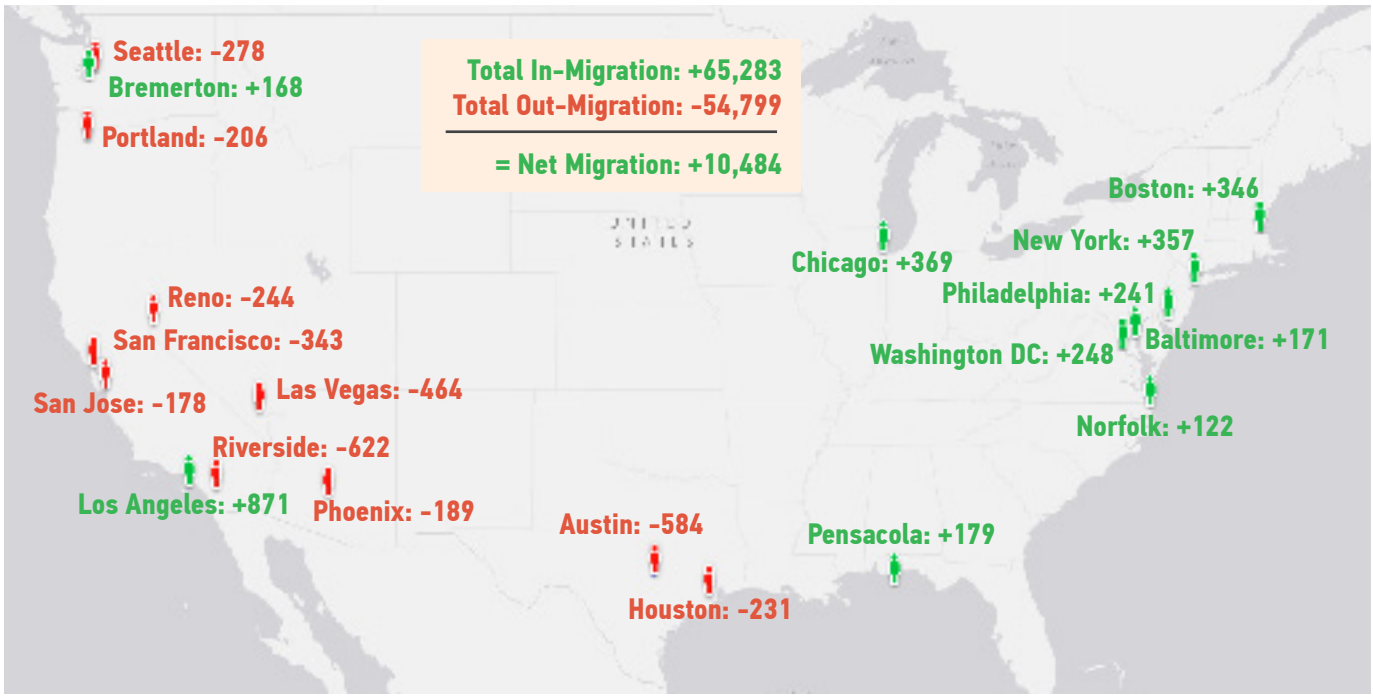
Figure 1.12: Characteristics of Inward Migrants Age 25+



Domestic Tax-Payer Migration

Data from the IRS shows that San Diego did net gain population from 2013. About 10,500 net new income tax-payers migrated to San Diego in 2014, though the data does not differentiate between degree and non-degree holders. About 65,000 people reported to the IRS that they moved to San Diego in 2014 from a different region in 2013, while about 55,000 reported leaving. This data largely does not include college students and retirees, in particular those with little to no income, so this likely accounts for some the gap between data in figures 12 and 13. From this information, we can infer that migration likely explains a portion of the degree-holder growth, but is not the whole story.

Figure 1.13: Top and Bottom 10 MSAs by Net Migration to/from San Diego, 2013-14



Source: IRS SOI Tax Stats, 2013-2014 | Base map from National Geographic MapMaker

MIGRATION (cont.)

Looking deeper into the IRS data, we find that San Diego net gained the most migrants from major Midwest and Northeast cities, such as New York, Chicago, and Boston, as well as regions with a substantial military presence, such as DC, Baltimore, Norfolk, and Bremerton (WA). The latter group is expected as San Diego has the largest uniformed military presence in the U.S.[6]

San Diego net lost the most workers to either peer tech hubs or lower cost metros. Austin, Seattle, San Francisco, Portland, and San Jose were all peers identified in this study, and offer competitive market opportunities for San Diego tech workers. Nearby regions like Riverside, Las Vegas, Reno, Houston, and Phoenix are lower-cost Southwestern metros where people have likely escaped San Diego's comparatively high cost of living (see page 19 for more on cost of living).

Compared to peers, San Diego ranked seventh in terms of number of positive net migrants. Denver and Austin experienced the most substantive net gains and are outliers from the rest of the regions. San Jose was an outlier on the other end of the spectrum, having net gained less than 1,000 workers, most likely due to the large net loss to San Francisco.

San Diego gained a comparatively large number of in-migrants, but also lost a large number of out-migrants. Without knowing the characteristics of these migrants, it is challenging to reach conclusions about the impact of this turnover. It is quite possible, as the attainment data suggests, that San Diego is replacing less educated out-migrants with more educated in-migrants, as the region's innovation economy demands more highly-educated and skilled workers.

Figure 1.14: Migration Patterns of Peer Metros, 2013-14, Ranked by Total Net Migration

Rank (Net)	Peer Metro	In-Migration	Out-Migration	Net Migration	Largest Net Gain		Largest Net Loss	
1	**Austin**	119,522	-35,084	**84,438**	Atlanta	4,030	Fort Collins (CO)	-17
2	**Denver**	62,673	-29,782	**32,891**	Chicago	942	Austin	-174
3	**Portland**	43,279	-23,442	**19,837**	Chicago	347	Austin	-199
4	**Seattle**	60,376	-42,345	**18,031**	Chicago	576	Austin	-196
5	**Boston**	66,113	-51,005	**15,108**	Philadelphia	199	Tampa	-755
6	**Baltimore**	42,408	-28,277	**14,131**	Washington DC	1,649	Austin	-371
7	**San Diego**	65,283	-54,799	**10,484**	Los Angeles	871	Riverside	-622
8	**Pittsburgh**	23,012	-14,462	**8,550**	Portland	33	Austin	-208
9	**San Francisco**	49,436	-40,999	**8,437**	San Jose	1,504	Portland	-336
10	**San Jose**	35,402	-34,773	**629**	Los Angeles	467	San Francisco	-1,504
-	**Peer Avg.**	56,750	-35,497	**21,254**	N/A	1,012	N/A	(434)

Source: IRS SOI Tax Stats, 2013-2014

6 Bureau of Economic Analysis, Table CA25N, 2014.

INTERNATIONAL TALENT

As the economy becomes more global, attracting talent that is multi-lingual and culturally fluent has become increasingly important to businesses with an international presence. Given San Diego's proximity to Mexico and its Pacific Coastal location, the region has become a magnet for foreign-born talent that spans the globe.[7]

The region has one of the most concentrated foreign-born and multi-lingual workforces. According to the 2014 American Community Survey, more than 750,000 residents in San Diego metro area were born outside of the United States—23.2 percent and third among peers. More than 22 percent of San Diegans speak another language and also speak English very well (figure 1.15). This is also third among peers and well above the peer and national averages.

When looking just at the employed population, 28.6 percent of the region's working population is foreign-born, which is also third among peers (figure 1.16). Only the Bay Area metros boast a more international population. While nearly half of San Diego's foreign-born population is from Latin America, more than 38 percent of the region's foreign-born population is Asian-Pacific (figure 1.17), with significant shares from emerging mega-markets like India and China, as well as established tech business centers, such as South Korea and Japan.

The region is also a popular destination for H1B Visas, which is a program that allows American firms to hire foreign workers temporarily. The number of H1Bs granted is limited each year. In 2014, about 490,000 H1B Visas were certified in the U.S. Roughly 40 percent of H1Bs went to the Bay Area, Boston, New York, Chicago, and Los Angeles.[8] San Diego firms received approximately 4,400 certified applications, or about one percent of the total. San Diego's visa recipients were more likely to be in STEM occupations. In 2014, about 85 percent of all H1Bs were for STEM occupations, compared to about 77 percent nationally.

Figure 1.15: Multi-Lingual Population

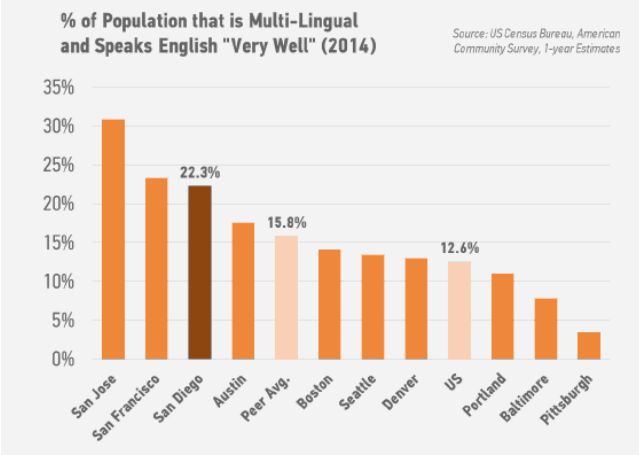


Figure 1.16: Foreign-Born Workfirce

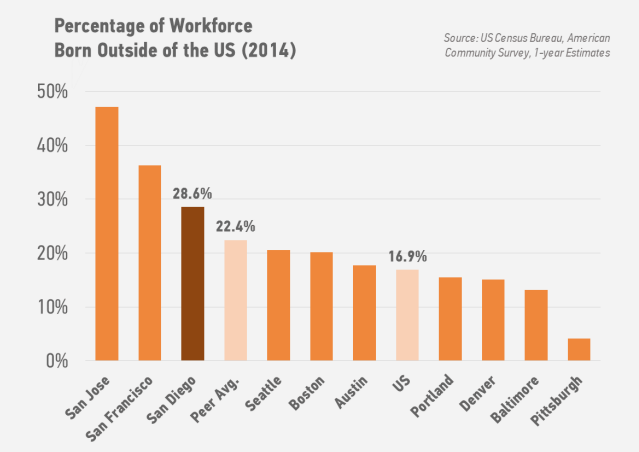
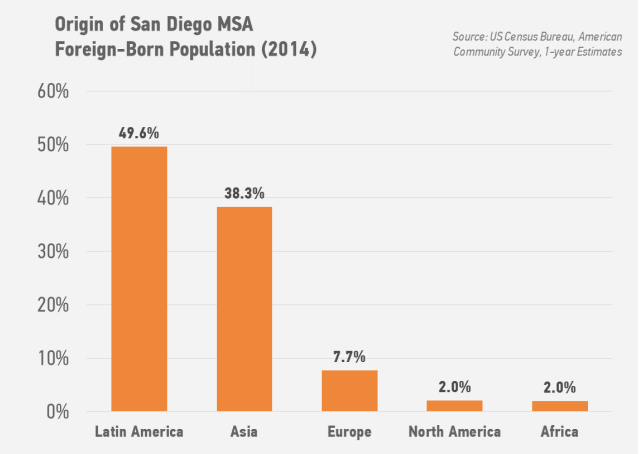


Figure 1.17: Origins of Foreign-Born Population



7 Go Global San Diego. Brookings Institution and San Diego Regional EDC. http://www.sandiegobusiness.org/sites/default/files/Go%20Global%20-%20San%20Diego's%20Global%20Trade%20and%20Investment%20Initiative.pdf

8 U.S. Department of Labor, LCA Data. Fiscal Year 2014. https://www.foreignlaborcert.doleta.gov/performancedata.cfm

STEM & MANAGEMENT

Given that San Diego is driven largely by innovation and R&D, potential firms and investors interested in San Diego are concerned about a specific type of talent—STEM. In addition to STEM, firms need a requisite pool of managers and business/financial operations talent.

Degree Attainment

While San Diego falls behind peers in terms of degree holder share of population (see figure 1.1), the type of degree holder in San Diego is more likely to have a STEM and business background. In 2014, 39.6 percent of degree holders in San Diego have their first degree in a STEM field. This ranks fourth among peers.[9] The region also ranks second in physical sciences, and third in engineering, biology, and business.

Science and Engineering

San Diego is the number two market among peers for concentration of both science and engineering talent (figure 1.18). This is in large part because the region is the most concentrated scientific R&D market among peers.[10] The region has more than 63,000 science, architecture, and engineering professionals. Only two peer regions, Boston and San Francisco, have more workers in science occupations than San Diego, but both metros are substantially larger in terms of employment. In science professionals per 1,000 employees, San Diego is behind only San Jose in architecture and engineering (SOC 17-0000), and only San Francisco in science (SOC 19-0000).

The region offers competitive wages for these professionals as well. The region pays more than most peer metros, but workers in San Jose and San Francisco demand far higher wages in these occupations compared to San Diego and the rest of the field (figure 1.19). This makes San Diego an attractive market for firms looking for a discounted labor cost in a highly concentrated California market.

Figure 1.18: Workers in Science and Engineering Occupations per Thousand Workers, 2014

Rank (Tot)	Metro	Arch / Engineering	Science	Total
1	San Jose	57.2	11.4	68.6
2	San Diego	31.2	16.7	47.9
3	San Francisco	23.5	19.1	42.6
4	Boston	25.8	16.2	42.0
-	Peer Avg.	28.3	13.4	41.6
5	Seattle	30.5	10.8	41.3
6	Portland	30.2	9.3	39.5
7	Austin	30.2	9.1	39.3
8	Denver	25.4	10.9	36.3
9	Baltimore	20.6	11.9	32.5
10	Pittsburgh	19.8	9.6	29.5

Source: Bureau of Labor Statistics OES, 2014

Figure 1.19: Annual Median Wages for Workers in Science and Engineering Occupations, 2014

Rank (Avg.)	Metro	Arch / Engineering	Science
1	San Jose	$109,780	$76,220
2	San Francisco	$96,420	$87,310
3	San Diego	$88,600	$71,590
4	Seattle	$88,380	$66,180
-	Peer Avg.	$84,972	$67,510
5	Boston	$82,370	$69,880
6	Denver	$81,640	$64,790
7	Baltimore	$80,540	$65,090
8	Portland	$74,730	$62,960
9	Austin	$77,270	$53,320
10	Pittsburgh	$69,990	$57,760

Source: Bureau of Labor Statistics OES, 2014

9 US Census Bureau, American Community Survey, 2014 1-Year Estimates

10 By local concentration of employment in NAICS 5417: Scientific Research and Development Services using BLS QCEW data.

STEM & MANAGEMENT (cont.)

Computer & Mathematical

While San Diego excels in the science and engineering portions of STEM, the technology and mathematical portions fall behind many peers. The region ranks eighth in concentration of computer and mathematical occupations (SOC 15-0000), according the Bureau of Labor Statistics data. San Jose, Seattle, Austin, and San Francisco lead peers by a relatively large margin, as those regions are known for their computer and software giants like Google, Microsoft, Dell, and Oracle.

Despite being behind these regions, San Diego still offers many advantages to technology firms. Wages for tech workers are lower than the larger markets, except Austin. For example, the median annual wage for a computer/mathematical professional is $31,000 less than in San Jose and about $23,000 less than Seattle or San Francisco. The region is also home to many large software/tech firms like Qualcomm, Intuit, Mitchell, and ESET. Though the region's overall computer and mathematical concentration ranks low, the region is heavily concentrated in computer and information research scientists (SOC 15-1111), which are those professionals who study and solve the large and complex computing problems for business, science, and medicine.[11] Given San Diego's world-renowned scientific R&D and biotech industries, it is reasonable that the region would have a high concentration of professionals supporting these and emerging tech convergence industries like bioinformatics, health IT, and genomics.

Management, Business, and Financial Operations

STEM talent is invaluable for high-tech firms who are interested in relocation or expansion, but firms also need managers, accountants, and other operations professionals. In terms of concentration, the region ranks roughly in the middle of management jobs and business/financial operations jobs per 1,000 workers. The region only ranks exceptionally high in two specific professions, property managers (#2) and natural sciences managers (#3), which is due to the region's large real estate and life sciences industries.

The region also offers competitive wages for firms looking to hire managers and operations professionals. San Diego's labor costs for these professionals are closer to regions like Baltimore, Pittsburgh, and Denver than the Bay area or Boston (figure 1.20).

Figure 1.20: Management and Business/Financial Operations Annual Median Wage

Rank (Avg.)	Metro	Management	Business/ Financial Ops
1	San Jose	$152,820	$87,270
2	San Francisco	$128,870	$81,700
3	Boston	$114,240	$73,820
4	Seattle	$112,120	$72,210
-	Peer Average	$112,816	$71,052
5	Denver	$112,580	$69,740
6	Baltimore	$108,540	$70,100
7	San Diego	$107,870	$70,280
8	Pittsburgh	$101,090	$61,070
9	Austin	$97,110	$61,640
10	Portland	$92,920	$62,690

Source: Bureau of Labor Statistics OES, 2014

11 http://www.bls.gov/ooh/computer-and-information-technology/computer-and-information-research-scientists.htm

EMPLOYEE RETENTION

A major component of a talented workforce is the ability to retain key employees. Higher rates of employee turnover are related to effects like lower productivity, increased hiring costs, and general project disruption.[12] All of these effects can substantially hurt a business's bottom line. Data suggests that San Diego firms have an advantage in this regard, especially among educated workers in the tech and science industries. This study uses two workforce indicators to measure retention: turnover and replacement rate. This study also focuses on specifically degree holders and those who work in the computer systems design (NAICS 5415) and scientific R&D industries (NAICS 5417).

Turnover

Turnover is measured by the difference in individuals hired in one quarter and separations in the next, divided by stable employment during that quarter.[13] It is intended to answer which industries or regions have the most employment churning in a quarter. When looking specifically at the degree holding population, the region ranks fifth overall at 6.3 percent (figure 1.21). When isolating degree holders in tech and science industries, San Diego has one of the lowest turnover rates for computer systems design and scientific R&D workers.

Replacement

Replacement rate is a similar measure to turnover, except more specifically indicates the share of the workforce in a region or industry that needs to be replaced with a new hire. Overall, San Diego also ranks fifth in this measure. However, like turnover, the region ranks higher than peers in computer systems design and scientific R&D (figure 1,2). The region has the lowest replacement rate in computer systems design and the fourth lowest rate in scientific R&D. Combined, the region has a lower rate than any other peer except Baltimore (tied).

Figure 1.21: Firm Turnover Rate of Degree Holders by Industry and MSA, Q2 2014

Rank (Avg)	Metro	All Industries	Computer Systems Design	Scientific R&D
1	Pittsburgh	6.0%	7.8%	3.0%
2	San Diego	6.3%	7.0%	3.9%
3	Boston	5.6%	6.5%	4.5%
4	Baltimore	6.8%	7.4%	3.8%
5	San Jose	5.8%	7.4%	5.0%
6	Portland	6.3%	8.4%	4.4%
7	San Francisco	6.2%	8.4%	4.5%
8	Austin	6.9%	8.4%	5.3%
9	Denver	7.7%	7.8%	6.2%
10	Seattle	6.5%	10.6%	5.2%

Source: US Census Bureau, Quarterly Workforce Indicators

Figure 1.22: Firm Replacement Rate of Degree Holders by Industry and MSA, Q2 2014

Rank (Avg)	Metro	All Industries	Computer Systems Design	Scientific R&D
T-1	San Diego	4.5%	3.2%	2.4%
T-1	Baltimore	4.2%	3.3%	2.3%
3	Portland	4.7%	3.7%	2.0%
4	Pittsburgh	3.9%	3.9%	2.0%
5	Boston	4.1%	3.2%	3.0%
6	Denver	5.2%	4.0%	2.6%
7	Austin	5.2%	4.3%	2.9%
T-8	San Francisco	4.5%	5.2%	2.8%
T-8	San Jose	4.2%	4.7%	3.3%
10	Seattle	4.8%	5.8%	3.2%

Source: US Census Bureau, Quarterly Workforce Indicators

12 Park, Tae-Youn; Shaw, Jason D. "Turnover rates and organizational performance: A meta-analysis." *Journal of Applied Psychology* 98.2 (2013): 268-309

13 QWI 101. US Census Bureau: http://lehd.ces.census.gov/doc/QWI_101.pdf

PART II: FACTORS FOR TALENT

The talent measures that are important to businesses and investors differ from the factors that are important to talented people. Extensive research and polling has been performed on what drives talent to regions and what causes talented people to leave or stay, but this research has often increased the debate. As a result, there is little consensus on what drives talent to and from regions.

According to the U.S. Census Bureau's annual Current Population Survey, people in the United States have traditionally moved for three reasons: jobs, housing, and family. However, why people choose to move is different from why people choose a specific place over another. In a 2014 survey by the American Planning Association, Americans cited quality of life features ahead of local economic health and job prospects as the overriding factor in choosing where to live.[1] Those factors varied by different age cohorts, and priorities were mixed.

Instead of focusing on one prevailing idea on what drives talent, this study uses data on several commonly cited factors to determine San Diego's performance in three key areas:

- Economic Climate / Career Mobility
- Affordable Housing / Cost of Living
- Live / Work Culture

In investigating these factors, this study presents possible explanations as to why San Diego has experienced such explosive recent growth, as well as why the region has lagged peers in some of the other measures explored in Part I.

1 Investing in Place (2014). American Planning Association: https://www.planning.org/policy/polls/investing/pdf/pollinvestingreport.pdf

ECONOMIC CLIMATE

There are a variety of possible measures for economic climate, but this study focuses on the following key components that are most directly important to talent: employment and job growth, wages and wage growth, and career mobility. In other words, these measures help determine if a person who is looking to relocate can: find a job, get paid enough, and have numerous opportunities for job change and career growth.

As detailed in Part I, San Diego is one of the fastest growing metros in terms of degree holders since the end of the Great Recession. The region's large and growing innovation economy—anchored by scientific research and development, information technology, and the defense industry—make San Diego an attractive place for workers in the new knowledge economy. However, the region's economic climate since the Great Recession has been mediocre compared to peers.

Labor Market

As of 2014, San Diego had the highest unemployment rate among peer metros, at 6.4 percent, but San Diego was hit harder by the Great Recession, starting with the highest unemployment rate in 2010 (figure 2.1). The region experienced the fourth largest decline in unemployment rate from 2010 to 2014, falling 4.3 percentage points. As of September 2015, the region's seasonally unadjusted rate was down to 4.6 percent, fourth lowest among peers according to the BLS.

Figure 2.1: Unemployment Rate over time by MSA

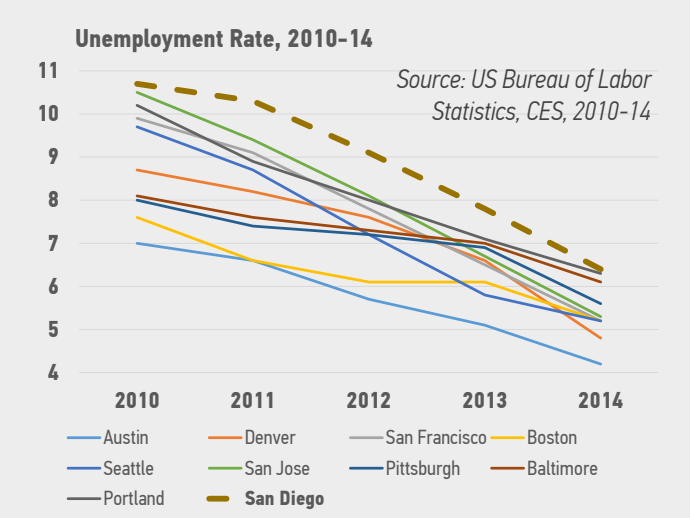
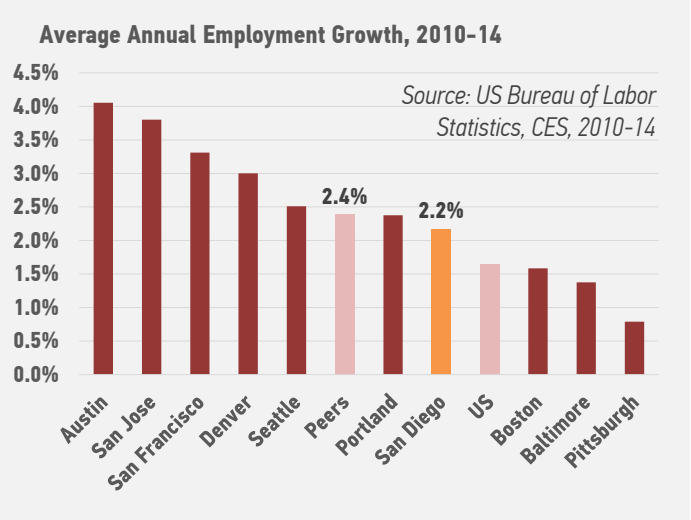


Figure 2.2: Employment Growth by MSA



Job Growth

From 2010 to 2014, the region added approximately 111,000 jobs—an average annual growth rate of about 2.2 percent (figure 2.2). This exceeded the U.S. average growth rate of 1.6 percent, but was under the peer average rate of 2.4 percent. The region ranked seventh out of the ten peers measured.[2]

2 Note: During that same period, the region added 126,000 college graduates. It may appear incompatible that degree growth could exceed job growth, especially amid unemployment decline, meaning any increase in the labor force was offset by increases in employment. However, this is likely be explained by two factors. First, not all college graduates are in the workforce. About 58 percent of those graduates gained from 2010 to 2014 were ages 25-34 or 65 and older. The former likely includes some college and graduate school students, while the latter includes a large number of retirees. Second, the economy continued its shift toward a more advanced innovation-based economy, which requires more degree-holders for technical positions. This means that many non-degree workers were either replaced or earned degrees to retain their jobs.

ECONOMIC CLIMATE (cont.)

Wages and Growth

As detailed in Part I, San Diego wages in science and engineering sectors are higher than their peers, except for San Francisco and San Jose. Conversely, computer/math, management, and operations wages are slightly lower than the peer average, but still competitive nationally and above several peers depending on the job. The total annual median wage for San Diego is eighth compared to peers, but this is in large part due to San Diego's major hotel and restaurant industries, which record lower wages.

Ability to earn a competitive wage is an important factor in location decisions for those looking to continue their careers in a new place.[3] Equally important is how an individual can expect his or her wages to grow. From 2010 to 2014, San Diego's median annual wage grew by 3.5 percent compared to the peer average 5.5 percent—ahead of only Baltimore (figure 2.4).

However, when looking specifically at key occupations in STEM, and operations, the region is outperforming many peers. Computer/math and operations wages were lower than peers in 2014, but growth in those occupations were among the largest from 2010 to 2014. Computer and math occupation wages grew by 13.6 percent during that period, second only to Seattle. Architecture/engineering occupations and business/financial occupations outgrew the peer average as well. Science wages did not experience substantial growth, but the region is already one of the highest paying metros for these jobs.

Career Mobility

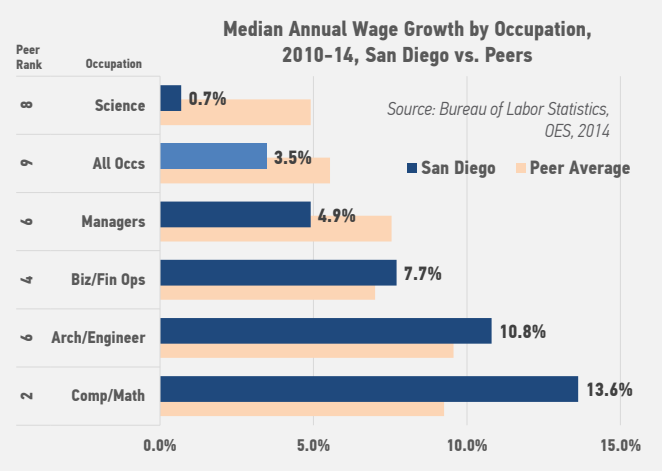
The ability to find a single well-paying job is important, but if an individual is considering moving themselves and possibly a spouse or family to a region, a market with several options for career advancement is a major factor. A thick job market with employer options is important, especially in tech industries where turnover is higher.[4]

Figure 2.3: Annual Median Wages for Workers in Science and Engineering Occupations, 2014

Rank (Avg.)	Metro	Arch / Engineering	Science
1	San Jose	$109,780	$76,220
2	San Francisco	$96,420	$87,310
3	San Diego	$88,600	$71,590
4	Seattle	$88,380	$66,180
-	Peer Avg.	$84,972	$67,510
5	Boston	$82,370	$69,880
6	Denver	$81,640	$64,790
7	Baltimore	$80,540	$65,090
8	Portland	$74,730	$62,960
9	Austin	$77,270	$53,320
10	Pittsburgh	$69,990	$57,760

Source: Bureau of Labor Statistics, OES, 2014

Figure 2.4: Wage Growth by MSA, 2010-14



San Diego's scientific R&D industry is one of the thickest in the U.S. The region has more than 750 firms performing R&D in defense, biotechnology, engineering, and clean technology. San Diego has the most concentrated R&D industry in the U.S., with 28 out of every 1,000 employees in the region working in the industry, compared to six nationally. San Diego also offers the second highest average annual pay in this industry among peers, with the average scientific R&D employee earning $176,000 on average.[5]

3 Luis, Michael. A Tale of Ten Cities: Attracting and Retaining Talent. November 2009. Prepared for the 2nd Annual Meeting of the International Regions Benchmarking Consortium.

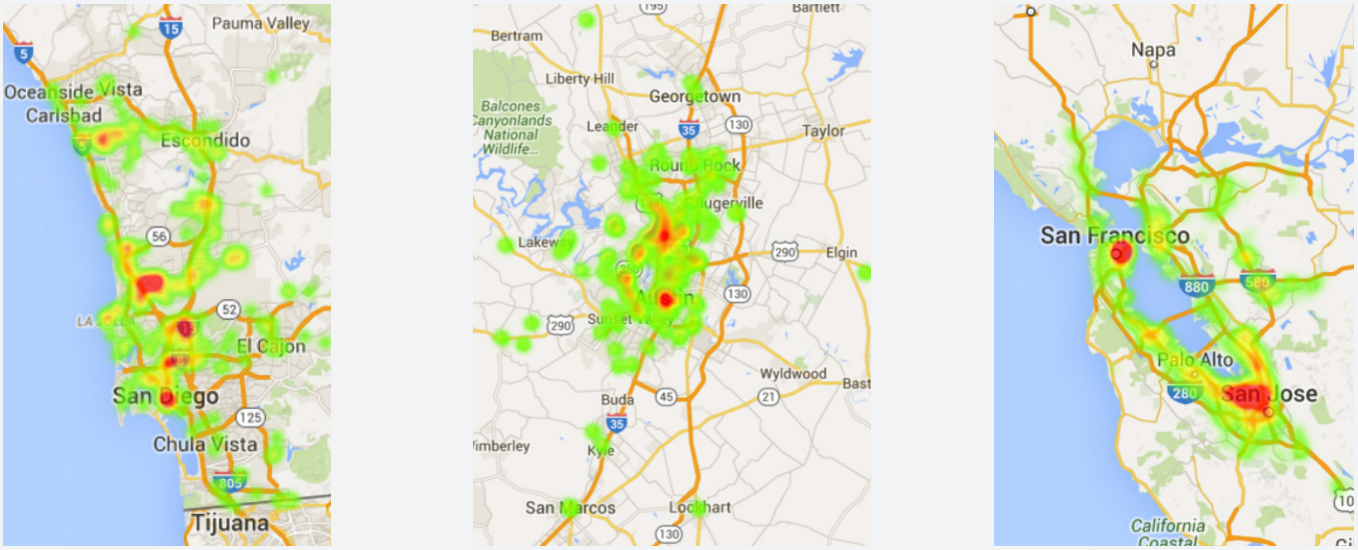
4 Florida, Richard. "The Creative Class and Economic Development." *Economic Development Quarterly* (2014), Vol. 28(3) 196–205

5 Based on data for NAICS 5417: Scientific Research and Development Services using BLS QCEW.

ECONOMIC CLIMATE (cont.)

Figure 2.5: Heat Maps of Tech Firms (NAICS 5415) for Selected MSAs

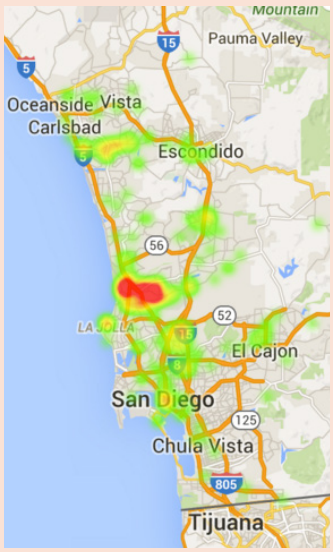
San Diego's tech firms (Left) are dispersed compared to peers like Austin (middle) and Silicon Valley (right)



Source: Info Group Reference USA | Note: Only firms with 5+ employees

Figure 2.6: San Diego Scientific R&D Heat Map

San Diego's Scientific R&D firms are more concentrated in a single area.



Source: Info Group Reference USA
Note: Only firms with 5+ employees

San Diego's tech market is comparatively modest. The region ranks seventh in terms of employment concentration, ninth in firm concentration, and sixth in average annual wage.[6] The region still has plenty to offer tech talent, with more than 1,800 firms in computer systems design, but the region lacks large firms compared to many peers. Only seven San Diego firms in the computer systems design industry employ more than 250 people, compared to 34 in San Jose, 28 in Boston, and 19 in Baltimore. However, the region is not far behind peers like Austin (8) or Seattle (12).

According to these figures, the tech market in San Diego appears characteristically similar to a regions like Seattle and Austin, meaning similar number of firms, employees, and major employers, but San Diego's tech market is geo-spatially different. The maps in figure 2.5 compare concentration of firms with more than five employees in three different markets. San Diego's firm concentration is scattered across five different sub-regions throughout the county. Conversely, most of the firm concentration in Austin is in the center of the city, with some additional dense activity to the north. San Francisco shows this effect to the extreme, with an intense node centered around the urban core, while San Jose has a dispersed, but contiguous tech market.

Compared to San Diego's scientific R&D sector, San Diego's R&D firms are densely packed around a single area or strip along the Torrey Pines Mesa through Sorrento Valley—a contributing factor to the region's reputation as a center for this activity.

6 Based on data for NAICS 5415: Computer Systems Design and Related Services using BLS QCEW.

COST OF LIVING

San Diego's wages for college educated workers, especially in the STEM economy, are relatively high, as outlined in previous sections. However, high wages are counteracted by a relatively high cost of living.

Price Parity

According to the Regional Price Parity Index developed by the U.S. Bureau of Economic Analysis, San Diego is the tenth most expensive region in the United States, and the third most expensive among peers. Regional Price Parity Index takes into account consumer prices for goods, services, and housing (rents) in each metropolitan area in the U.S. It is essentially a comparator of what a person can buy with his or her income relative to other regions in the U.S. In other words, the lower the RPP, the more an individual can buy with his or her income.

Housing

San Diego's RPP is driven up largely due to the cost of housing. Goods and services measures are only slightly above the U.S. and peer averages. However, rent is substantially higher (figure 2.7). Only San Francisco and San Jose have a higher rent RPP.

San Diego's housing prices are equally high. The region ranks third behind San Francisco and San Jose in median home price and housing affordability. The Housing Affordability Index by the National Association of Realtors measures whether or not a typical family earns enough income to qualify for a mortgage loan on a typical home based on the most recent monthly price and income data. Even with San Diego's comparatively high wages, housing affordability is well below the U.S. average of 100, while all peer metros except San Francisco and San Jose are above this threshold (figure 2.8). This of course affects home ownership rates. Only San Francisco has a lower home ownership rate than San Diego (figure 2.9).

The challenge of purchasing a home combined with high median rents makes the cost of living an obstacle in the region. This is likely a major contributing factor to the trends outlined in Part I. Non-degree holders are growing much slower than degree holders, and exhibiting negative growth in the 35 to 44 year old cohort, which is typically prime home buying age. Degree holders generally earn more than non-degree holders, making it more feasible for them to remain in or migrate to the region, despite the high cost of living. Similar trends are apparent in other high cost metros, such as San Jose and San Francisco.

Figure 2.7: Regional Price Parities, 2013

Peer Rank (Lowest 1st)	Category	RPP San Diego (US=100)	RPP Peer Avg. (US=100)
8	All	117.6	108.4
7	Goods	103.5	102.0
6	Services	105.8	104.0
8	Rents	162.7	134.0

Source: Bureau of Economic Analysis

Figure 2.8: Housing Affordability Index, 2014

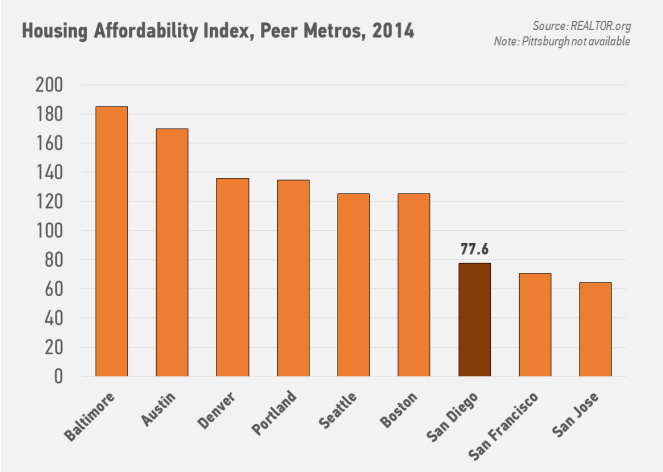
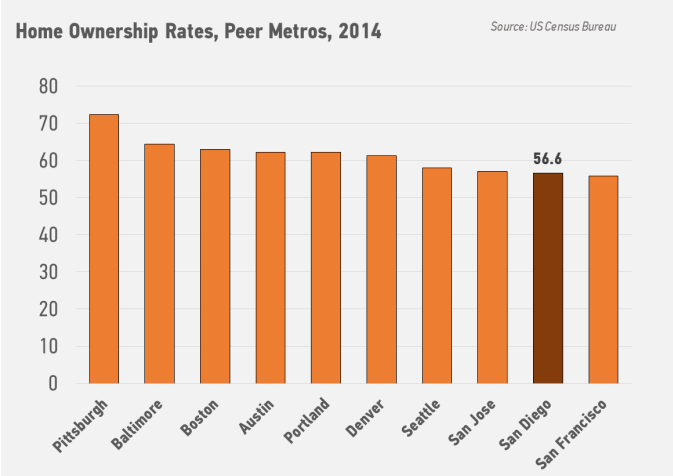


Figure 2.9: Home Ownership Rates, 2014



LIVE/WORK CULTURE

Commute times, transit options, walkability, and workplace culture are becoming increasingly important to America's talent base, particularly among the millennial population.[7] People want to spend less time in cars and in traffic, live in walkable or bikeable places, and work in cool, creative places and spaces.

Commuting & Transit

San Diego is not known for its transit options, but it offers the shortest trip to work in the U.S. Workers on average spend less minutes getting to work in San Diego than any other region, especially if those individuals are commuting by car. The average daily commute time to work in San Diego is 25 minutes, the shortest among peers (figure 2.10). While San Francisco offers more extensive transit options, comparatively, it takes the average worker 31.9 minutes to commute to work regardless of mode of transport, which ranks last. Those minutes add up. San Diego offers the second least annual hours of delay spent in an car, at 6.9 hours per auto. San Francisco is nearly double.

Live & Work Downtown

As shown in figures 3.5 and 3.6, the San Diego region has several central business districts, especially in high-tech industries. Employers tend to be concentrated in several major business centers—Downtown, Sorrento Valley, UTC, Del Mar, Carlsbad, Chula Vista, etc.—while many peers have businesses concentrated around a downtown or nearby central business district. Only San Jose has a smaller share of their workforce centered around downtown (figure 2.12). In 2013, 17.8 percent of San Diego employees worked within a three-mile radius of downtown. Comparatively, 31 percent of Austin workers worked within that radius.

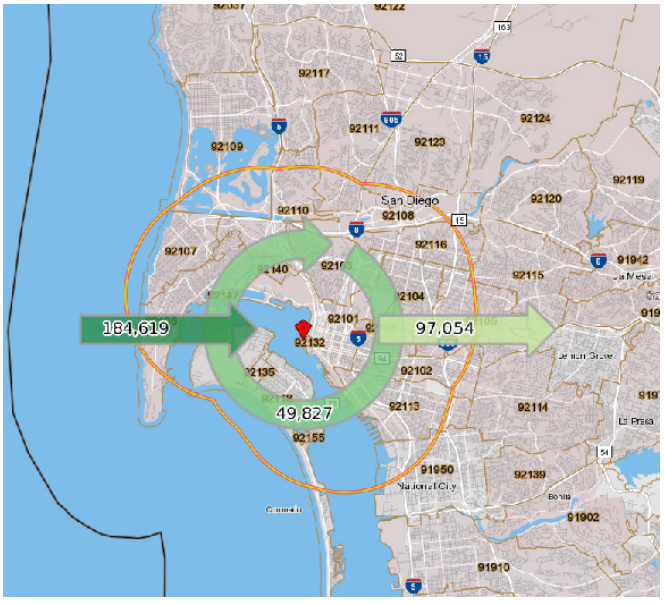
While this trend is concerning for those seeking a downtown, dense work environment, it comes at a cost for workers in many regions, as more workers centered around a single business

Figure 2.10: Commuting Times

Rank (Travel Time)	Metro	Mean Travel Time to Work	Annual Hours of Delay per Auto
1	San Diego	25.0	42
2	Portland	26.0	52
3	Austin	26.5	52
3	Pittsburgh	26.5	39
5	San Jose	27.0	67
6	Denver	27.4	49
-	Peer Avg.	28.1	55
7	Seattle	29.6	63
8	Baltimore	30.3	47
9	Boston	30.8	64
10	San Francisco	31.9	78

Source: US Census Bureau, American Community Survey, 2014

Figure 2.11: San Diego Commuting Patterns To/From Urban Core, 2013



Source: US Census Bureau, OnTheMap, 2013

7 Investing in Place (2014). American Planning Association: https://www.planning.org/policy/polls/investing/pdf/pollinvestingreport.pdf

LIVE/WORK CULTURE (cont.)

Figure 2.12: Live/Work Patterns: Urban Core*

Rank (Live/Work)	Metro	%Live and Work in Urban Core	%Live Outside of Core, Commute In	%Live in Core, Commute Out	%Workers in MSA that Work Downtown
1	Portland	22.4%	77.6%	19.2%	25.1%
2	Baltimore	22.4%	77.6%	32.9%	18.9%
3	San Diego	21.3%	78.7%	41.4%	17.8%
4	Pittsburgh	20.5%	79.5%	18.9%	23.4%
5	San Francisco	19.6%	80.4%	17.3%	23.2%
-	Peer Avg.	19.2%	80.8%	24.0%	21.9%
6	Denver	18.6%	81.4%	26.4%	22.8%
7	Seattle	16.3%	83.7%	13.8%	20.1%
8	Austin	16.0%	84.0%	17.4%	31.0%
9	San Jose	15.2%	84.8%	50.0%	17.5%
-	Boston	N/A	N/A	N/A	N/A

Source: US Census Bureau, OnTheMap, 2013
**Urban core is defined as the 3-mile radius around the 5-digit ZIP most commonly associated with the primary city's downtown.*

district can lead to more traffic and congestion without the right infrastructure. In Austin, for instance, 84 percent of workers commute into downtown from outside, the most among peers. Only 16 percent of workers in downtown Austin also live in the area. By comparison, 21.3 percent of workers in downtown San Diego also live downtown, the third most among peers.

Due to San Diego's many business districts coupled with the desire of many residents to live in the urban core, the downtown area also has a large portion of downtown residents commuting out. The region ranks second behind San Jose in this measure, as 41.4 percent of downtown area residents commute out of the area for work each day. By comparison, only 13.8 percent of those who live around downtown Seattle commute out each day.

This data shows opportunity for downtown, as clearly a large share of the workforce prefers living in an urban area around downtown, but commutes out to another business district each day, and oftentimes at longer distances than some peers. For example, 40 percent of urban core residents in San Diego travel 10 miles or more for work, compared to only 21 percent in Seattle.

Office Space

Innovative work spaces in downtowns and office parks have increasingly become the standard for the modern workforce. This trend, driven largely by Silicon Valley tech firms and the Millennial generation, has put a premium on regions that have employers and commercial real estate firms who can offer cool and creative places to work. While downtown spaces remain important, Silicon Valley has shown that office parks and campus environments can be just as attractive. For instance, Google's campus in Mountain View, CA is often considered the gold standard in the tech community, offering ample amenities to employees.

LIVE/WORK CULTURE (cont.)

In Jones Lang LaSalle's 2015 Tech Outlook Report, the commercial real estate firm noted opportunity in San Diego as a low cost, high startup opportunity metro.[8] The report cited that recent demand from major firms like Lumedyne and Fitbit indicate a strong demand for tech real estate in the region. Only four of the peers in this study—San Jose, San Francisco, Austin, and Seattle—experienced a larger share of local leasing activity from tech. While San Diego's asking rents are higher than some Midwest and southern metros, the region competes on lower cost with the Bay area, Seattle, Boston, and other major metros in the U.S.

Figure 2.13: New iboss Headquarters in San Diego

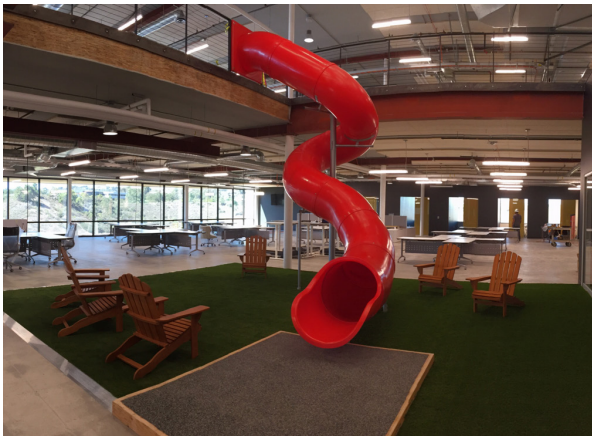


Photo Credit: iboss press release

As demand increases, firms and developers are responding. Local cybersecurity firm iboss recently completed a $14 million, 43,000 square foot office renovation in central San Diego in a building that used to house an SAIC data center. The space has been retrofitted to offer ample amenities to their talent, including outdoor open spaces, creative common spaces, and a slide that connects the first and second floors.[9]

Commercial real estate firm Kilroy Realty Corporation is changing the landscape of office parks in San Diego with new construction centered around campus-like environments and employee amenities. With experience as one of the major landlords to the technology industry on the West Coast to such firms as Linkedin, salesforce.com, Dropbox, Box and others, Kilroy is uniquely positioned to apply office environment lessons learned in peer metros such as Seattle, San Francisco and Silicon Valley to its 2M+ square foot San Diego development pipeline.

The Heights at Del Mar, for example, offers a contemporary campus environment with indoor/outdoor connections, functional outdoor workspaces, an outdoor kitchen, with building system efficiencies and floorplates to optimize flexibility and natural light.[10] One Paseo will provide a suburban town center in Carmel Valley with 608 residences, 280,000sf of office space and 95,000sf of dining and retail options woven together with coastal elegant architecture and sustainable landscaping around public plazas, walking trails and gardens. The project will provide a unique opportunity for employers to attract and retain the best and brightest talent in an amenity rich setting.[11]

Figure 2.14: The Heights at Del Mar

Photo Credit: Kilroy Realty Corp.

8 http://www.us.jll.com/united-states/en-us/Documents/technology-trends/jll-us-2015-technology-trends-market-outlook.pdf
9 http://resources.iboss.com/press_releases/Expanded_San_Diego_Headquarters.html
10 http://www.kilroyrealty.com/property/heights-del-mar-building-3
11 http://www.kilroyrealty.com/property/one-paseo

LIVE/WORK CULTURE (cont.)

Local consulting and management firm Gafcon is transforming existing commercial office parks and campuses that reflect the trends in other innovative regions around the world, while integrating San Diego's unique physical characteristics.[12] The firm is currently setting out to transform Sorrento Valley—home to Qualcomm and many other San Diego tech office parks. The firm intends to link existing parks and employers while making dated office landscapes feel more like the 21st century tech campuses to which millennials in particular have become accustomed.

Figure 2.15: IDEA District

Photo Credit: ideadistrictsd.com

As noted, downtown real estate is of particular importance, and The Idea District is a project with the vision of transforming an entire neighborhood in San Diego's urban core.[13] The vision includes an urban live, work, play environment that connects traditional business districts, transit, and amenities to a modern workspace. The first phase, IDEA 1, broke ground in 2015 and will offer 8,000-plus square feet of ground office space, 292 housing units, and 5,000-plus square feet of restaurant and retail space on one full city block.

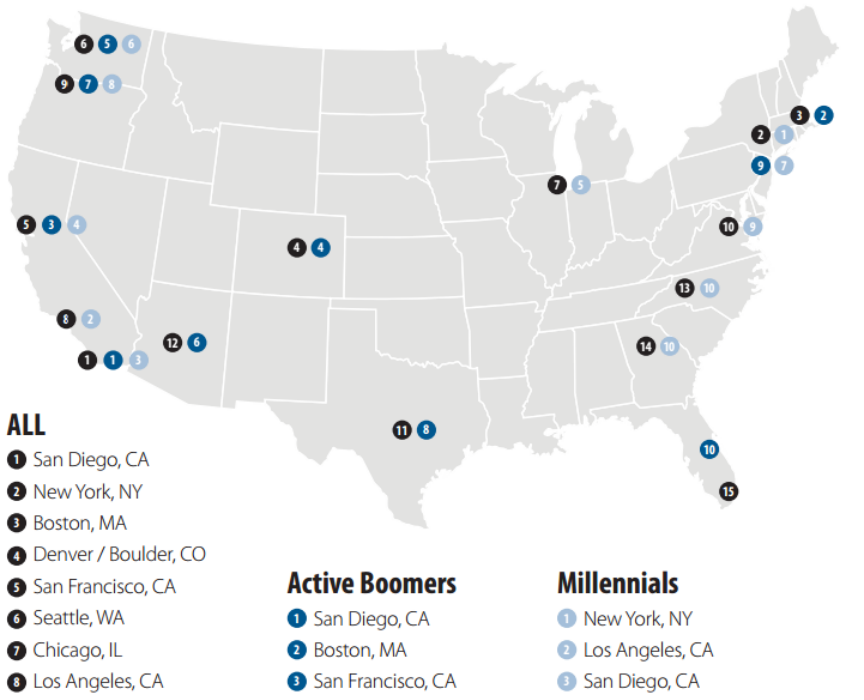
12 http://www.gafcon.com/
13 http://www.ideadistrictsd.com/

PART III: BUILDING ON MOMENTUM

The San Diego region has a lot to offer firms looking for highly educated and technically skilled talent. The region compares favorably to peers in talent attraction, retention and growth measures like migration and degree attainment trends. Firms in San Diego also tend to retain their employees for longer, and can leverage top talent at a discount compared to the Bay Area.

Similarly, the region has plenty to offer talented workers, and people are recognizing San Diego's attractive quality of life. In the 2014 study, *Investing in Place* by the American Planning Association (APA), San Diego was cited as the top potential location when respondents were asked which three metros were of most interest (figure 3.1). In addition to the lifestyle amenities that come with ample sunshine hours, proximity to beaches and mountains, and attractive neighborhoods, the region offers career amenities as well. High wages relative to most peers, a thick labor marker with ample opportunities, short commute times, and innovative new spaces are all attractive to a talented workforce.

Figure 3.1: APA Survey



Source: Investing in Place, American Planning Association. http://www.planning.org/

However, San Diego trails peers in some other key measures, and is currently behind most metros in education attainment, despite the recent momentum. Most notably, people in the region pay more for goods and services than most peer metros, especially when it comes to housing. In addition, despite being a leader in science and engineering, the region falls short of its peers on the density and development of computer and technology professionals. The region must seek to develop and implement new programs and practices to reinforce momentum and address critical workforce needs.

PART III: BUILDING ON MOMENTUM

Peer regions are leveraging assets and local leadership to keep pace in attracting, retaining, and growing talent. Civic, education, and business leaders in San Diego are not sitting idly by, as the region has many best practice programs of its own, but San Diego can learn from other regions who have scaled similar programs or implemented new programs worth considering for the region. The following best practices emerged from studying other regions and local programs tackling talent attraction, retention and growth challenges:

- **Strengthen industry-university partnerships**
  Example: In 2013, Johns Hopkins University in Baltimore developed a bi-annual event called HopHacks[1], which invites students from universities anywhere in the country to compete for prizes in a 36 hour coding and programming competition. In addition to attracting hundreds of students to the city, the event attracts sponsorship and participation from regional technology-driven firms. These firms give presentations on employment opportunities and have access to resumes of participants in the contest, connect local and international students to high-tech firms in Baltimore.
  San Diego action: Scale existing programs like SD Hacks[2] and Link2[3] that expose students to career opportunities and leverage those programs for internships and jobs with San Diego based companies.

- **Leverage major events to get message to new audiences**
  Example: Austin has been leveraging South by Southwest (SXSW) for years[4], turning the popular music, film, and technology festival into a global networking event that exposes the world to Austin's unique culture and economy.
  San Diego action: San Diego Comic-Con attracts more than 100,000 people from around the world each year for the arts and culture festival[5], which offers the opportunity to market San Diego's own unique culture and economic opportunity. The region also attracts major televised events like the MLB All-Star Game and the Breeders' Cup, which present opportunities for the region to broadcast its message to a large audience.

- **Develop a dedicated web presence and utilize social media tools**
  Example: Imagine Pittsburgh is a website developed by Allegheny Conference on Community Development to serve as a virtual concierge for talent and to showcase Pittsburgh as a top international destination for talent.[6]
  San Diego actions: The region currently has several sites that detail the economic opportunities for businesses and investors, but San Diego Regional EDC must engage partners to develop a website that exclusively tells San Diego's story through the lens of its talented workforce.

1 https://hophacks.com/
2 http://www.sdhacks.io/
3 http://sandiegobusiness.org/services/initiatives
4 http://www.sxsw.com/
5 http://www.comic-con.org/
6 http://imaginepittsburgh.com/

- **Engage youth in STEM education**
  Example: Qualcomm's Thinkabit Lab is a combination of a lab, makerspace, and classroom for 6th to 8th grade students from all cultural and socioeconomic backgrounds.[7] It has served 3,000 local middle school students and is recognized as a best practice for career exploration and the promotion of science, technology, engineering and math (STEM) careers.
  San Diego action: Regional leaders should replicate and scale five regional "Thinkabit" style labs by working with firms and schools to expand this successful model.

- **Expose K-12 to summer jobs and internships**
  Example: K-12 summer jobs are a way to elevate the local talent base and engage students in growing sectors of the STEM economy. Boston, for example, put more than 3,000 students to work every summer with well over half of the commitments being paid for by the private sector.[8] Boston has sustained these efforts for more than a decade, using both public and private resources and leadership.
  San Diego action: Regional leaders should set a goal for youth employment and create a long-term campaign towards increasing youth engagement in summer jobs and internships.

- **Implement creative tax and zoning policies to incentivize redevelopment**
  Example: Though New York City was not a peer in this study, the city has been tackling urban redevelopment issues for decades, which is important for inspiring talent and developing denser, more attractive geographic live and work clusters. The 125th Street Revitalization is a partnership between the NYCEDC and several NYC departments to identify a shared vision for "Harlem's Main Street" in NYC.[9] The partnership with the city led to a complete rezoning of the area, incentivizing mixed-use development to create a world-class arts and entertainment district.
  San Diego action: Create economic incentives for priority sector businesses to open and expand in low-moderate income neighborhoods like City Heights and Southeastern San Diego. This could involve expedited permitting, waiving of fees or taxes and possible collaboration with neighborhood philanthropic organizations such as the Jacobs Center and Price Philanthropies.

7 https://www.thinkabitlab.com/
8 http://www.bostonsummerjobs.org/about/
9 http://www.nycedc.com/project/125th-street-revitalization