



Office of the Chancellor



Impact of the California State University System

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Prepared for

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Executive Summary

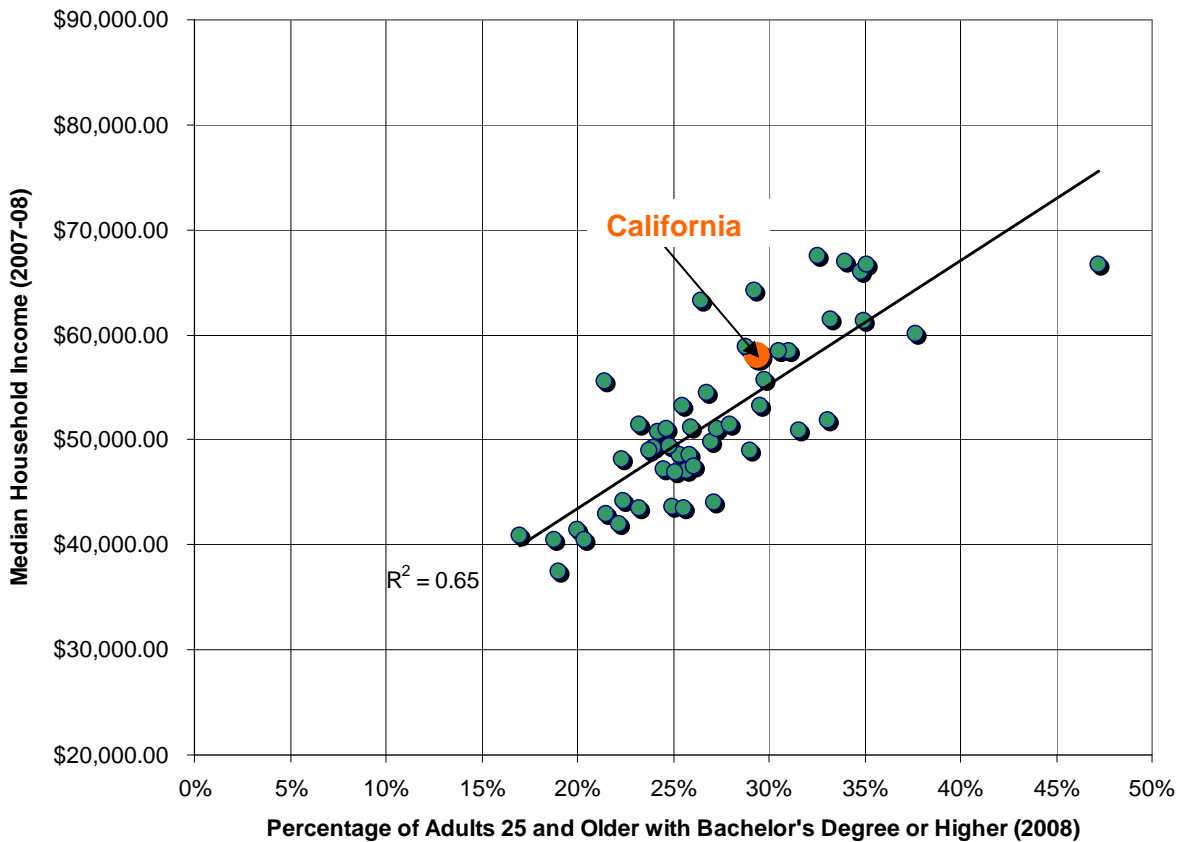
California's dynamic, knowledge-based economy is envied the world over. As the California State University (CSU) prepares to celebrate its 50th anniversary, it is an important time to be reminded of the enormous impact that the CSU has on the state of California and its economy. This analysis, an update to the CSU systemwide economic impact assessment conducted by ICF International in 2004, provides a current picture of the CSU's economic contributions related to workforce and the growing areas of sustainability and applied research. Both reports underscore that the CSU is central to California's economy and directly or indirectly impacts *everyone* in the state.

How the CSU Impacts California's Economy

A university education changes the trajectory of people's lives. It helps them fulfill their aspirations to become artists, engineers, teachers, health care professionals and more. Its recipients are better prepared to succeed in, adapt to, and appreciate the rapidly changing world around them. In addition, a university education is widely recognized as an investment that pays a lifetime of dividends in the form of better jobs and higher incomes.

What is less well understood, however, is that the investment in higher education is also a *strong investment for states*. When states invest in their public university systems, the state as a whole receives a lifetime earnings boost. As shown in Figure 1, average household income is systemically greater in states where a higher percentage of the population has an undergraduate university degree. The chart demonstrates a strong correlation, showing even a relatively modest increase of 5 percent in the bachelor's degree percentage yields about an \$8,000 increase in household median income statewide.

Figure 1. State Median Household Income by Adult Education Attainment Rate, All U.S. States, 2007-2008.



Source: Current Population Survey, U.S. Census 2006-08

Figure 1 is a clear indicator of how investment in public education benefits all people. As knowledge-based services and high-technology production have transformed the U.S. economy, a well-educated workforce has become a more valuable asset to a state than ever before. Workers in regions with fast-growing, high-paying industries benefit from higher wages and greater economic opportunity. In turn, they are able to fund a greater level of public services that benefit all of a state's citizens.

Conventional economic impact assessments focus on estimating the direct and indirect expenditures of the organization being studied—the so-called “multiplier effect” created by the multiple rounds of spending triggered by new income into a region. As in those traditional economic impact assessments, the direct spending by the CSU—spending that is funded by both state and non-state sources—and the multiplier effect of this direct spending is a major part of the university's overall economic impact on the state. However, the value of the CSU is much more than just the total impact of its direct, indirect, and induced spending because of what the CSU *does*. Specifically, the CSU's 23 campuses provide tens of thousands of job-ready graduates each year who contribute significantly to California and its economy.

The CSU's primary mission is to provide access to baccalaureate, post-baccalaureate, master's level and applied doctorate education. The success of the university in fulfilling this responsibility has been decisive in providing California's advanced industries with the skills they need. In academic year 2006-07, the most recent year comparative data is available, the CSU conferred almost 71,000 bachelor's degrees, nearly half of all the bachelor's degrees awarded by all of the universities, public and private, in the entire state. In that same year, the CSU conferred roughly 18,000 master's degrees, or almost one-third of all the master's degrees awarded in that year in California. In addition, in partnership with other institutions (most notably the University of California), the CSU offers joint doctorate programs.

While producing university graduates has been the most visible way that the CSU supports the state's knowledge-based economy, it is not the only way. The CSU's applied research helps California's industries remain innovative and competitive, and the university provides an array of services and facilities to assist entrepreneurial start-ups.

The CSU's cultural and recreational programs and its focus on environmental sustainability help make California's communities more livable and contribute to their overall quality-of-life. This encourages creative and talented people to move into and remain in the state, which is a major advantage in an increasingly mobile society.

California's economic future is largely tied to the competitiveness of its knowledge-based industries. Consequently, all Californians share a common interest in the foundations that make these industries strong. There is no element of that foundation that is more important than the state's public university systems. *Because the California State University provides more well-educated, job-ready graduates to California's knowledge-based industries than any other institution of higher education in the state, it has a strategic role at the absolute center of California's economy.*

The Magnitude of the CSU's Economic Impact

The CSU provides a significant source of benefit to the California economy by generating revenues and creating jobs throughout local economies. The impacts associated with the CSU originate with the institution itself—its faculty, staff, students, and alumni—then percolate through the economy, generating successive rounds of economic activity because of the interlinkages between different economic sectors.

In 2006-07, the CSU awarded:
46% of all Bachelor's Degrees in California
32% of all Master's Degrees in California

Direct spending by the CSU, faculty, staff, and students is the most obvious economic impact of the system. Not only does each CSU campus and the Chancellor's Office purchase goods and services from the surrounding economy, they are also important regional employers.

This direct spending represents only a portion of university-generated spending. The full economic impact of the CSU on the state's economy, including its impact on other seemingly unrelated sectors beyond those in which it directly participates (education, retail, construction),

can be assessed through regional economic impact analysis. Regional economic modeling is founded on the principle that industry sectors are interdependent: one industry purchases inputs from other industries and households (e.g., labor) and then sells outputs to other industries, households, and government. Therefore, economic activity in one sector causes an increased flow of money throughout the economy. For the purpose of this analysis, the modeling software IMPLAN was used to calculate these impacts.

In this assessment of the California State University's economic impact, two types of economic impacts are presented: the impacts generated by CSU-related expenditures and the impact of earnings of CSU alumni that are attributable to their degree. The impact associated with CSU alumni earnings constitutes the total economic impact of CSU alumni who are currently California-based and thus contributing to and spending their income in the California economy. The value of their CSU degree is evaluated in the differential between their current salary and what they would have earned without their CSU degree.

The CSU-related expenditures for wages and salaries; capital equipment and supplies; student spending on textbooks, meals and housing; and an array of other items related to its educational mission for the 2008-09 academic year totaled \$7.96 billion.

The full economic impact of this \$7.96 billion of direct CSU-related expenditures is estimated at nearly \$17 billion. Simply stated, each dollar of direct spending by the CSU "grows" to \$2.13 when indirect and induced spending is considered. This level of spending activity supports almost 150,000 California jobs annually and generates over \$995 million in annual taxes for state and local governments. Assessing the impact of CSU-related expenditures alone confirms that the university is a large and significant institution in California with a spending profile and an economic impact to match.

CSU-related expenditures and the enhanced earnings of its graduates in the workforce:

- Generate a \$70 billion total annual spending impact in the state,
- Support more than 485,000 jobs in the state, and
- Create \$4.9 billion in tax revenue for the state and local governments.

The economic impact of direct CSU-related expenditures, however, does not capture the full impact of what the university actually does: provide an affordable, accessible quality university education to hundreds of thousands of Californians who would not otherwise be able to attend a university. One of the ways that the full economic impact of the CSU enterprise can be estimated is by focusing on the higher earning power of its graduates. In 2008-09, it was estimated that 1.96 million

CSU bachelor's and master's alumni living and working in California earned an estimated \$122 billion in income. Of this \$122 billion in total wages, it is estimated that *\$42 billion is attributable to their higher level of educational attainment; i.e., their CSU degrees.*

The combined direct CSU-related expenditures and the alumni earnings attributable to their degrees have a full economic impact of \$70.4 billion when modeled in IMPLAN. This level of economic activity supports roughly 485,000 jobs annually in the state and generates \$4.9 billion in annual tax revenue for state and local governments.

California's Return on Investment in the CSU

The magnitude of the CSU's economic impact on California can be compared to the state's annual investment in the university system. In 2008-09, the state's investment in the CSU (operating and average capital appropriations) totaled \$3.12 billion. For every dollar the state invests in the university, the impact of CSU-related expenditures alone creates \$5.43 in total spending impact. When the impact of the enhanced earnings of CSU graduates is included, the ratio rises to \$23 in total spending impact for every dollar the state invests in the CSU.

For each \$1 invested by the state, the CSU generates \$5.43 for California's economy annually.

When enhanced earnings by graduates are taken into account, the annual return rises to more than \$23 for each \$1 invested.

These figures show that the CSU has a massive economic impact on California with state and local governments—annually getting back more in taxes than the state's annual investment in the CSU, making the CSU increasingly valuable every year.

CSU and California's Workforce Needs

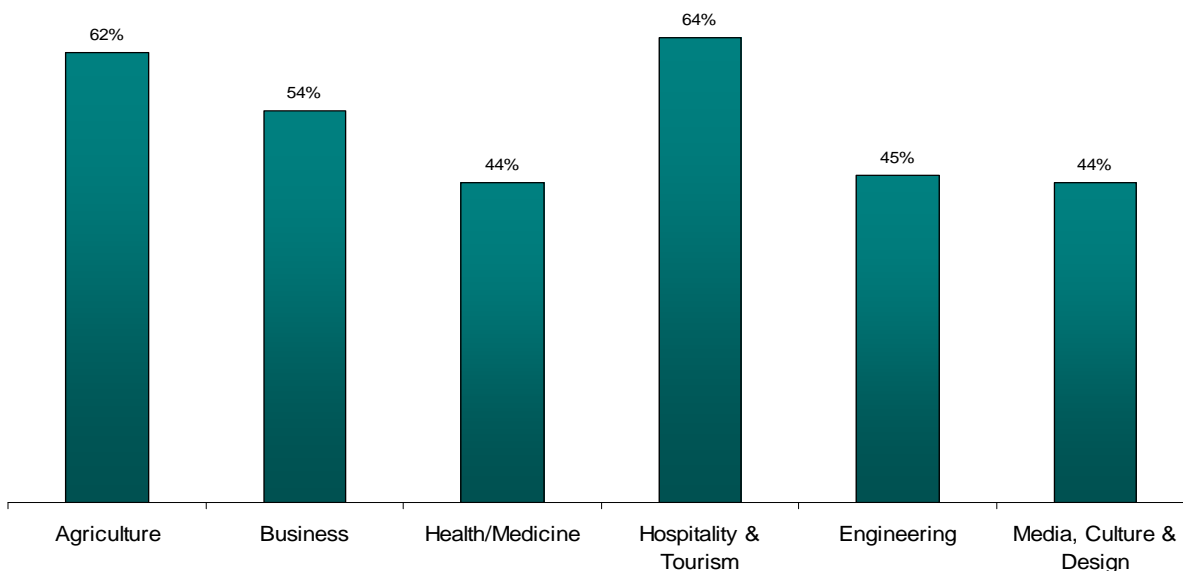
As the largest source of the state's skilled, diverse workforce, the California State University provides thousands of graduates in hundreds of fields each year. This workforce has and will continue to provide the foundation for California's success in the global economy. CSU graduates have the skills, expertise, and preparation to succeed and excel in emerging knowledge-based fields like life sciences, information technology, and the emerging "green" industries. The CSU is also an important contributor to the public sector workforce, educating a substantial number of teachers, criminal justice employees, social workers, and policymakers. For all of these fields, the CSU strives to build a workforce based in a range of backgrounds and experiences, and to provide educational opportunities to students regardless of their financial means.

This analysis focuses on key knowledge-based and service industries that account for nearly five million jobs in California:

- Agriculture, Food and Beverages;
- Business and Professional Services;
- Life Sciences and Biomedicine;
- Engineering, Information Technology and Technical Disciplines;
- Media, Culture, and Design;
- Hospitality and Tourism;
- Education;
- Criminal Justice;
- Social Work;
- Public Administration.

The CSU's contribution to these industries is evident when analyzing the percentage of graduates in California who receive their degrees from the CSU. Figure 2 demonstrates the CSU's strong showing across California's key industries.

Figure 2. Percentage of California Bachelor's Degrees awarded by CSU, 2007



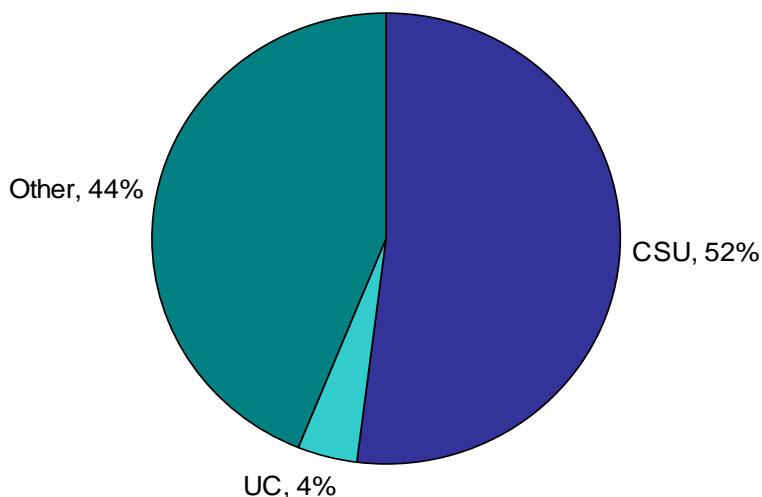
Source: California Postsecondary Education Commission

Of particular note is the CSU's significant contribution to graduates in the fields of Hospitality and Tourism, Business, and Agriculture. In each of these fields, the CSU produces well over 50 percent of the bachelor's degrees awarded in California.

But the CSU's strategic importance to California's workforce is not limited to supplying the state's industries with well-prepared professionals. The CSU is an even more important producer of workers for critical occupations in the public and non-profit sector, from education and social work to public administration and criminal justice.

In fact, the CSU remains California's largest source of educators. More than half the state's newly credentialed teachers in 2007-08—52 percent—were CSU graduates, expanding the state's ranks of teachers by more than 12,500 per year.

Figure 3. Newly Issued California Teaching Credentials (regular credentials and internships) by University, 2007-08



Source: California Commission on Teacher Credentialing

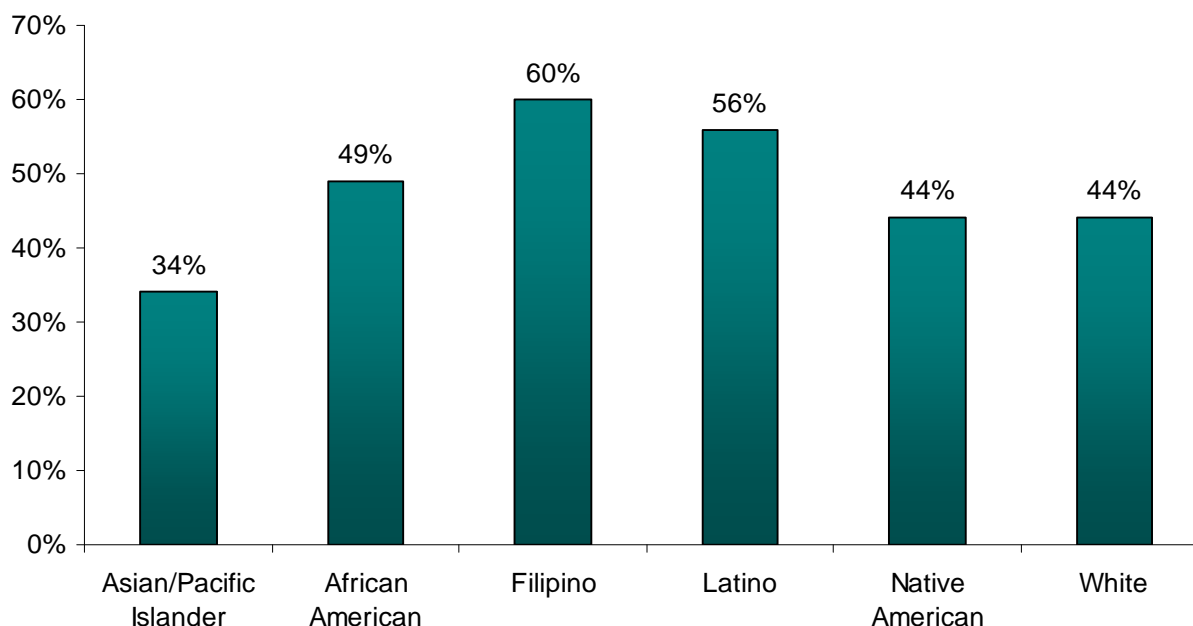
The full report contains a more detailed breakdown of each industry as well as notable examples of programs and contributions from various CSU campuses.

Making Higher Education Accessible

In every industry, California thrives on a workforce based in a range of backgrounds and perspectives. To that end, the CSU has a long tradition of providing access to higher education to Californians from different ethnic, socioeconomic, and educational backgrounds, making it the most diverse university system in the country. Over the last 10 years, the CSU has significantly enhanced its academic preparation and outreach efforts to underserved communities through a variety of programs and partnerships with the goal of increasing college readiness for K-12 students. Equally as important, the CSU is also focusing on helping students succeed and persist to a degree once they reach the university and has recently launched a Graduation Initiative aimed at increasing the graduation rate and halving the achievement gap of underrepresented students.

As of 2006-07, 56 percent of all bachelor's degrees granted to Latinos in California were CSU degrees. The numbers for other ethnic groups in the state were similar as shown in the following graph.

Figure 4. CSU Bachelor's Degrees Recipients as a Percentage of All California Public and Private University Bachelor's Recipients, 2006-07.



Source: California Postsecondary Education Commission

The CSU has also continued efforts to offer a university education to disabled students. More than 10,000 disabled students are currently enrolled at the CSU, and more than 95 percent graduate. This success rate is in part due to the wide range of services provided to assist disabled students.

CSU campuses also provide comprehensive services that ensure the admission, retention, and graduation of foster youth. Foster youth are provided direct contact with staff members, ongoing academic monitoring and intervention, opportunities to build relationships in a community setting, and connections to campus clubs and organizations.

The CSU works to welcome students who enter college from community college or non-traditional avenues. In fall 2008, about 42 percent of students entering the CSU began their academic careers in community college. This is coupled with the CSU's programs that allow students to engage in learning later in life. Approximately 1 in 5 CSU students is older than 30, and one-quarter of students attend the CSU part-time. Programs and services like child care, veteran's offices, financial aid, and counseling and advising support help students successfully engage while in college.

Numerous online and distance learning programs also allow access to the CSU for students who otherwise may not have the opportunity. In addition, the CSU Extended Education units on every campus address the educational and training needs of California's workforce. Individuals can pursue degrees, take classes, complete credentials, earn certificates, and explore

professional and career development opportunities. Extended Education partners with business and industry to design and deliver high-quality programs that enable people to excel in a competitive environment.

Beyond the wealth of programs designed to promote access to higher education, the CSU remains one of the most affordable public education systems in the nation. With federal and state aid, loans, and scholarships, students have many options to help them afford a college education. While state funding cuts have forced the CSU to find new ways to maintain quality, including raising fees, the CSU's in-state fees remain the second lowest among comparable institutions nationally.

In addition, about one-third of revenues from increased fees help bolster financial aid. In 2008, the CSU awarded more than \$2 billion in financial aid, including loans, work study, and grants, helping to maintain its legacy as a uniquely affordable option for higher education. More than 250,000, or 54 percent, of CSU students received some form of aid in 2008.

California faces a complex web of challenges in the 21st century, including growing a nimble economy founded on agriculture and propelled by innovative technologies, while also providing essential social services to a broad array of citizens. In this environment, a large, dynamic workforce of job-ready university graduates is essential.

The CSU is by far the state's largest and most affordable educator of California's workforce. No other California university provides as many well-prepared graduates for knowledge-based industries. At the same time, the CSU's education of public professionals in criminal justice, education, and public administration lays the foundation for future economic growth and protects citizens in need.

CSU on Sustainability: Environmental Consciousness and Energy

The CSU is cognizant of its responsibility to serve as a guardian of the state's natural resources—not only as a consumer of these resources but also as an institutional leader. This report describes the different means through which the CSU has integrated sustainability across all campuses. The CSU campuses have committed to sustainability initiatives such as the Presidents' Climate Commitment, and the international higher education-sponsored Talloires Declaration, and have also joined associations and voluntary green programs. Sustainability and related fields of study are offered as undergraduate majors as well as graduate degree programs to prepare the next generation of environmental leaders.

In April 2009, the U.S. Environmental Protection Agency recognized the CSU in the Top 20 list of the largest national green power purchasers. CSU ranked fifth among EPA's Top 20 College and University Green Power Partners.

The CSU campuses have adopted creative measures to incorporate sustainability in their everyday operations. The broad scope of green initiatives committed to by the CSU campuses discussed in this report are closely aligned with the statewide Integrated Energy Policy, which includes energy efficiency, water conservation, alternative transportation, local food options,

recycling/waste reduction, green outreach/community action, green building/sustainable design, and renewable energy.

CSU currently has Leadership in Energy and Environmental Design (LEED™) certified projects across 16 campuses.

The CSU has adopted renewable energy generation to help achieve energy independence for its campuses. Statewide policy requires California to reduce its carbon emissions to 80 percent of its 1990 levels by 2050. As electric power generation accounts for 22 percent of California's carbon emissions, the CSU is utilizing renewable power generation to achieve a reduction in its carbon emissions. Currently 23 percent of the CSU's electric power is from renewable sources.

The CSU Board of Trustees has set a goal for the CSU to double its on-campus renewable generation by 2014, and the CSU is well on its way to exceed this target. In 2005, the CSU partnered with the Department of General Services to lead a statewide effort to install solar-powered generation systems on university campuses and state facilities. This is expected to offset an amount of carbon dioxide that is equivalent to removing nearly 1,200 cars from the road annually or providing annual electricity for 800 homes.

Students play a key role in the design and implementation of various innovative "green" initiatives that not only raise environmental awareness in the local community, but also ensure that graduates will join the community tomorrow with a deeper understanding of sustainability and an increased environmental sensibility. Key examples of the latter are Chico's annual "This Way to Sustainability" conference, the nation's largest student-run conference focusing on sustainability, and Humboldt State University students' creation of a fee to fund student-led energy efficiency projects.

Community education and action is a key component of the CSU's mission to raise environmental awareness on a local and regional level. The CSU offers specialized centers for community use such as Cal Poly Pomona's AGRIsCapes, which integrates farming and urban landscaping practices that are sustainable, environmentally beneficial, economically viable, and technologically sound. San Francisco State University's Industrial Assessment Center provides small- and medium-sized manufacturers with free assessments of their plant's energy, waste and productivity efficiency, and offers recommendations for improvements.

The CSU will continue to meet the sustainability challenges of the 21st century using creative and feasible solutions that can be adopted across its campuses.

Impact on Innovation and Entrepreneurship

Applied research and innovation is a productive and burgeoning economic engine for California. The CSU's research capabilities have an enormous impact on California's economy, with CSU research and project sponsored expenditures from federal, state, local, and private sources amounting to over half a billion dollars annually, and employing 6,000 students in fiscal year 2007-08.

The CSU actively pursues research and sponsored program opportunities as evidenced by the 5,100 proposals it submitted to federal and state agencies and private foundations in 2007-08. That same year CSU campuses received grant or contract awards varying from approximately \$2 million to \$131 million from federal, state, foundation, and private sources. Academic units that benefit from such grant and contract awards broadly include Agriculture, Arts and Letters, Business Administration, Education, Engineering and Computer Science, Health and Human Services, Science and Mathematics, Social Science, and Liberal Arts, among others. The CSU's applied research projects focus on multiple industries such as Energy and the Environment, Biotechnology and Health Care, Agriculture, Information Technology and Engineering, and Physical Sciences/Advanced Sciences.

This report includes examples of initiatives in each of these areas that demonstrate the innovative and broadly applicable nature of CSU research. One such example is the CSU Council on Ocean Affairs, Science, and Technology (COAST), which was established in 2008 to promote marine and coastal science research and education throughout the CSU and disseminate this information to the public. Research partnerships and entrepreneurial initiatives are implemented not only through the CSU's centers and institutes but through faculty-led and student-supported programs and projects, and multicampus consortiums. Examples of such projects include the California Seafloor Mapping project, the Biocompass project, and the California Vehicle Launch Education Initiative.

The aforementioned research activities are indicative of the CSU's growing economic impact across California. The CSU's expanding research agenda is complementing and stimulating its educational mission, while providing new solutions for and new forms of partnership with industry.

Guide to the Report

In the full report that follows, Chapter 1 documents the quantifiable economic impact that the CSU's campuses have on their particular region as well as other regions throughout the state. Chapters 2-4 explore the tremendously important contributions of the CSU to California and its future including workforce, access, sustainability, and applied research.

