# Welcome

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Report Partners

Orange County Business Council
Orange County Workforce Investment Board
Acknowledgements
Dear Workforce Development Partner:

Orange County Business Council (OCBC) and the Orange County Workforce Investment Board (OCWIB) are pleased to present the 2013-2014 Orange County Workforce Indicators Report. This report highlights the fundamental accomplishments achieved by Orange County's employers and workers, the education and workforce training system, as well as the challenges that California must address to develop a skilled workforce for the 21st century economy.

Last year's report focused on the challenges Orange County faced with a struggling economic recovery together with a state and nation grappling with slow job growth. In this report, Dr. Wallace Walrod, OCBC's Chief Economic Advisor, finds that while the recovery from the Great Recession gains momentum, employers continue to encounter prospective workers lacking in relevant, needed skills for the jobs available. With the impending changes to education in California and the nation this year, the Workforce Development Committee examined several broad based issues, including implementation of Local Control Funding Formula, business engagement in pre-school education, and outreach to Latino and Asian parents encouraging English language acquisition and fluency to help close the achievement gap.

How do we recruit qualified workers to replace retiring baby boomers and what do businesses need to entice the talented Millennial generation, keep them involved, and build institutional knowledge for the future? Other issues persist such as how employers can support the arts to keep students — their future employees — engaged and motivated, as well as supporting the Community College system as it embarks on new strategies toward transferring and training students toward career success?

The theme of this year’s conference is “Preparing a 21st Century Workforce: The Common Core and Education Modernization.” Orange County continues to be the place to live, work and flourish. Orange County already has developed a great education and workforce training foundation and continues to work hard on identifying steps to success through:

- Promoting education reform;
- Supporting local control so that communities may decide what is best for its students; and
- Advocating groundbreaking legislation to ensure success in innovation and achievement.

OCBC and the OCWIB have built an enduring alliance to seek out creative workforce solutions, educational success and the best in workforce training. We hope you will gain new understanding about these issues and a spirit of collaboration and partnership from this conference. We encourage you to utilize today’s materials as a resource as you plan for future success in business, educational institutions, and local government.

Sincerely,

Lucy Dunn
President and CEO
Orange County Business Council

Bob Bunyan
2013 Chair
Orange County Workforce Investment Board
October 3, 2013

On behalf of AT&T, it is a pleasure to welcome you to the 12th annual Workforce Development Conference.

Southern California continues to be the place employers and workers congregate to when it comes to innovation, technology, health care and life sciences. Orange County has much to offer by way of a high quality of life and limitless opportunity. Despite all the prospects, residents still recognize they will need to adjust to new workforce realities as we move away from the aftermath of the Great Recession and into more effective education and training methods. This will sustain the way of life we crave by ensuring that we have traditional economic development, a functioning infrastructure, adequate workforce housing, and continued workforce development.

This year’s theme, “Preparing a 21st Century Workforce: The Common Core and Education Modernization” continues to challenge businesses and educators as we strive to attract the best and the brightest. This is no small act as the state and nation alter how we educate our students and fund our school districts. Our parents are acclimating to a new way of teaching their children about cognitive thinking because that is essential to career success for any business, non-profit or government entity. The challenges we have identified include: adjusting to the changing work habits of the Millennial generation; maintaining arts programs in schools to keep students engaged and promote creativity; and ensuring our 3- and 4-year-olds have access to comprehensive preschool programs to guarantee they will excel in English reading and writing skills. Other challenges we have identified include teaching immigrant parents how the education system works in California, and partnering with higher education institutions to identify the training skill sets needed to make certain our businesses thrive and our economy continues to move forward.

Orange County Business Council continues to be a key partner with AT&T in promoting the S.T.E.A.M. disciplines (Science, Technology, Engineering, Arts and Math), Latino Educational Attainment, and preparing our young people for the global economy. Business, non-profit organizations, and educators working together to close the Achievement Gap will continue to inspire self-assurance, open the world to new ideas, and sustain our economic engine in the county. With challenges, comes resiliency, but it makes what we do in Orange County and our community worthwhile.

Sincerely,

Richard Porras
Regional Vice President of External Affairs
AT&T
2013 OCBC Chair, Workforce Development Committee
October 3, 2013

On behalf of the Orange County Board of Supervisors, I am pleased to announce the release of the 2013-2014 Orange County Workforce Indicators Report.

The Report provides unique and valuable information that educators, workforce/economic development, professionals, non-profits and Orange County businesses can utilize throughout the year for strategic planning and policy development. This year’s report clearly defines the trends in education, employment and population for the county. It is an indispensable tool of the Comprehensive Economic Development Strategy (CEDS) of Orange County, allowing for analysis of challenges and identification of potential opportunities that affect favorable economic development from San Clemente to La Habra.

The Orange County Workforce Investment Board and Orange County Business Council have maintained a strong and innovative partnership for more than decade. The Orange County Board of Supervisors congratulates the Workforce Investment Board and the Orange County Business Council along with praise for for their commitment to the enduring strength and growth of our local economy.

Sincerely,

Shawn Nelson
Supervisor, Fourth District
Economic trends permanently shifted in the last decade, transforming the workforce development landscape. Orange County is positioned to thrive in the post-recession economy, establishing an innovative and effective foundation for future job growth and long-term prosperity.
INTRODUCTION

The Great Recession caused devastating job losses and dealt severe economic hardship to the national and global economy. Recovery is now in sight, but difficult economic and workforce choices remain for regions that must deal with a complex set of gaps, mismatches and tradeoffs. For example, persistently high unemployment rates among Americans aged 18 to 24 reveal a generational divide in workers’ access to employment opportunities and, by extension, economic prosperity. At the same time, employers throughout the country continue to report that they are unable to find workers possessing the skills that their firms need. Together these realities suggest that the educational and employment training systems currently utilized in the U.S. must evolve if they are to meet the task of preparing workers for success in the years ahead.

This year has brought a sunnier outlook to the nation’s economic status, including a revitalized stock market, rebounding home prices and downwardly trending unemployment rates. Orange County’s recovery was comparatively quick compared to surrounding counties and California as a whole thanks to its diverse demographics, competitive business environment, skilled workforce and continued job growth in innovative emerging industries. Orange County’s recovery took full force in 2013, once again placing the county as the economic engine driving Southern California forward.

Competing Successfully by Adjusting to Shifting Trends

The private sector became “lean and mean” in terms of its hiring policies and company department compositions. Although a large portion of jobs lost in Orange County may not return, emerging industries within the cross-cutting clusters of information technology, international trade, creative professions and green technology provide a much-needed boost for job creation and regional competitiveness. Orange County’s education and workforce placement systems are also adapting to remain competitive and relevant, fostering increased investment in high-tech degrees relating to STEM disciplines. In order to sustain continued economic growth, Orange County is taking substantial steps in three key areas profiled later in the report — IT education, community college operations and military veteran employment programs — utilizing the county’s natural strengths in its innovative spirit, high quality of life, desirable geography and receptiveness to incorporating a diverse mix of industries to prepare for the future. With continued focus and diligence, Orange County can differentiate itself from its peers by staying ahead of economic trends in the components critical to regional prosperity.

Innovation Leads to Job Creation and Wage Growth

While the Great Recession put forth substantial challenges for Orange County to overcome, it has also created a variety of new pathways for increased economic activity and job creation. This year’s report identifies the most significant opportunities for economic growth and job creation, while highlighting the challenges Orange County currently faces, which will require creative solutions. Understanding the dynamics of the economic changes brought on by the recession is crucial to maintaining Orange County’s future economic viability.
Orange County has never lacked the building blocks for innovation as it is:

- Home to a large number of high-tech industries and prominent companies;
- A leader in new, emerging industries such as advanced transportation, alternative energy, medical devices and computer gaming;
- A creative, problem-solving and IT-savvy workforce exemplified by Disney’s Imagineers; and
- A home to large concentrations of renowned higher education institutions, business incubators and venture capital investment.

These attributes provide Orange County with the tools necessary to thrive among shifting demographic and economic landscapes. As demographics and industries within the county evolve, it is crucial that Orange County does not lose its innovative and competitive edge. Continuing to develop innovative policies and mechanisms to adapt to shifting trends rests largely on successful collaboration between Orange County elected officials, the business community and policymakers.

Creating Job Growth by Understanding Key Economic and Workforce Drivers

Among economic development and workforce experts, there is nearly unanimous agreement on the need for industry-driven, sector-focused workforce development strategies that track with economic development priorities. By using detailed information on current and projected workforce demand provided by the private sector, regions can work to set appropriate goals, align funding and programming, and encourage cross-sector collaboration on the implementation of educational and workforce training initiatives that support economic development aims.

One recent success story involves the U.S. Department of Labor Workforce Innovation Fund grant awarded to Orange County for the Information Technology Cluster Competitiveness Project. Results from the study will increase the number of training programs providing nationally-competitive IT skills, create an expanded and sustainable pool of skilled IT workers and, ultimately, increase growth and competitiveness in the local IT industry cluster. With a focus on long-term sustainability and fostering replication, the project consortium partners will implement an “IT Roadmap” model that communities across the country can adopt wherever the IT cluster is a significant economic driver.

Initiative goals include:

- Develop business-responsive IT training programs that will produce better results for both employers, whose skill needs are met, as well as workers, whose new skill attainment will qualify them for better positions;
- Promote a collaborative approach to identifying and addressing IT business needs by providing greater cooperation across workforce development, education and economic development programs and delivery systems.

Short-term outcomes will include increased placements of new and returning workers into IT positions, skills upgrade of incumbent workers already in the Orange County IT industry and preparation of a greater number of high school students for entry-level IT jobs or advanced training. Long-range outcomes will include:

- The availability of a large pool of skilled IT workers;
- Increased capacity of the workforce system partners to support IT business needs; and
- Identification of a series of promising practices that are worthy not only of being institutionalized as part of the local service delivery system, but of being replicated throughout the nation's education and workforce system.

Continued emphasis on the need for greater industry engagement, data-driven solutions, clear goals and cross-sector collaboration suggests the emergence of a new best approach to workforce development in Orange County. In order to help understand and appreciate the economic and workforce foundations on which Orange County currently stands, the 2013 to 2014 Orange County Workforce Indicators report highlights the current and projected trends that will shape the future of the county, including sections highlighting Orange County's community colleges, veterans and IT industry. Orange County Business Council and Orange County Workforce Investment Board are pleased to collaboratively promote Orange County's key competitive advantages while simultaneously engaging, supporting and connecting groups of workforce, education and business community leaders to ensure a prosperous economic future. We hope this report inspires Orange County leaders to take initiative, work together and craft the innovative education and workforce solutions needed to keep Orange County moving forward.
Orange County’s demographic makeup is aging rapidly and becoming increasingly diverse. Local and regional leaders are essential for planning around the county’s shifting population trends and guiding Orange County’s residents toward long-term economic success and prosperity.
WHY IS THIS AN ISSUE?

Both education and workforce training programs should be designed to accommodate Orange County’s current economic, population and workforce trends. Population demographics point to the need for initiatives and strategies to support diverse ethnic communities and the county’s rapidly aging general populace. Orange County’s aging population requires a broad range of healthcare services, housing options and enrichment programs to sustain a satisfactory quality of life. With a culturally diverse community and workforce comes the critical need for English language proficiency programs and initiatives to increase educational attainment across all levels (K-12, community college, and university) in order to build a well-educated, high-earning workforce that meets current and future labor market demands.

2012 Orange County Demographic Snapshot

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Source: U.S. Census Bureau, Population Estimates Program

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HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Age Trends

In 2010, Orange County had a population of 3,010,232 (U.S. Census Bureau, 2010 Census) and a median age of 36.2 years. Currently, around 26.6 percent of the county's population is less than 19 years old, 61.1 percent are between the ages of 20 and 64, and seniors at or above the age of 65 comprise 12.3 percent of the total. Compared to state and national age trends, Orange County has a slightly larger proportion of working-age residents (20 to 64) and a smaller proportion of residents aged nine and under. These age trends can generally be attributed to slightly lower levels of natural increase (defined as births minus deaths), but also indicate Orange County's larger concentration of active workforce participants. These trends are projected to continue over the next several decades, driving a dramatic rise in Orange County's concentration of residents over the age of 55, with an associated drop in the relative proportion of all other age groups as a percentage of the total Orange County population.

Population Growth

From 1990 to 2010, Orange County’s population increased by approximately 600,000 residents, with the majority of that growth occurring in the 1990s. The county traditionally exceeded state and national growth rates since 1950, but the population growth rate from 2000 to 2010 was just above 5 percent, which is a significantly slower rate than the prior 50 years. However, from 2010 to 2012 the county grew by an estimated 2.7 percent, once again placing it back above the state, which experienced a relatively slower growth rate of 2.1 percent. The California Department of Finance estimated an additional 79,895 residents from 2010 to 2012, increasing Orange County’s population to 3,090,132 by 2012.
Between 1950 and 1980, the chief driver of Orange County population growth was migration from other states and Californian counties. In more recent decades, natural increase has become the main source of the county’s population growth. Foreign immigration to Orange County continues to trend positively, accounting for 151,002 in population growth since 2000. Population growth experienced in the 2000s was primarily due to natural increase (299,661 residents), or about 30,000 babies born annually. However, population growth due to natural increase gradually slowed as the number of births dropped almost 14 percent in 2008 — a typical trend during recessionary periods. As Orange County continues toward economic recovery, natural increase rates have yet to return to pre-recession levels, but the return of positive net migration has driven population growth with its relative spike in 2011, the first net positive migration since 2001.
Ethnic Composition

Orange County will continue to maintain its increasingly diverse ethnic composition. In fact, by 2020, Latinos are projected to become Orange County’s largest ethnic group and Asians will make up an increasingly large share of the population. Since 2005, Latinos have accounted for more than 50 percent of the total births in the county, followed by Asians at 25 percent. However, the 20-year growth rate of Asian population in Orange County outpaced Latino growth rates despite Asian’s smaller actual numbers. From 1990 to 2010, Orange County’s Asian population increased by 115.8 percent compared to an increase of 79.3 percent by Latinos.

Over the course of the next several decades, the 55+ population is expected to rapidly grow, while the younger population will decline as a proportion of the county population.

3,090,132
2012 Orange County Population

Source: U.S. Census Bureau, 2010 Census
Since 2005, **Latinos** have accounted for more than **50 percent of the total births** in the county, followed by **Asians at 25 percent**.

By 2020, Latinos are projected to become Orange County’s largest ethnic group and Asians will make up an increasingly large share of the population.
WHY IS THIS AN ISSUE?

A region's housing supply must keep pace with long-term population and job growth in order to balance projected economic growth with the region's ability to house a growing workforce. Even during the Great Recession, Orange County was a net importer of workers from surrounding Southern California counties. Housing availability is necessary for families looking to take advantage of Orange County's job opportunities, young residents just starting careers who might otherwise leave the region due to housing constraints and attraction of key workforce talent to meet the labor market needs for an increasingly skilled workforce, and all of which help to ensure long-term sustainable economic recovery and job creation.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

The California Department of Finance estimates that between 2010 and 2013, Orange County added 10,077 new housing units, bringing the total housing unit count to 1,056,195. The estimated housing growth rate of 0.36 percent is far behind the estimated population growth rate of 0.78 percent during the same time period. Compounded by high median housing prices carrying through 2013 and the sluggish pace of new home construction, there is a notable workforce housing supply shortage risk for the county.

In 2010, Orange County had a total of 1,046,118 housing units and a home vacancy rate of only 5.4 percent. Compared to the 8.1 percent vacancy rate for California and 11.4 percent vacancy rate for the nation, Orange County’s residents consistently utilize the homes available in the market. Of Orange County’s total occupied housing units in 2011, 60.3 percent are owner-occupied and 39.7 percent are renter-occupied. The ownership rate in the county is higher than the state (56.7 percent) but lower than the nation average (66.1 percent). From the 1990s until the early 2000s, home ownership rates grew and rental occupancy fell drastically. The later 2000s saw the tables turned, with stagnant home ownership rates and rental occupancy growing by approximately three percent.
Overall, the total number of housing units in Orange County grew by 13.6 percent from 1990 to 2010, almost equivalent to the state growth rate of 14.1 percent, but far below the national growth rate of 28.8 percent. The three cities that experienced the largest population growth also experienced the highest housing growth. Housing units in Aliso Viejo increased by 320 percent between 1990 and 2010, followed by Rancho Santa Margarita growing by 173.4 percent and Irvine by 87 percent.

Future housing growth is estimated to centralize near job-center cities equipped with easily accessible transportation infrastructure, such as Anaheim, Irvine and Santa Ana. Housing options will likely change to reflect the need for higher residential densities to house a growing workforce or, in other words, the construction of multi-unit housing options such as apartments or condos.

Please see the Workforce Housing section of the report for more information on the county’s housing climate, as well as OCBC’s 2012 Workforce Housing Scorecard (available at www.ocbc.org/research) for detailed analysis of Orange County’s housing context.
As the Orange County economy recovers from the Great Recession, economic development and workforce programs should target opportunities to foster high-paying occupations, increase median wage levels and expedite employment growth. At a time of slow job growth and income stagnation at the state and national levels, continued focus on Orange County’s comprehensive economic development strategy and the development of a more skilled workforce are essential in maintaining positive job creation, income and competitive advantage trends.

**WHY IS THIS AN ISSUE?**

Creating good-paying jobs that keep Orange County’s median household income growing is crucial to maintaining and growing a vibrant and prosperous economy. While the state projects that low-wage occupations will be the primary driver of the region’s employment growth in the next 10 years, Orange County’s employment growth is projected to be driven by emerging industry clusters — such as High-tech and Biotech — that are primarily high-wage occupations demanding high-level skills. Continuing to create a more highly skilled workforce is increasingly necessary to meet future labor market demands in these critical industries.

**HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?**

Sustained employment growth, rising wages and increasing incomes allowed Orange County to become the economic engine for Southern California while maintaining an unparalleled quality of life for its residents. Positive income trends are a by-product of the county’s business climate concentration of successful employers, high growth in key industries, innovation and its well-educated workforce.

Orange County’s 2010 median household income was $73,380, which was 22.9 percent higher than the state ($59,659) and 41 percent higher than the nation ($52,041), which is a trend that goes back several decades. Between 1990 and 2010, Orange County median household incomes were 24.9 percent greater than state averages and 44.5 percent greater than national averages.
The past two decades brought significant changes to Orange County’s distribution of income categories. In 1990, approximately 30 percent of residents had annual incomes under $30,000; 25 percent had incomes in the $30,000 to $49,000 range; and 23 percent were in the $50,000 to $74,999 income range. Top tier income categories — those making $75,000 to $124,999 and more than $125,000 — were at 17 percent and 6 percent, respectively.

By 2000, the proportion of Orange County workers making less than $75,000 shrank to 63 percent, while the two largest income categories grew to 37 percent. The largest growth occurred in the over-$125,000 income group (9 percent), while the largest decrease occurred in the below $30,000 income category (7 percent). These trends continued through the most recent decade, with the proportion of lower income groups in Orange County shrinking further and the top two income categories maintaining steady growth. Overall, the two highest income groups in 2010 represented nearly 50 percent of all households, a testament to the significant positive impact that a favorable economic and business environment has on long-term regional prosperity.
While recovery in Orange County is progressing steadily, replacing permanently changed job roles and creating new opportunities will require innovative strategies and new perspectives on education and workforce initiatives to adjust to a vastly different job climate. Education, workforce and economic development strategies must all be put under the microscope to identify the most effective pathways and plans of action for expanding Orange County’s reach and competitiveness following recent hardships.
Application for Employment

Please fill out form completely for employment considerations.

Position Applied For:

Social Security No.:

Full legal
Home Street
City
E-mail Address:
Education:
Highest school grade
Do you have a high school
Number of years of post high
Name and Location of Educational Institution:

First

State

Degree Received
WHY IS THIS AN ISSUE?

Although many economists initially estimated a quick recovery from the Great Recession, the lasting damage to economic vitality and job creation were greatly underestimated. The spending habits of businesses and consumers have been slow to improve. Many societal and business trends in traditional hiring and staffing patterns have permanently shifted. There is a growing realization that a significant portion of the jobs that were lost will not return. Expecting recovery to stem exclusively from traditional pathways of economic and employment growth will be ineffective and new ways of thinking are required to prepare the next generation for future job market expectations.

The Orange County job profile reveals some significant improvements through 2013, including a declining unemployment rate. However, for many occupations critical to fostering countywide growth, there are still a large number of discouraged job seekers who are unemployed, underemployed or have stopped looking for work. If there is a continued lack of available job opportunities, it will subdue the effects of the county’s otherwise healthy economic growth outlook. In order to remain competitive in this challenging environment, companies are maintaining their “lean and mean” profiles created in response to the Great Recession and emphasizing operational efficiency and cost savings as means to achieve profitability.

The recent economic downturn has forced some older workers into early retirement, while many more have chosen to work longer than expected due to threats to their post-retirement plans. One serious issue emerging from the recession that the unemployment rate alone cannot fully convey is the matter of reduced job openings for the younger workforce, which escalates labor market competition in an already strained job market.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Job Loss and Employment

Orange County lost approximately 162,000 jobs, a staggering 10.7 percent of its payroll employment, from 2007 to 2010. Construction experienced the largest percentage decline (28.6 percent), which translated to a total of 29,467 lost jobs. Significant employment loss was experienced by other industries as well, including Business and Professional Services (34,314 jobs), Trade, Transportation and Utilities (27,050 jobs), Manufacturing (25,867 jobs), and Financial Services (22,025 jobs).

Last year was a year of continuing recovery for the overall job market. Orange County employment grew by approximately 35,000 private sector jobs in the first half of 2012, but unemployment rates remained high, fluctuating between 7.4 percent and 8.2 percent, an improvement from the 8.5 percent to 9.2 percent unemployment rates during 2011. The tipping point for 2012 began in September, when unemployment dropped to 7.1 percent. Unemployment continued to dwindle to 6.8 percent by the end of the year, a full 1.1 percent improvement from December 2011. As of June 2013, county unemployment hit 5.5 percent, the lowest unemployment rate recorded since June 2008. Orange County continues to reduce its unemployment rate, but an increasingly large percentage of the young labor force lacks enough entry-level job opportunities to balance industry-specific employment significantly.
Chapman University forecasts an estimated gain of 32,000 jobs in Orange County at a growth rate of 2.3 percent. With the pickup in real GDP growth in 2014, the forecast calls for job growth of 2.6 percent in Orange County. Employment increased by 1.5 percent in 2012 and California State University, Fullerton projects that it will increase 2.1 percent in 2013 for Orange County, which translates to a gain of 20,500 jobs in 2012 and 29,500 jobs in 2013, which are increases that follow the 14,375 jobs added in 2011.

A month-to-month trends analysis from January 2009 to June 2013 shows the recessionary drops in industry employment and the subsequent lag in employment recovery. While most industries showed significant employment declines during the recession and subdued growth coming out of the initial downturn through 2011, the majority of industries have produced steady growth through 2012 and 2013 thus far. The greatest improvements have come from Education and Health Services, Construction, and Financial Activities, while the greatest recent declines are found within Retail Trade and Government Employment. The two sectors with the biggest declines during the Great Recession — Construction and Financial services — are slowly returning to their pre-recession hiring levels.

Orange County is adjusting relatively well to a post-recession global economy compared to its peers; at the state level, a more distressing economic profile takes shape. In the 1990 to 1991 recession that saw severe defense downsizing and aerospace cutbacks, California lost 517,000 payroll jobs and unemployment rates hit 9.9 percent, yet recovery to peak levels came within 21 months. In the 2001 recession caused by the bursting of the “dot-com” bubble, California lost 365,000 jobs, yet only took 28 months to recover. The recent 2007 to 2009 recession cost the state 1,366,000 jobs over 38 months. Compared to past recessions, California’s recovery has been prolonged and painful.

As of June 2013, the Chapman University model anticipates 2.1 million new payroll jobs to be created through 2013 and another 2.2 million jobs in 2014 for the nation as a whole, which will reduce the unemployment rate to 6.7 percent by the end of 2014. Statewide, Chapman University estimates 307,000 jobs to be created through 2013 at a growth rate of 2.1 percent, and a 2.3 percent growth rate through 2014. These projected increases in job growth will continue on the heels of the 0.6 percent growth in 2011. While payroll job growth is showing signs of recovery, the lower 2014 forecasted rate casts doubt about California’s ability to regain its peak employment levels in the near future.

With this steady stream of improvements in the job market and a greatly reduced unemployment rate that’s gone beyond expectations, the county is well on its way to recovering from the more than 150,000 jobs lost during the Great Recession.
Projected Distribution of New Job Openings Signals Challenges Ahead

California’s Employment Development Department (EDD) estimates of new and replacement jobs through 2020 underscore the severity of the issue of baby boomers constraining lower-level job openings that traditionally fall to new workforce entrants. By definition, “new jobs” are classified as openings due only to new additional job growth, while “replacement jobs” are defined as job openings created when workers retire or permanently leave an occupation. As it stands, future replacement jobs may not be as available as needed due to older generations of workers that are delaying their retirement plans and are willing to take lower-level jobs to support their eventual retirement.

Replacement jobs largely consist of lower-wage entry-level jobs in industries with a significant body of temporary workers, including Office and Administrative Support, Food Preparation and Service, and Sales-related occupations. These industries have median annual wages of $35,920; $19,392; and $30,663, respectively.

This trend of baby boomers occupying traditionally younger workforce starter jobs in all fields transforms their use into survival jobs. As many of these jobs are more reliant on workforce experience than education credentials, senior generations of workers can more easily draw from their larger experience pools to find the right requirements. Baby boomers have been in the workforce longer than younger generations and are likely to be overqualified for these positions, making opportunities for new entrants scarce in what should be a plentiful selection. This preference for the older workforce compounded by the employer-wide trend of operating with leaner teams, which further crowds the younger generation out of the entry-level labor market.

Employment increased by 1.5 percent in 2012 and forecasts project a 2.1 percent increase in 2013 for Orange County, which translates to a gain of 20,500 jobs in 2012 and 29,500 jobs in 2013. The county unemployment hit 5.5 percent in June 2013, the lowest unemployment rate recorded since June 2008.

As a result, young graduates may be unable to enter the workforce in their preferred areas of study or within a preferable timeframe. Although some have taken the opportunity to continue advancing their education, it prolongs the acquisition of valuable work experience, which can vary greatly in importance for a given field. Even with the potential for higher eventual salaries via continued education, jobless students are forced to take out large student loans and accrue debt for years after graduation. Without the right combination of openings designed for new graduates and education programs designed to give graduates in-demand job skills for new labor market trends, prolonged uncertainty about current and future job market trends will continue to hamper the employment and career prospects of this generation.
Background

Baby boomers are the largest generation in American history and are responsible for the explosive economic and employment growth in Orange County from 1960 to 2000. However, the 2007 to 2009 economic collapse resulted in baby boomers losing substantial amounts of their retirement savings, therefore prolonging the need for significant numbers to remain in the workforce.

More and more young graduates enter the labor force to find there are few jobs available in their desired industries not only because of the Great Recession, but because the baby boomers — who are generally well-equipped education-wise and have a huge head start in work experience — continue to work, stalling vertical career ladder movement for many eager young candidates. These challenges coupled with the increasing college tuition rates will decrease the number of students able to further their education and, as jobs become available, may not be able to grow a local pool of qualified workers.

New Jobs Created and Forecasted Replacement Jobs for Orange County, 2010-2020

Source: California Employment Development Department
### Orange County 2012, Quarter 1 Wages by Industry

<table>
<thead>
<tr>
<th>OCCUPATION TITLE</th>
<th>MEDIAN ANNUAL WAGE, Q1 2012</th>
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<tr>
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<td>Computer and Mathematical Occupations</td>
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<td>Transportation and Material Moving Occupations</td>
<td>$27,165</td>
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</table>

Source: California Employment Development Department

### Orange County Industry Trends by Month, 2009-2013

![Graph](chart.png)

Source: California Employment Development Department
Programs and policies should support emerging industries in order to accelerate their growth and proliferation throughout traditional industry clusters. International Trade, Information Technology, Creativity and Green Technology are multi-industry intersection points that drive employment growth and elevate the diversity of Orange County’s occupations in progressive ways. Although the recession has hampered potential growth in previous years, industries within these cross-cutting cluster groups are expected to support traditional sectors and become major sources of employment and income generation for the county and its residents.
**WHY IS THIS AN ISSUE?**

Orange County is in the midst of transitioning into a knowledge-based economy fueled by the need to inspire high-skilled talent to grow organically. As a result of the Great Recession, companies have retracted many traditional high-wage jobs of the past and adjusted to a leaner workforce, which will likely not return to pre-recession staffing levels. The entrepreneurial and innovative community of Orange County is world-renowned. It is an ideal platform for employers and workforce professionals to unite and develop new opportunities in four emerging groups of industries that blur traditional cluster boundaries – International Trade, Information Technology, Creativity and Green Technology.

These four drivers have become important elements of employment from all of Orange County’s major industry clusters, offering a better understanding of workforce needs in the county’s most critical areas for growth potential. Orange County Business Council, in partnership with the Orange County Workforce Investment Board, has monitored changes in these cross-cutting cluster groups over the past several years in order to assist education and workforce development institutions when designing policies and education programs for meeting employer demand.

This section explores these interrelated components of cross-cutting industry formation and how each driver overlaps and enhances its constituent cluster industries. The four cross-cutting clusters are recognized for their horizontal impact as core components of many industries. Information Technology, for instance, is present in any corporation that relies on computer networks and software for daily operation. IT is applicable to nearly any type of company, not just companies such as software development firms that make technology their primary good or service. Similarly, Creativity-oriented occupations are essential to any firm requiring design or communications specialists, regardless of the firm’s industry.

These four drivers are increasingly important in developing and maintaining competitive advantage in Orange County’s clusters. They generate value by creating jobs for a broad range of firms and supplement continued economic growth.

**HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?**

According to the estimated employment in 2012, International Trade, Information Technology, Creativity and Green Technology are helping to drive employment growth and new high-wage occupations within the county’s major industries. Although the recession has hampered their potential growth in previous years, industries within these cross-cutting cluster groups are expected to both support traditional sectors and become major individual sources of employment and income generation for the county and its residents. In total, the four cross-cutting clusters consisted of approximately 246,634 jobs across 12 different industry clusters in 2012. While International Trade made decent year-over-year gains in employment, Information Technology, Green Technology and Creativity all saw slight declines compared to 2011’s levels.

- International Trade: 159,629
- Information Technology: 58,357
- Creativity: 35,800
- Green Technology: 15,280
Workers in these cluster drivers consistently earn nearly $20,000 above the average wage in Orange County. Creative Professions experienced the greatest year-over-year increase in average salary, growing by more $4,000 from 2011 to 2012. Although Information Technology salaries declined slightly from 2011 to 2012, they still remain the dominant industry group in terms of overall earning potential.

The four cross-cutting clusters (International Trade, Information Technology, Creativity, and Green Technology) consisted of approximately 246,634 jobs across 12 different industry clusters in 2012. Workers in these cluster drivers consistently earn nearly $20,000 above the average wage in Orange County.
International Trade

Orange County’s geography provides distinct advantages regarding International Trade, including proximity to the ports of Long Beach and Los Angeles, a well-connected freeway and road system for fleet transportation, rail lines providing national trade linkages, proximity to international and domestic airports — including John Wayne Airport and LAX — and a large and growing multicultural presence. These significant trade factors combine with Orange County’s existing manufacturing base — particularly in computer software, electronics and transportation equipment — to create compelling opportunities for international trade. The county continues to rapidly cultivate trade relationships with growing economies such as China, Japan, South Korea, Mexico and Canada.

The Institute for Economic and Environmental Studies (IEES) at California State University, Fullerton recently released its 2013 edition of “International Trade Forecast: An Overview of Orange County and Southern California Exports,” which states that the Los Angeles-Long Beach-Santa Ana MSA ranks third in the nation for merchandise export volume and that roughly 13 percent of Orange County’s gross metropolitan product is generated from exports. Estimated employment in the space is nearly 160,000 for Orange County alone. From 2003 to 2007, the total volume of exports grew an average of 13 percent with export values reaching $19.7 billion in 2008 — nearly doubling levels seen almost a decade ago. The Great Recession forced exports to experience dramatic declines by falling 14.9 percent from $19.7 billion to $16.7 billion in 2009. Recovery since then has been noteworthy, with rapid export growth of 22 percent in 2010 and 20.2 percent in 2011. The IEES estimates that exports will continue to grow modestly through the coming years and reaching about $30 billion in value by the end of 2014.
Orange County’s top countries for exports as of 2011 are Mexico and Canada, accounting for $5.8 billion and $2.8 billion in trade, respectively. Asia’s dominant regions of China, Japan and South Korea round out the top five trade partners for the county and together the three countries account for 35.3 percent of merchandise exports from the county. Export growth is based on the expansion of the economies of those countries. China’s economy expanded by 9.2 percent in 2011, while South Korea’s increased by 3.5 percent and Canada’s by 2.5 percent.

The two most dominant export sectors continue to be Transportation Equipment and Computer/Electronic Products, which is consistent with previous years. These sectors combined accounted for more than 45 percent of total exports in 2011, together exceeding $11.3 billion in exports. Other significant export trade sectors for Orange County include Chemicals, Machinery and Miscellaneous Goods — together comprising $4.6 billion.

Though Transportation Equipment took a slight hit in 2009, the sector is already estimated to have returned to pre-recession levels of export volume and is on track to reaching over $5.2 billion by 2014. Computer and Electronic Products, conversely, maintained growth even through recessionary years and total exports are anticipated to reach $8.3 billion by 2014. Total export volume was $24.6 billion in 2011, with the highest year-over-year percentage growth occurring in Petroleum and Coal, Miscellaneous Goods and Food Products.
Information Technology

A highly skilled Information Technology workforce is essential to driving economic growth in a fast growing knowledge-based economy. IT companies provide strong economic growth potential, offer higher than average wages and support a broad range of skilled workers and professional services. Regions with a large and diverse high-tech economy have an edge in attracting and retaining high-tech firms because of their deep employment pool and other factors that encourage industry clustering. A diverse, skilled IT workforce meeting the needs of both vertical and horizontal IT employers is also more resilient during economic downturns than markets that are overly dependent on a particular industry. Specialized skills derived from the STEM (science, technology, engineering and mathematics) disciplines are widely applicable to a host of Orange County corporations and will continue to be for the foreseeable future.
Orange County has long been a key player in electronic software, technical services and hardware manufacturing — as previously discussed, the majority of Orange County’s international exports are reliant on the success of Information Technology. Occupations that connect businesses and provide computer software products and services continually aided the growth in employment of numerous companies within the county, especially for companies outside of the technology industry. The Professional and Business Services industry relies greatly on companies using computing technology for day-to-day operations, from third-party software as a service tailored for each company’s needs, to innovative data storage solutions utilizing “the cloud.” These and many other new technologies allowed businesses to become more attuned to their customers’ needs and promote greater efficiency and effectiveness in business-to-business markets, allowing for superior resource allocation and more sophisticated analysis capabilities.

The average IT salary is $83,078, which is about $28,000 more than county’s annual average salary for all industries. According to the State of California EDD, the top-earning occupations in Information Technology include Information Systems Managers ($138,874 annual salary), Systems Software Developers ($114,795 annual salary) and Information Research Scientists ($115,535 annual salary). Business and technical skills are becoming increasingly interwoven, with occupations that bridge the business and IT worlds becoming the main driver of employment and economic activity in the county. California’s EDD recently reported that three of the top six occupations with the most job ads/openings in Orange County were related to Information Technology — the key issue to address in the coming years is in supplying employers with a steady pipeline of students and technicians capable of filling gaps in IT employment locally.

Creativity

Orange County’s increasing focus on STEM as a critical competitive advantage evolved into an emphasis on STEAM by adding “Arts” alongside the technical disciplines associated with STEM. The Creativity sector consists of industries that emphasize culture, art and design — either as a primary driver or significant contributor. More specifically, the sector consists of creative professionals and enterprises that take powerful, original ideas and transform them into practical and innovative goods, or inspire us with their artistry.

Creative professions intersect with traditional industries on many levels as two-thirds of the Creativity cluster’s employment is derived from the Business and Professional Services cluster, signifying their multi-industry reach. Average salaries appreciated by 6 percent for creative disciplines from 2011 to 2012. Of particular note is the rise in Digital Arts as a critical component of many marketing and communications departments. Fashion and Home Furnishings continue to lead employment figures for creative industries, together accounting for 17,800 jobs.
Green Technology

Many Orange County companies have adjusted their operations to include new environmentally sustainable practices in light of recent state and federal legislation, but in doing so have discovered many cost-saving and performance-enhancing side effects that have made Green Technology practices more than altruistic — they simply make good business sense. According to the 2012 Next 10 edition of "Many Shades of Green" report, Orange County’s employment in “green” companies increased by 62 percent, adding 6,900 jobs from 1995 to 2010 compared to the state’s “green” employment growth of 53 percent during the same period. Orange County’s overall job growth of 15 percent was the third largest growth rate in California, behind the Sacramento region (113 percent) and the San Francisco Bay Area (78 percent).

The clusters with the greatest employment totals in Green Technology for 2012 included Business and Professional Services, Advanced Manufacturing and Construction — a split emphasis in producing environmentally-conscious products and applying concepts at a strategic level via consulting services. Next 10 categorizes Green Technology employment across 15 clean economy segments, ranging from infrastructure to agricultural support, and found significant fluctuation in each segment’s growth since the beginning of the decade. The greatest employment growth stemmed from Advanced Materials, which includes the production of specialized energy-efficiency equipment such as solar cells. The backbone of growth for Green Technology also includes Energy Infrastructure, Water and Wastewater Management and Recycling Services. Although Business Services relating to Green Technology are considered a major part of the cluster’s total employment, the Orange County employment growth in Business Services is the weakest of all the 15 segments in Next 10.

Employment Change by Clean Economy Segment for Orange County, 2010-2012

Source: Next 10 2013 California Green Innovation Index
Orange County’s diverse industry cluster base, educated emerging workforce and increasingly entrepreneurial business climate are some of the many reasons why the county is an economic leader in California. Concentrating on education, workforce and economic development programs that support key industry clusters will help continue to accelerate employment growth in Orange County and aid recovery.
UNEMPLOYMENT

Although the Great Recession “officially” ended in late 2009, unemployment rates throughout the nation remained relatively high. Orange County’s significant job creation — and related reductions in the unemployment rate — help the county’s job climate improve faster than surrounding Southern California counties, the state of California, and most of the nation.

WHY IS THIS AN ISSUE?

Orange County stands out among its surrounding communities for many reasons — its diverse industry cluster base, composition of high-wage industries, active and increasingly entrepreneurial business climate, well-educated pool of workers and geographic location at the center of Southern California’s international trade linkages all contributed to the county’s reputation and opportunities it has created. The recovery in Orange County recovery came a long way over the past year and is moving full speed ahead.

Employers survived the Great Recession by developing new competitive approaches, such as operating with smaller and more efficient workforces. The majority of employers maintained this leaner approach to operational efficiency, choosing to conservatively fill out new job functions on an as-needed basis. This tactic has slowed employment growth in several key industries where it is critical to the county’s economic success.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Orange County’s unemployment peaked at 10 percent in January 2010. Since then, Orange County made significant advances toward economic recovery by creating more than 100,000 new private sector jobs. The county is well on the road to recovery, with unemployment dipping below 6 percent in April and May 2013 for the first time since 2008. While unemployment ticked up to 6.1 percent in June 2013, the Orange County economy continues to create jobs, 8,500 of them in fact. Job creation spread across most sectors, with the largest gains occurring in Tourism, Professional and Business Services, Trade/Logistics and Construction. The reason the unemployment rate increased slightly is primarily due to more people looking for work, a trend which can be expected to continue as the job market improves. Even so, the overall trend for Orange County’s unemployment rate will likely continue downward for the rest of 2013.
While unemployment ticked up to 6.1 percent in June 2013, the Orange County economy continues to create jobs. The reason the unemployment rate increased slightly is primarily due to more people looking for work, a trend which can be expected to continue as the job market improves.

*The overall trend for Orange County's unemployment rate will likely continue downward for the rest of 2013.*
Industry clusters, a concept separate from industry sectors, are defined as geographic concentrations of interconnected companies, specialized suppliers, service providers and associated institutions in a particular field. They initiate a self-sustaining cycle of employment, innovation and productivity in a specific industry, which serves to attract increasingly prestigious high-level employees and improve the socioeconomic conditions for the region. Increased regional specialization leads to higher demand for exports from the region as cash inflows from exports increase local wealth, indirectly benefitting local businesses with improved resident spending. Industry drivers are emerging industries that are found in a large majority of industry clusters (as illustrated in the Cross-Cutting Cluster Drivers section), and help to drive employment growth from within those specific clusters.

During this period of global economic recovery and increased importance of globalized trade, it is important for Orange County to build a differentiated competitive advantage around its growing and emerging industry clusters. Sustained economic growth can be achieved by strengthening Orange County’s emerging industry clusters and industry drivers, each of which contributes to creating pathways for increased economic activity.

**Background**

The industry clusters discussed in this section represent three-fourths of all Orange County occupations and were created to highlight the leading industry sectors that drive employment and economic activity in Orange County. Clusters emerge because companies engaged in a similar industry recognize that they can elevate the playing field for their entire industry through regional specialization, including a more capably educated labor pool and reduced logistical costs. The societal benefit to cluster formation is clear — increased outside business that leads to greater cash inflows into a region, specialized education institutions that aptly prepare students for stronger careers, reduced environmental impact through more efficient supply-side management, and growth in local services that support the region’s general economy. Individual firms in a cluster benefit from comparative advantages associated with geographical concentrations, such as access to a common pool of specialized labor, intellectual property access and streamlined transaction costs between firms.
WHY IS THIS AN ISSUE?

The county’s concentrations of communication, computer software programming and biomedical industries led to competitiveness and increased development in several high-tech clusters. According to the State of California Employment Development Department (EDD), Orange County is projected to grow in Professional, Scientific, and Technical Services employment by 23.8 percent from 2010 to 2020, the third largest growth in its major industry clusters. Specifically, the Management, Scientific and Technical Consulting Services industry is anticipated to rise by 57.5 percent by 2020. The county is capitalizing on its strengths in life sciences and advanced electronics as a formidable industry cluster, enabling it to stand out as a world class leader.

Industry Sector Overview

In 2012, EDD released its 2010 to 2020 employment projections for Orange County. This new adjusted schedule of employment growth provides a useful comparison point for assessing California’s speed in post-recession job expansion. EDD projections estimate that Orange County’s industry sector employment will grow by 13.3 percent from 2010 to 2020. So far, Orange County has grown its total employment base by 7.7 percent since 2010, signifying that the county is on the right track to meeting or even exceeding the 2020 estimates.

When looking at the industries that EDD projected to grow the fastest — both in terms of absolute and percentage growth — more than the 10-year period up to 2020, there is solid progress being made in meeting long-term projections for all but a select few industries estimated by EDD. While the majority of industry sectors are on track to meet or exceed growth expectations, others experienced stagnant employment growth from 2010 to 2013. The Professional, Scientific and Technical Services industry is projected to increase by more than 25,000 jobs and is steadily reaching that goal with an actual 8,400-job increase since 2010. Food Services, Drinking Places, and Administrative and Support Services have greater anticipated employment growth than Professional Services, and appear to gain equally strong momentum in their hiring rates. Some industries, such as Specialty Trade Contractors and Credit Intermediation, have already exceeded the 10-year forecast by EDD in just three years. Only the General Merchandise Stores industry appears to be defying growth projections, having only increased employment minimally as of June 2013. In terms of percentage growth, Nondepository Credit Intermediation, Nursing and Residential Care Facilities and General Merchandise Stores are the leading industries in estimation, and Non-depository Credit Intermediation already advanced past predictions for percentage growth by 2020. The General Merchandise Stores industry sector also under performs in terms of percent growth, joined by Health and Personal Care Stores and Clothing and Clothing Accessory Stores.
Taking into account performance of growth-driving industries so far compared to the EDD projections, what are Orange County’s current overall fastest-growing industries that are driving the region’s recovery? The industries that show the most growth since 2010 are useful indicators for identifying both Orange County’s current standout industries and exploring what the county’s future growth-driving industries might be.

The top 10 industries profiled below represent those adjusting well to the difficulties posed by the Great Recession and capitalizing on the needs of the labor market during the recovery. Employment Services boomed in the wake of the recession, ranking third both in terms of absolute and percentage employment growth. Restaurants, entertainment venues and health service-related industries see the majority of immediate growth, thanks to their numerous entry-level positions and role in supporting Orange County’s dominance in tourism and medical technology. While absolute growth demonstrates the county’s current dominant industries, percentage growth depicts where emerging trends begin to take form — Heavy or Civil Construction and Credit Intermediation both lead percentage growth, signifying business and residential desire to finance expansionary projects that provide significant returns on investment.

Technical industries in Orange County generally rebounded well, yet are noticeably absent from the top 10 fastest-growing industries. Notable appearances include Credit Intermediation at more than 45 percent job growth, Scientific Consulting at just below 20 percent growth and College Employment at more than 17 percent growth. The continued development and growth of these and other more technical industries are important for the county’s future as a leader in high-tech industry employment.
Occupational Overview

Occupations identified as the fastest growing in terms of absolute growth kept pace with or exceeded the EDD projections. Only Registered Nurses and Waiters and Waitresses experienced negative growth over the past three years, significantly diverging from the EDD’s projections. Absolute job growth in retail, cooking and grounds-keeping generally adhered to the EDD projections for occupational employment growth. Office Clerks appear to be the closest occupation to meeting the EDD projections earlier than anticipated, currently only 1,250 new positions away from surpassing the 2020 forecast.
Similar to the trends Orange County experienced with industry employment projections, the projected top occupations by percentage growth centered on technical, health-centric professions. Biomedical Engineers in particular saw rapid occupational expansion, already surpassing the EDD 10-year growth forecast before even four years elapsed. Physical Therapist Aides and Assistants already exceeded projections for growth, attaining nearly 50 percent growth in just below four years. While several other occupations are on track to exceed the EDD projections (Personal Care Aides, Logisticians and Audiologists), several others lag behind in percentage growth. Home Health Aides in particular declined by three percent since 2010, despite projections anticipating nearly 60 percent growth by 2020. These top 10 fastest-growing occupation categories both demonstrate the overall high reliability of the 10-year forecasts put forth by the EDD and reinforce the actual growth trends of the Orange County’s well-regarded Information Technology, Biomedical and Healthcare Clusters.

**Top Ten Occupations by Percent Job Growth, 2010-2020**

- Conservation Scientists
- Meeting, Convention and Event Planners
- Physical Therapist Aides
- Audiologists
- Physical Therapist Assistants
- Health Educators
- Logisticians
- Personal Care Aides
- Home Health Aides
- Biomedical Engineers

*Source: California Employment Development Department*

**FAST FACT**

Orange County is projected to grow in **Professional, Scientific, and Technical Services** employment by **23.8 percent** from 2010 to 2020, the **third largest growth** in its major industry clusters.

The county is capitalizing on its strengths in life sciences and advanced electronics as a formidable industry cluster, enabling it to stand out as a world class leader.
Eight of the 10 projected fastest-growing occupations have annual salaries exceeding $80,000 and are split between the High-tech, Management and Healthcare clusters. Each occupation highlighted is expected to grow by at least 25 percent from 2010 to 2020. Biomedical Engineers have the fourth-highest average salary and already experienced 108 percent actual employment growth since 2010, drastically above the anticipated 86 percent growth spanning 2010 to 2020. High-wage occupations have the greatest impact on improving long-term regional prosperity and Biomedical/Life science and IT/Tech clusters are important targets for talent acquisition for the county.

**Average Salaries of Fastest 2008-2018 Growing Occupations in Orange County**

![Graph showing average salaries and growth percentages for various occupations.](image)

*Source: California Employment Development Department*
WHY IS THIS AN ISSUE?

The Great Recession led to the loss of many of Orange County’s high-wage occupations. The county has since worked diligently to increase job availability, although much of these increases in job growth are attributed to employment growth in lower-income clusters. As a result, Orange County must continue to focus on the attraction and creation of high-wage occupations while developing a well-educated and skilled workforce to meet the demands of emerging roles. These high-wage occupations will play a significant factor in the ability of Orange County to maintain its reputation as a vibrant place with a unique combination of a high quality of life and economic vitality — attributes that historically attracted a skilled workforce, thriving corporations and entrepreneurs to the region.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Tourism remains Orange County’s largest cluster in terms of employment. The largest absolute employment growth in the past year was seen in the Management and Administration cluster (more than 6,600 jobs), which represented 15 percent of total cluster employment growth from 2011 to 2012. Other rapidly-growing clusters include Tourism, Manufacturing and Advanced Manufacturing, which emphasizes electronic components and scientific equipment.

Overall, cluster employment conditions greatly improved in 2012, with only Logistics and Transportation experiencing a year-over-year decline in job growth, versus four clusters suffering declines in last year’s report. However, Orange County must continue to drive competitive advantage improvements in key high-tech sectors, such as Information Technology and Biomedical, to maintain and expand the region’s competitive edge in this high-multiplier industry cluster, it experienced only 1.8 percent growth in the last year.
The annual average salary for all clusters in 2012 was $61,988, a significant increase compared to 2011, and continuing positive trends from recent years following the wage declines experienced during the Great Recession. For 2012, Finance, Biotechnology and Information Technology have the highest annual average salaries, with Biotechnology experiencing the greatest year-over-year growth (more than $7,700). Finance and Construction were the next closest clusters in terms of absolute growth in annual salaries, with Tourism experiencing notable year-over-year percentage growth in annual salary as well. Only Logistics and Transportation experienced a decrease in annual average salary since 2011, compared to two clusters with negative income growth in last year's report.
Orange County schools must continue to supply the region with a pipeline of well-educated, well-trained workers in order to maintain its reputation as having both high-wage jobs and a high-quality of life for its workforce. Programs and policies must be enacted to ensure that the emerging workforce meet the demands of the continuously evolving employment climate.
WHY IS THIS AN ISSUE?

Orange County’s academic performance steadily improved over the past decade and although not all schools have shown improvements, the majority of Orange County’s school districts saw sustained success throughout the current decade. The Academic Performance Index (API), Scholastic Assessment Test (SAT) and the High School Exit Exam provide measures of student performance, helping decision-makers assess possible shortfalls in the educational system and identify school districts that require improvement. Local regions with higher overall test scores tend to attract more residents since parents often search for the most reputable educational programs for their children.

Measures of academic performance also provide employers with broad indicators of workforce readiness. If the county performs well, it will encourage employers to recruit locally while minimizing retraining costs for industries hiring well-prepared students, thus creating job opportunities for the local workforce.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

While efforts to improve poorly performing school districts have begun to enhance overall performance, achievement gaps between school districts remain significant. Orange County must continue to implement programs and policies that focus on improving educational attainment, particularly among English language learners and economically disadvantaged populations.

Across API, SAT and High School Exit Exams, Orange County performs well compared to peer regions, the state and the nation. Yet within the county, there still remains a large gap between high-performing and low-performing schools. Narrowing this performance gap is essential in order to continually increase the educational prowess of Orange County.

Programs and policies should not only aim to enhance educational performance in under-performing districts, but also ensure that graduating students are adequately prepared to pursue advanced degrees. Doing so will effectively improve Orange County’s future workforce and demonstrate it’s competitive strengths to national and international audiences, both of which have the potential to attract and retain more high-skilled workers to the region as well as high-growth, high-wage businesses.
**Academic Performance Index**

The API measures the academic performance of individual schools based on the results of statewide testing. The API uses an improvement measurement model, by comparing results from the previous year and the current year to determine annual growth.

Orange County has steadily improved its API results year-over-year since 2005 and the trend continues through 2012. The average API score was 845 in 2012, a substantial increase compared to 2005’s 769 average API score. While Orange County’s average API scores have improved, individual school districts have also shown steady improvement – 23 of the measured 28 school districts have exceeded the statewide performance target of 800 as of 2012 and 26 out of 28 districts have improved scores from 2011 to 2012. Anaheim and Santa Ana School Districts are two critical Orange County districts that have yet to reach the API statewide standard, with scores of 781 and 755, respectively. Should the API trend continue, both Anaheim and Santa Ana could attain the standard within the next few years.

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**FAST FACT**

- 23 of the measured 28 school districts exceeded the statewide performance target of 800 as of 2012.
- 26 out of 28 districts improved scores from 2011 to 2012.

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**Orange County Average API Scores for 2005-2012**

![Graph showing Orange County Average API Scores for 2005-2012](chart.png)

Source: California Department Of Education, Educational Demographics Unit

**Orange County Average API Scores by District, 2006-2012**

![Graph showing Orange County Average API Scores by District, 2006-2012](chart.png)

Source: California Department Of Education, Educational Demographics Unit
High School Exit Exam Performance

Orange County high school students are required to take the High School Exit Exam in order to graduate. Exit exams provide another barometer for measuring cumulative student achievement. As of 2012, Orange County's high school students had an exam pass rate of 89 percent for Mathematics and 88 percent for English Language Arts. This is the highest pass rate yet for both subjects in the county and exceeds the state level pass rates of 84 and 83 percent, respectively.

At the district level, only Santa Ana Unified School District’s math pass rates are below the state average. For ELA, only three districts are performing below the state average: Anaheim Union High, Santa Ana Unified and Nova Academy Early College High. While pass rates for Santa Ana and other regions have increased in recent years, they are still slightly below average county rates and those of neighboring school districts.

Every school district in Orange County outperformed the state averages for both Math and English Language Arts except for the following: Santa Ana Unified with exit exam pass rates of 78 percent for English Language Arts and 83 percent for Math, Anaheim Union High with a lower ELA pass rate of 82 percent and Nova Academy Early College High with an 80 percent pass rate.
SAT Performance

SAT performance across the state decreased from 2011 to 2012, with most regions facing a 10 to 20 point drop in overall averages. While not avoiding a similar drop, Orange County’s SAT performance continues to be noteworthy. It performed nearly 100 points above the state and national averages and exceeded all but Santa Clara County among its regional peers. Santa Clara County’s latest cumulative average SAT test score is 1,671 compared to Orange County’s average of 1,597. Thus, although Orange County’s average has fallen from the previous year’s average, it is still performing relatively well.

Source: California Department Of Education, Educational Demographics Unit
Orange County has some of the best-scoring districts in the state on the SAT, but there is also great variation within the county. Irvine Unified had the highest overall SAT scores with an average of 1,811, followed by Laguna Beach Unified at 1,714 — these are minor drops compared to 2010, but substantially above the county average of 1,597. Only Anaheim Union High, Garden Grove Unified and Santa Ana Unified under performed compared to the state average, with cumulative totals of 1,499, 1,470 and 1,370 — demonstrating the need for actions targeting these red-zone school districts.

**Average Total SAT Scores by District, 2011**

Source: California Department of Education, Educational Demographics Unit
Why Is This an Issue?

Language barriers pose significant hardships for students looking to improve their education as well as new entrants in the labor market. Improved fluency enables students to grasp concepts more clearly, demonstrate their comprehension of classroom material, function more effectively in communication-heavy occupations, and more easily present themselves as professionals. As future job markets become increasingly competitive, it will be critical for Orange County to support the development and improvement of English fluency programs. This is particularly important for communities with higher migrant populations. Communities that lack opportunities for language learning may be unable to advance beyond chronic lower-wage occupations and experience poor business growth in their communities. Students who do not speak, read or write English fluently face serious limitations in Orange County’s current and future job markets — it is crucial that improved English fluency programs be instituted to support a student population that comprise the majority of tomorrow’s workforce. If not, the county will fail to provide local business with a qualified workforce, ultimately resulting in overall lower wages and a decreased quality of life for Orange County residents.

How Do We Know This Issue Exists in Orange County?

Orange County must focus on improving English fluency among student populations to ensure that these students are prepared for higher education and the workplace. Over the last decade, Orange County has experienced an overall positive trend of students designated as “Fluent English Proficient” (FEP). In fact, following a slight drop in 2011, FEPs have steadily risen over the past two years and have almost overtaken the number of students designated as “English Language Learners” in Orange County. That being said, the percentage of Orange County of English language Learners in the 2012 to 2013 school year was still 24.6 percent, the highest among neighboring counties and the state as a whole. While this represents a decrease from the previous year (27 percent), Orange County’s current ratio is still nearly 2 percent higher than its closest regional peer, and almost 4 percent higher than the state, indicating the need for more diverse and improved English language programs.
Among primary school districts, Anaheim City school district had the highest rate with 54.2 percent of its total enrollment designated as English learners, followed closely by Magnolia and Westminster Elementary. For secondary school districts, Santa Ana Unified and Garden Grove Unified contained the highest proportion of language learners, both exceeding the county ratio by more than 20 percent.

The percentage of English Language Learners in the 2012 to 2013 school year was 24.6 percent. While this is a 3 percent decrease from last year, Orange County’s current ratio is still 2 percent higher than regional peers, and 4 percent higher than the state.

Indicates the need for more diverse and improved English language programs.
Supplemental Information

English Language Learner students are those who reported a primary language other than English on the state-approved Home Language Survey and who — on the basis of the state-approved oral language (grades K-12) assessment procedures including literacy for grades 3 to 12 — lack the clearly defined English language skills of listening comprehension, speaking, reading and writing necessary to succeed in the school’s regular instructional programs.

Fluent English Proficient (FEP) students are those who reported a primary language other than English, but met the district criteria for determining proficiency in English — i.e., those students who were identified as FEP on initial identification and students re-designated from Limited-English-Proficient (LEP) or English Learner (EL) to FEP. Re-designated Fluent to English Proficient students are the percent of students re-designated from English learners to Fluent English Proficient status since the last count of student English proficiency, which is determined on an annual basis.
WHY IS THIS AN ISSUE?

The dropout rate represents both the number of students that have dropped out of school as well as an estimate of students added to the under-educated segment of the population. While Orange County continues to enjoy the benefits of maintaining low student dropout rates on the whole, analyzing changes over time can help Orange County proactively anticipate and address any areas of concern surrounding the dropout issue. Many Orange County schools are recognized as being amongst the best in the state due to their commitment to academic excellence. However, students continue to drop out for many reasons, the most prevalent being that students have lost overall interest and may not realize the substantial benefits associated with education. While many of Orange County’s more affluent school districts are attended by families that demonstrate the value of education, the county must take responsibility for all districts, focusing on the implementation of programs and policies aimed at communicating the importance of education — both for the financial and social value that it attains.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Compared to the state and neighboring counties, Orange County had the lowest dropout rate in 2012 at 9.1 percent, representing a substantial 24 percent decrease in the dropout rate from the previous year. The next closest counties were San Diego County (10.4 percent) and Riverside County (11.2 percent). While Orange County’s overall dropout rate has fallen into single digits, dropout rates continue to be significantly higher for some populations including English Language Learners, the socioeconomically disadvantaged and specific minority populations.
Orange County had the **lowest dropout rate** in 2012 at **9.1 percent**, representing a substantial **24 percent decrease** in the dropout rate from the previous year.

While Orange County’s overall dropout rate has fallen into single digits, dropout rates continue to be significantly higher for some populations including English Language Learners, the socioeconomically disadvantaged and specific minority populations.
WHY IS THIS AN ISSUE?

A region’s ability to improve conditions for its growing industry sectors, attract high-wage occupations, increase overall earning potential and drive innovation is directly tied to advancing the educational attainment of its workforce. The availability of a diverse, well-educated pool of individuals in the workforce provides a competitive advantage and is crucial to promoting broad economic development across the county. A greater presence of well-educated individuals helps to promote innovation across industries by facilitating the emergence of improved technologies and business processes.

During the Great Recession, many Orange County industries were forced to operate with a leaner, more efficient workforce. As the economy recovers and industries begin to gradually expand their workforces, it is important for long-term sustainability that the county provides businesses with a well-educated workforce pipeline. In order to meet this demand, programs and policies must be implemented to increase college and university-level educational attainment, as well as support for adult retraining. Doing so will provide industries with a localized competitive advantage for conducting operations in Orange County, promoting continued economic development.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

More than 43 percent of Orange County high school students were eligible for entry into the UC/CSU university systems during the 2011 to 2012 school year, which is a slight improvement over the previous year, and a significant 8 percent improvement compared to the 2009 to 2010 session.

Asian students continue to achieve the highest levels of eligibility, while African American and Latino student eligibility rates in Orange County continue to underperform compared to other ethnicities and are hovering near state eligibility levels. However, significant efforts within Orange County to address these low rates have clearly had a beneficial impact on the Latino population, which experienced an increase of more than 11 percent in eligibility since 2010.
Background

Orange County has historically been a well-educated community with educational attainment levels consistently higher than those of the state. Its fast-growing industries and high quality of life serve as a magnet for young and experienced professionals alike, while Orange County’s three prominent universities — University of California, Irvine, California State University, Fullerton and Chapman University — provide a consistent flow of skilled graduates. The talent pool in Orange County has enabled high-wage occupational growth, helping to generate higher wages than surrounding areas and its regional peers across the nation.

With much of Orange County’s future job growth anticipated to thrive in industries requiring advanced or technical degrees, demand will increase significantly for individuals who invest in these skills. It is essential that the county prepare its current and future workforce to meet this demand. Advanced degrees are increasingly important for emerging job opportunities in technology, pharmaceuticals and business support services. Technology streamlines business operations and presents new emerging industries as viable career opportunities — capitalizing on these advancements to the county requires individuals with a robust combination of high-level educational attainment and competitive experiences to draw from fluidly. Thus, the need for individuals with advanced, specialized degrees is critical for Orange County’s long-term competitiveness.
WHY IS THIS AN ISSUE?

Orange County has had a long history of science and technology-based business, originating with the large presence of aerospace companies that came to take advantage of the county’s large, well-educated workforce in the 1960s and 1970s. Today, many of the most prominent high-growth industry clusters in Orange County revolve around medical technology, consumer electronics and components. With the recent emergence of computer chip, circuit board and microprocessor manufacturing companies, Orange County is steadily looking to improve its stake in high-tech industries, generating STEM opportunities for students as well as creating a greater demand for professionals capable of both technical and business communication expertise. This reputation for excellence in the STEM fields has attracted even more technology-based businesses and highly-proficient technicians into the county. With increasing global competition, keeping Orange County’s competitive edge in the STEM disciplines is more important than ever for the continued economic success of the region.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Following a slight drop in 2008, the number of STEM-related undergraduate degrees awarded by Orange County increased over the past two years, with an 8.5 percent increase in 2009 and a 7 percent increase in 2010. Since 2004, the STEM majors with the highest growth are Physical Sciences and Biological Sciences, with 110 percent and 71 percent growth respectively. Information and Computer Science undergraduate degrees were the only undergraduate disciplines to experience a decline since 2004, with a 45 percent decrease. Among graduate degrees, Engineering and Math disciplines experienced the largest growth at 69.34 percent and 49 percent, respectively. Overall, STEM degrees amounted to roughly 17 percent of all degrees awarded from 2010 to 2011. While STEM degrees are steadily increasing, the rate of increase continues to be outpaced by Orange County’s demand for critical positions within STEM-related industries or occupations.
The number of **STEM-related undergraduate degrees** awarded by Orange County increased over the past two years, with an **8.5 percent increase in 2009** and a **7 percent increase in 2010**.

*The STEM majors with the highest growth are Physical Sciences and Biological Sciences, with 110 percent and 71 percent growth respectively.*
Computing’s Convergence with Business Sensibilities

Most of the tools used on a daily basis in the home or at the workplace to create, analyze and communicate are products of Information Technology (IT), a classification that includes computer hardware and software, information systems, networking, multimedia and telecommunication technologies. Members of the community in all stages of life depend on IT to connect, work, and be productive citizens, from high school students who use IT to complete assignments to employers who utilize IT to interact with employees and increase the company’s productivity.

The development of a robust pipeline of IT students and workers, sustained support of IT-related education opportunities and correlated workforce training programs, and creation of fulfilling career pathways are all critical to Orange County’s long-term competitiveness in the international labor market. A current scan of the education programs related to IT shows that while Orange County is improving in terms of programs offered, content adjustments need to be made to address the new portfolio of skills businesses demand of new graduates in IT-related occupations.

Currently, IT-relevant business skills are not adequately addressed in IT and IT-related programs, and several outdated or irrelevant programs (such as web design) remain unchanged despite shifts in workplace trends. However, several up-and-coming programs that incorporate business management skills into traditional technology concentrations are gaining ground at prominent universities in Orange County.
Several specific, emerging IT skill areas are expected to drastically expand within the short-term due to current business demand — IT security, business intelligence, business process analysis, healthcare IT, database administration utilizing cloud computing technologies, and mobile application development. While these six skill areas (and their corresponding occupations detailed in-depth below) are diverse in the level of technical depth they all share the commonality of translating technology to solve complex business problems. In addition, they are all concepts or specialties that grow from a foundation in fundamental IT knowledge. Orange County’s cutting-edge IT education and training programs that are inspiring new technology-savvy students and retraining jobseekers and candidates alike, have the potential to develop the multiple, state-of-the-art aptitudes needed in these emerging, high-growth IT fields.
Emerging IT Occupations - Orange County Employment and Annual Salary Comparisons

Source: California Employment Development Department

Emerging IT Occupations, Orange County Projected Growth, 2010-2020

Source: California Employment Development Department
REGIONAL SOCIOECONOMIC IMPACT

Orange County’s community colleges are an integral economic engine vital to the well-being of the region and state. The community college system touches every aspect of life in Orange County by enriching the lives and earning power of students and driving the economy forward.

LIFELONG STUDENT BENEFITS

Students attend community college for a multitude of vital reasons, including as an affordable pathway to higher education and career advancement. Students find that an associate degree is financially rewarding, with higher average salaries at a relatively minor cost compared to those without degrees. Community colleges help Orange County jobseekers significantly increase their earning potential, that is increased by more than $11,000 per year and nearly $387,000 over a lifetime. The 2010 median income of associate degree holders was $39,094 — 33 percent more than their peers with high school diplomas or GEDs. The difference in annual wage between associate degree holders and those without high school diplomas was approximately $20,000, an increase of more than 100 percent.

However, community college is not only a place to earn a degree. Students have the ability to reinforce basic skills such as second-language learning and foundational mathematics, retrain or participate in non-credit programs for employability, or initiate a career-oriented certification program in a specialized field. Community college brings a multitude of employability-building benefits for jobseekers both inside and outside the classroom. Attending trade-specific classes through community college is a low-cost opportunity to hone specific skills designed especially for new career paths, such as information technology certification, nursing programs, electrical engineering, and numerous other fields.
In addition to developing jobseekers' technical backgrounds, community college is a highly valuable networking location — both teachers and fellow students can be indispensable sources for career guidance, job opportunities and advice on professional development. Moreover, many community colleges have active career centers that can assist jobseekers with tailoring their schedules around coursework that supports their desired fields. Thus, for students without degree attainment in mind, community college can be equally beneficial for their goals. Overall, the community college system enriches the lives and earning power of students.

Orange County’s four community college districts are comprised of:

- More than 300,000 enrolled students;
- More than 8,500 staff and faculty across 11 institutions;
- Payrolls of more than $600 million; and
- Budgets totaling nearly $1 billion.

- Only 10 percent of community college budget funding is privately sourced, including revenues from student tuition, contracts and interest payments.
- Orange County’s most prominent degree pathways include the humanities, social sciences and mathematics.
- More than 20,600 associate degrees were awarded during the 2011 to 2012 school year, a nearly 100 percent increase compared to five years ago.
From an investment perspective, the taxpaying public gains substantial benefits from Orange County’s efforts in supporting sustainable education institutions. Taxpayers are estimated to see a return of $4.78 for every dollar appropriated by state and local governments, as well as an overall return on investment of 14.7 percent. If state funding appropriations ceased, colleges would be forced to consider additional increases in local fees and taxes to ensure their continued survival by passing costs on to attendees and threatening the tertiary economic benefits community colleges provide for Orange County.

For the business community in the county, community colleges are a vital resource fostering job training programs and introducing students to new career footholds. Community colleges are particularly well-equipped for meeting the workforce needs of businesses through Career Technical Education, offering job training in high-demand occupations such as public safety, information technology and health-related careers such as nursing.

Community colleges as a whole are the county’s fourth largest employer. Orange County’s community colleges maximize the impact of every taxpayer dollar by improving economic welfare. The workforce benefits from a steady pipeline of college-trained workers whose skills bring greater earning power to the region. Employers of community college graduates find increased profitability thanks to the higher level of services that graduates can offer to their employers, resulting in a return on investment for property owners, increased regional tax revenues and strengthened incomes leading to spending expansion.

### Social Benefits
- Graduates receive a **17.4 percent** return on their education, and recover their initial costs **within seven years** after attending.
- Associate degree holders earn an average of **$11,000 per year more than** high-school diploma holders, and increase their after-tax annual incomes by roughly $70 per credit hour of instruction.
- The **total impact** of community college instruction on all future student earnings in the county is estimated to be more than **$24 billion**, with a net present value of nearly $9 billion.
- College operations drive the **employment of 14,766** individuals each year and enhance the regional economy by more than $1.6 billion annually.

**Source:** Orange County Business Council “The Socioeconomic Benefits Generated by Orange County’s Community Colleges”, 2012.

### Annual Average Tuition and Fees Comparison
- Community Colleges: $864
- CSU System: $5,472
- UC System: $12,192
- Private Universities: $40,000+

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**FAST FACT**
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**Annual Average Tuition and Fees Comparison**
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A LOOK AT VETERANS ENTERING THE WORKFORCE

Veterans make an ideal fit for a variety of positions and also come with intrinsic advantages and abilities for companies hiring them. Military professionals have natural and proven leadership capabilities, understand the value of teamwork in achieving long-term objectives and will maintain diligence in their consistent work ethic. Many come equipped with security clearances, government paid relocation assistance and tax benefits for the hiring company. But most importantly, military veterans are technologically inclined and conducive to learning the skills required of technical occupations — as demonstrated by the veteran employment rates in Professional, Finance, Maintenance and Production occupations comprising a combined 52.1 percent of veteran employment compared to 47.3 in non-veterans. While many resources such as Career One Stop exist for veteran-specific job postings, further initiatives should be considered to support former military personnel in transferring skills and gaining proper training that will lead them to career success.

Unemployment among military veterans, particularly those under the age of 30, is prevalent throughout the county and the nation as a whole. The U.S. unemployment rate for Post-9/11 veterans is 7.7 percent as of July 2013, 0.5 percent higher than the July 2012 rate and 0.4 percentage points above non veteran unemployment. Orange County currently has the third highest number of military veterans in the state, with an estimated veteran population of 133,000. For Orange County, veterans ages 20 to 24 are about three times as likely to be unemployed as their civilian counterparts and generally face financial hindrances to attaining education enabling career growth. Veterans have a great foundation in technical skills and teamwork dynamics and, with program support, can become a valuable pool of quality talent for employers.
National Programs

The U.S. Chamber of Commerce launched the Hiring Our Heroes program in March 2011 to help military personnel and their spouses find significant employment, targeting recent returning veterans of the Iraq War. As of January 1, 2013, Hiring Our Heroes:

- Hosted 430 career fairs for veteran employment across Puerto Rico, the District of Columbia, and all 50 of the United States;
- Connected 18,400 veterans and military spouses to new jobs through connections established at Hiring Our Heroes’ career fairs, 4,300 of which were hired within the last three months; and
- Brought more than 750 companies into contact with veterans and filled their employment needs.

In March 2012, through a partnership with Capital One, Hiring Our Heroes launched a nationwide initiative called Hiring 500,000 Heroes, designed with the goal of achieving a half-million veteran hires by the end of 2014 in every sector of the U.S. economy. Utilizing the U.S. Chamber’s federation of 1,600 local chambers of commerce, Hiring Our Heroes is “enlisting the support of thousands of small companies across America to achieve this goal.” According to the latest quarterly status report provided by the organization, more than 800 companies and organizations have made commitments as part of the Hiring 500,000 Heroes campaign. Thus far, companies committed to hiring more than 182,000 veterans and military spouses by the end of 2014. These employers hired more than 85,000 veterans between March 2012 and September 2012 alone.

Joining Forces is a national initiative that aims to motivate businesses, non-profits, government bodies and philanthropic organizations to become informed of the struggles faced by military families and offer support for veterans and their spouses. The initial challenge mandated by the federal government was for private sector companies to hire 100,000 veterans by August 2013. By August 2012, 200 American companies hired a combined 125,000, achieving above the original goal a full year in advance.
Local Programs

The Orange County Workforce Investment Board is an active advocate for veterans' training and employment in Orange County. Through its One-Stop centers OCWIB provides resources, supportive services and opportunities to OC vets by ensuring priority of service to vets, continued collaboration with community partners serving veterans to leverage services, having a strong partnership with the California EDD and applying and receiving veterans training and employment grants. Under the OC4Vets program, the OCWIB works in collaboration with the County of Orange Health Care Agency, County Veterans Service Office, and other partners to assist Veterans in Orange County by providing job development and job support, coaching and training, behavioral health services, supportive services and housing assistance to the veteran population regardless of veteran status; i.e. active, discharged or reserve guard and their families. The goals of this program include increasing access to a comprehensive array of health and supportive services.

The OCWIB has been very successful in receiving Veterans' Employment-Related Assistance Program (VEAP) awards from the EDD. VEAP awards are operated in partnership with community agencies, community colleges, other local WIBs and veterans’ service agencies. Current VEAP awards assist veterans with employment and training assistance in high-demand industries including Health Care, Information Technology and other Professional Services through March 2015. VEAP also provides supportive services, including behavioral health services, transportation and housing assistance. The project will serve those recently separated from active military duty within the last 48 months and other eligible veterans. Services are offered at the Orange County One-Stop Centers located in Westminster, Irvine, Buena Park, San Juan Capistrano and at the Joint Forces Training Base in Los Alamitos. Additional targeted outreach for recently separated veterans is being conducted at Marine Corps Base Camp Pendleton.

<table>
<thead>
<tr>
<th>California</th>
<th>Employment Status by Veteran Status, Age 20+</th>
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</thead>
<tbody>
<tr>
<td>Participation Rate</td>
<td>67.7%</td>
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<tr>
<td>Unemployment Rate</td>
<td>10.4%</td>
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<tr>
<td>VETERANS</td>
<td></td>
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<tr>
<td>Participation Rate</td>
<td>49.5%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>9%</td>
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</tbody>
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Source: Bureau of Labor Statistics

In addition to these programs, OC Community Services provides numerous programs and resources for Veterans, including:

- Housing Assistance – The OC Housing Authority gives Veterans top priority preference for Section 8 Housing Choice Vouchers. Veterans Affairs Supportive Housing Vouchers are also available to homeless veterans.
- Veteran Benefits – The Veterans Service Office actively pursues the rights of veterans to receive Department of Veterans Affairs benefits for housing, disability, medical, and educational entitlements.
- Services for Older Adult Veterans – The Office on Aging provides services such as caregiver support, home delivered and congregate meals, transportation, health education and information and assistance to older veterans and their families.

Another resource includes, the Orange County Veterans and Military Families Collaborative, which is a group of public agencies and community based organizations providing resources and assistance to Veterans and Military Families in Orange County. Working groups include behavioral health, children and families services, community outreach and public relations, education, employment, events, government relations, housing and homeless, and legal. Working groups meet monthly with the entire collaborative convening on a quarterly basis.
In order to ensure plentiful housing options for the workforce in Orange County, housing development must reflect projected employment trends and produce a market sensitive to workforce income levels.
WHY IS THIS AN ISSUE?

Despite a deep and prolonged downturn in housing activity and values, Orange County’s housing costs, including apartment rental rates, are higher than those of neighboring counties, peer regions and the national average. As highlighted previously, lack of sufficient workforce housing options can cripple regional economic development by forcing otherwise willing workers to seek employment near their homes outside Orange County, drawing economic activity away from Orange County. Increasing the supply and availability of workforce housing options has become increasingly important following the Great Recession’s impacts on wage, income and household wealth trends.

Through an in-depth understanding of current and projected housing supply trends, rental rates, incomes and affordability, Orange County policymakers and leaders can make educated decisions about workforce-centric programs that address the most pressing housing needs in the region.

HOW DO WE KNOW THIS ISSUE EXISTS IN ORANGE COUNTY?

Orange County has long been one of the most expensive regions in the nation for housing, even during significant downturns such as the Great Recession. While long-term workforce housing demand continues to grow due to job creation and population growth, very few new housing units were constructed in the last five years. The Southern California real estate market turned around, with home prices rebounding dramatically since the start of 2013. Average rental rates tend to also be somewhat higher than neighboring regions. Furthermore, high-end housing prices force out recent graduates and those with difficulty finding employment capable of sustaining an Orange County lifestyle. The combined effect impacts workforce talent pipelines and can limit the county’s employment growth and economic development potential.

Home Ownership

According to the California Association of Realtors (CAR), 60.8 percent of Orange County units are owner-occupied, while 39.2 percent are renter-occupied units. In June 2013, the Orange County median price of an existing single-family detached home was $661,740 — a drastic 16.5 percent increase over June 2012’s median price of $567,910, and a 1 percent month-over-month increase from May 2013. This indicates not just improvement, but a housing boom from the real estate market as property values jumped dramatically at the start of the year and maintained high price points.

Another clear indicator of the housing market rebounding is CAR’s Housing Affordability Index, which measures the percentage of households capable of purchasing an entry-level median priced home in a given region. After becoming much more affordable during the Great Recession housing market collapse, and as Orange County’s housing market turns around and experiences rapidly advancing housing prices, CAR’s Affordability Index declined. The county scored 28 for Q1 2013, down six points from the previous quarter and 11 points below Q1 2012. Similarly, the First-Time Buyer Index measures the percentage of households that can afford to move from rental living to purchasing an entry-level home in a given region. CAR considers this index to be the most fundamental measure of housing market quality and accessibility for new buyers.
As of the Q1 2013, CAR scored Orange County at 49, meaning 49 percent of new Orange County homebuyers can afford to purchase an entry-level home, which is a sharp 11-point decline from Q1 2012’s index. Orange County is far below the Housing Affordability Index scores of California and the U.S., estimated at 62 and 79.

At a Q1 estimated entry-level price of $510,130, first-time home ownership in Orange County requires a minimum qualifying income of $73,170 (as of Q1 2012), up $13,000 from 2012. Orange County’s high cost of living impacts migration and resident inflows into the county and continues to pressure struggling residents to consider locating outside of the region. Without providing housing affordable to young adults, Orange County’s goals for a highly skilled workforce specializing in emerging growth clusters, requiring specialized training and expertise, may not come to fruition.

In June 2013, the median price of an existing single-family detached home was $661,740 — a drastic 16.5 percent increase over June 2012’s median price of $567,910. This indicates improvement and a housing boom as property values jumped dramatically at the start of the year and maintained high price points.
Renting in Orange County

The Housing Wage, defined by the National Low Income Housing Coalition to be the minimum wage required to afford rental housing for specified family and employment groups, ranges from $25.88 per hour for a one-bedroom apartment to $45.36 per hour for a three-bedroom apartment in Orange County. These rates have steadily increased since 2000, when the county’s Housing Wages ranged from $15.23 per hour for one-bedroom apartments to $20.86 per hour for three-bedroom apartments. After peaking in 2008, rental rates have mostly stabilized with relatively minor fluctuations each year.

Compared to peer counties, Orange County is second only to San Francisco County in one- and two-bedroom hourly wage requirements and behind both Santa Clara and San Francisco counties in three-bedroom affordability wages. The hourly wage needed for a one-bedroom apartment ($25.88) is equivalent to an annual income of about $54,830. The annual renter income needed to afford a two-bedroom apartment at fair market rent is 118 percent of median annual income, or $67,433. At this level, more than 57 percent of Orange County’s renters are not able to afford a two-bedroom apartment at fair market rent.

### Fair Market Rent in Orange County, 2004-2013

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</thead>
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<tr>
<td>One Bedroom</td>
<td>$1,098</td>
<td>$1,161</td>
<td>$1,238</td>
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<td>$1,336</td>
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<tr>
<td>Three Bedroom</td>
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<td>Estimated Orange County Median Family Income</td>
<td>$74,200</td>
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<td>$86,100</td>
<td>$87,200</td>
<td>$84,200</td>
<td>$85,300</td>
<td>$84,100</td>
</tr>
</tbody>
</table>

Source: National Low Income Housing Coalition

### Hourly Wage Needed to Afford Fair Market Rent in 2013, Orange County vs. National Peers

Source: National Low Income Housing Coalition
A product of the research partnership between the Orange County Business Council, County of Orange, and Orange County Workforce Investment Board, the Workforce Indicators Report examines the growth of industry and employment, salary and wage trends, demographic changes and the educational attainment of Orange County students.
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OTIS Report
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University of California, Irvine
US Bureau of Labor Statistics
US Census Bureau, Bureau of Economic Analysis
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