

LEADING INDUSTRIES



Leading Industries

Overview

Since the mid-1980's, the Sacramento Region's economy has been one with a large technology influence. Seven of the ten largest manufacturers in the region are involved in research and development and the production of high technology items. These companies include Intel Corporation, Hewlett-Packard, DST Output, Aerojet/Gencorp, NEC Electronics and Agilent Technologies. While, in the short-term, manufacturing employment numbers have declined due to the semiconductor "slump" and mergers, the employment level of manufacturers of electronic components is still 15 percent higher in the Sacramento Region than it was in 1990. These numbers will likely increase as companies look at the Sacramento Region as the "California answer" to more reasonable business costs, combined with a strong and diverse labor force.

In addition to being the political capital of the state, the Sacramento Region is becoming the "Commerce Capital" of the Central Valley and Upstate California. Many major institutional insurance, healthcare, and financial service providers have made the Sacramento Region home for

their regional headquarters and service centers. This trend will likely continue at an increasing rate as the fastest-growing areas of the state are now the inland, not coastal, regions.

Along with its higher than average growth in the healthcare sector, the Sacramento Region is also growing its own life sciences research cluster. The region now has over 100 biotech and medical device companies. UC Davis is one of the premier research universities in the world in subjects from food sciences and genetic research to veterinary medicine. It is the educational core of the life sciences sector in the region and is connected, in some form, to most biotech companies making the Sacramento Region their home. The University has increasingly acted as a magnet for life sciences firms looking for the combination of proximity to all of the research institutions of Northern California, as well as reasonable business costs and a high quality of life. This is a trend that is likely to continue and even increase in the near future as pharmaceutical and medical device companies start turning ideas into products.

Figure 29 – Technology

Company/Organization	City	Regional Employment	Product/Service
Intel Corp.	Folsom	7,000	Semiconductor components
Hewlett-Packard Co.	Roseville	4,000	Computer-related equipment and products
Electronics Data Systems Corp., dba EDS	Rancho Cordova	2,800	Electronic business systems
Aerojet	Rancho Cordova	1,375	Strategic and space propulsion systems
DST Output	El Dorado Hills	1,250	Customer management software
NEC Electronics America Inc.	Roseville	855	Customized technology for the automotive industry
Agilent Technologies	Roseville	650	Test and measurement and communications equipment
TASQ Technology Inc.	Rocklin	575	Information and merchant management software
DST Innovis	El Dorado Hills	470	Billing software
Motion Control Engineering Inc.	Rancho Cordova	380	Elevator control systems

Sacramento Regional Research Institute, July 2004
 Data Sources: *SRRRI Survey*
Listed Companies and Organizations
Sacramento Business Journal, Book of Lists, 2004
Listed Company and Organization Web Sites
Yolo County Biozone Web Site

McClellan Technology Incubator

The McClellan Technology Incubator (MTI), a non-profit organization located at the former McClellan Air Force Base in the heart of the Sacramento Region, was established as part of an economic development effort to assist emerging businesses in the technology sector. McClellan Air Force Base officially closed in July 2001, and MTI was one of the first buildings to convert from military to private sector use. The MTI building has over 28,000 square feet of office space, with much of the space consisting of common area space for all tenants.

The building renovation was funded by the Sacramento Housing & Redevelopment Agency and a grant from the U.S. Economic Development Administration. A total of \$1.2 million was invested into upgrading the building into Class A commercial office space. Office spaces were created to fit the needs of clients that range in number of employees from one to ten. MTI can accommodate 27 offices and has several conference rooms.

Technology

In addition to the Sacramento Region’s strengths for traditional businesses, including lower costs, positive business climate, high quality of life, etc., the region is seeing a new wave of technology companies moving to the area to take advantage of an entirely new set of competitive advantages. These advantages include strong educational and research institutions, proximity to the San Francisco Bay Area, an emerging venture capital network, premier sites and facilities, and a ready-trained workforce.

Some of the largest employers in the Sacramento Region are technology-related companies.

Many of these companies made the move to the Sacramento Region during the 1980’s and early 1990’s. After several years, many of these companies have expanded their operations into campus facilities, oftentimes moving divisions from elsewhere into the Sacramento Region, as well as locating new expansions in the region. Hewlett-Packard and Intel Corporation both claim that their facilities in the Sacramento Region have the lowest employee turnover of any of their facilities worldwide.

Key technology areas in the region that have developed rapidly include:

- Biotechnology and Healthcare
- Professional and Business Services
- Aerospace and Defense Support

Biotechnology and Healthcare

The biotechnology industry is a combination of science and technology which holds great potential for growth and discovery in the future. This pioneering industry has broad social and economic reach – it is involved in, or developing products for, many areas including the improvement of human health, meeting energy and environmental needs, national defense, and new innovations. The industry includes a wide range of firms, although many are involved in pharmaceuticals and medical device research and development or manufacturing.

The Sacramento Region is home to over 100 companies who have some or all of their business activities involved in the biotech industry. Some significant companies in the area include Affymetrix and Lipomics in West Sacramento, Calgene LLC and Novozymes Biotech Inc. in Davis, Seminis Inc. in Woodland, and Volcano Therapeutics in Rancho Cordova. These companies work in the manufacturing, research, or development of a wide variety of medical equipment, optical instruments, analytical devices, measuring and controlling devices, and biological and other health-related products. Employees of biotechnology firms generally earn higher than average wages.

The Sacramento Region holds multiple advantages for attracting and growing companies in the biotechnology industry. One of the most important is the location of the University of California, Davis (UC Davis), and UC Davis Medical Center which includes a well respected and successful biotechnology program along with other medical, veterinary, and agricultural programs which have ties to the industry.

Teale Data Center

Teale Data Center, located in Sacramento, is the center for all of the State of California’s information technology needs. Teale Data Center's annual budget is more than \$90 million, with 400 employees, over 250 customers and five major computer systems. In addition, there are over 75,000 end-user devices connected to Teale's statewide network.

Figure 30 – Life Sciences/Medical Devices Companies

Company	Products and Services	Number of Employees
Dade MicroScan Inc.	Provides research, development, manufacturing and distribution of microbiology instruments and software	475
Volcano Therapeutics Inc.	Develops and manufactures products used in the detection and treatment of coronary problems	325
Affymetrix Inc.	Develops and markets systems for acquiring, analyzing, and managing complex genetic information	170
Seminis	Develops, produces, and markets improved vegetable and fruit crops	165
Idexx Laboratories Inc.	Veterinary diagnostic services	160
Calgene LLC	Research on the enhancement of the seed quality of crop plants for food and feed improvements	90
Miltenyl Biotech Inc.	Manufactures cell-sorting equipment	85
Novozymes Biotech Inc.	Research and develop novel industrial enzymes, enzyme applications, and production hosts as well as general biotechnologies	70
Jackson Laboratory at University of California, Davis	Breeds and distributes mice for research and biomedical research	50
ThermoGenesis	Creates thermodynamic devices for processing and freezing blood and other biological substances; Develops and manufactures micromanufacturing systems designed to harvest biopharmaceutical products from blood	63
California Laboratory Services, dba CLS	Tests water, soil, and other solids for bacteria, metals, and petroleum products	50
Advanced Bio-Mechanics Inc.	Provides orthotics, posthetics, rehabilitative services	45
Immuno Concepts North America Limited	Manufactures vitro diagnostic kits	45
MMI Genomics	Diagnostic services, genotyping, DNA-bases parentage and identification-testing, and gene discovery programs	36

*Source: Sacramento Business Journal, High Tech Direct, October 2003
Sacramento Business Journal, Book of Lists, 2004*

The biological technology research and development capability, due to UC Davis academic programs and applied technology initiatives, is one of the keys to the region's success. In addition, there are also many major biotechnology manufacturers in the region.

Most recently, UC Davis Medical Center received National Cancer Institute status, making it one of only two Northern California health research institutions with this designation (the other being UC San Francisco). In addition, UC Davis recently received National Science Foundation funding for the Center for Biophotonics Science and Technology, serving as the lead educational

institution in a 10 campus national effort in this science. Biophotonics is the science of using light to understand the inner workings of cells and tissues in living organisms. The Center will employ 100 researchers and will collaborate with private and public research institutions for uses from healthcare to bio-defense.

An advantage for the Sacramento Region is its proximity to the San Francisco Bay Area's biotechnology cluster, which is less than 90 miles away. Many consider the San Francisco Bay Area to be the birthplace of biotechnology, and the current home of several hundred biotechnology companies.

Sacramento Ranked 11th Among the Nation’s Hottest Job Markets

The business publication *Business 2.0* recently ranked the Sacramento Region as the 11th of 61 metropolitan areas most likely to become “boom towns” during the next four years. The ranking was among 61 metropolitan areas with populations over one million in the United States. Each of the region’s scores were based on their capacity to generate high-wage jobs by comparing the growth potential of the top ten most skilled occupational clusters, the number of skilled workers and college degrees, and the percentage of the workforce that could be termed “knowledge workers.” As Business 2.0 states, “The top 20 metro areas in our ranking promise to be fertile ground for job seekers and employers alike.”

Professional and Business Services

Over the last 50 years, the United States has witnessed a major transformation in its economy. This has involved a shift of jobs and business focus toward a service-oriented rather than manufacturing economy. This transformation has meant a reduction in the employment growth of manufacturing and major changes in the geography of production, major increases in the number of white collar and service sector jobs, and the rise of new service activities.

According to the U.S. Census Bureau, the professional and business services industry sector is made up of three parts: the professional, scientific, and technical services sector, the management of companies and enterprises sector, and the administrative, support, waste management, and remediation services sector. Within all of these sectors, companies provide a variety of services including legal advice and representation, accounting and payroll services, architectural, engineering, specialized design services, computer services, consulting services, research services, advertising services, office administration, hiring and placing of personnel, document preparation and similar clerical services, security and surveillance services, cleaning, and waste disposal services. In addition, some companies administer, oversee, and manage establishments of companies or enterprises or hold securities in them.

California is a world-leader in the professional and business services industry. The industry provides the support mechanism for firms that are driving one of the world’s largest economies. The industry is also important to the Sacramento Region’s growing economy not only for private business, but also because the region is home to the headquarters of the sixth largest economy in the world, the State of California. Many business services

companies in the region have direct ties to the state’s operations and financial activities.

The Sacramento Region has a diverse network of quality business services, such as call centers, credit reporting and collection firms, personnel services businesses, software companies, and other firms supporting both private companies and state and local government.

The Sacramento Region has many leading local, national, and international professional and business service firms. Some of the largest include:

- Deloitte & Touche LLP (accounting)
- Perry-Smith LLP (accounting)
- Downey Brand LLP (law firm)
- Wells Fargo (banking)
- McDonough Holland & Allen PC (law firm)
- SBC (telecommunications)
- SureWest (telecommunications)
- Corestaff Services (staffing)
- Lionakis Beaumont Design Group, Inc (architecture)
- Wood Rodgers Inc (engineering)
- Helm Solutions (staffing)
- Onsite Companies Inc. (staffing)

The Sacramento Region offers a host of resources for companies in the business services industry. These resources, along with an outstanding system of higher education supplying an educated workforce, are allowing regional companies in this industry to grow and prosper.

Golden Capital Network

Based in the northern valley of California, the Golden Capital Network is an organization designed to assist fledgling technology companies, investors and entrepreneurs. The organization has been directly involved in launching new technology companies in the Sacramento Region, as well as attracting new venture capital to the area. Over the last four years, the organization has presented over 450 companies to 300 angel and venture capital investors at their company “showcase” events. Sixty of these firms received a total of roughly \$400 million in funding.

Aerospace and Defense Support

According to MarketResearch.com, the U.S. aerospace and defense industry contributed approximately one percent of the GDP, 0.5 percent of the total employment, and generated \$148.17 billion in sales in 2002. The increase in the Department of Defense’s budget for research and development is expected to boost several technological advancements in satellite communication, surveillance and reconnaissance equipment. The various measures of the federal government to enhance the intelligence and analytical capabilities of the armed forces are likely to result in up-gradation and transformation of military assets and revitalization of national defense.

With federal, state, and local authorities expected to spend approximately \$45 billion annually between 2003 and 2006, both large and small companies can expect to cash in on the booming market for cutting-edge Homeland Defense products and services. The government is also scouting for companies to enter into collaboration for conceptualizing, developing and delivering security technologies for both the military and commercial markets. Many companies in the Sacramento Region are already benefiting from the increased spending allocations.

The Sacramento Region has had a historical link with the defense and aerospace industry. The sector is smaller than it was in the 1980’s because the Air Force has closed local bases at McClellan and Mather, and the Army pulled out of what was the Sacramento Army Depot. Those former military bases have been successfully “privatized” employing thousands in new companies that have been recruited to the Sacramento Region. Despite these closures, Beale Air Force Base continues to remain a strong asset in the Sacramento Region with the recent addition of the Global Hawk operation. The Global Hawk

is an unmanned, high-altitude, long endurance aerial vehicle primarily designed for military reconnaissance.

An industry that was in the shadows of the more visible military, but nonetheless an important part of the regional economy, was private businesses that supported the defense and aerospace industry. Recently, increased spending on the U.S. military and homeland security fronts has created a strong business environment for both established and new defense and aerospace-oriented companies in the Sacramento Region.

Some companies involved in the defense and aerospace industry in the Sacramento Region include, but are not limited to:

- Aerojet/Gencorp in Rancho Cordova
- LifeWave Inc., in Roseville
- Spectrum Environmental Technologies in Rancho Cordova
- AAR-ATICS at McClellan Park in Sacramento County
- Alpha Research & Technology Inc., in El Dorado Hills
- Northrop Grumman Mission Systems, Electromagnetic Systems Laboratory, at McClellan Park in Sacramento County
- Composite Engineering Inc., in Sacramento

These companies are developing, building, or subcontracting on a wide range of defense and/or aerospace-related products and projects including unmanned jets, kinetic energy interceptors, missile defense, heart monitors for military applications, mobile personnel shelters, federal anti-terrorism building codes, military intelligence computer hardware and software, shock-temperature and dust-proof defense and intelligence computer systems.

