2006 Silicon Valley Projections
Daring to Compete: A Region-to-Region Reality Check

Trends Shaping the Valley
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Housing
Healthcare
Transportation
Tax Policy
Education and Workforce Preparation

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Campbell
Los Gatos
Monte Sereno
Saratoga

SANTA CRUZ COUNTY
Scotts Valley
# 2006 Silicon Valley Projections

**Daring to Compete: A Region-to-Region Reality Check**

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To survive, compete and thrive, an organism must change with its environment or risk extinction. It is time Silicon Valley – and California – embraced that concept.

Once, this Valley was a leader in adaptation, flexibility and innovation. We drove the electronic and economic evolution that transformed not only this region and the state, but the country and the world. Both global and national competitors have methodically benchmarked our prior successes and are striving to surpass them.

Global competition is not an idea or theory that's taught and debated about in business schools – it is quite simply a reality, and it is here to stay. It is in this vein that the Silicon Valley Leadership Group presents this year's Projections report, "Daring to Compete: A Region-to-Region Reality Check."

By providing an honest assessment of how our region stacks up against the seven other high-tech regions in the United States, this report attempts to provide a dose of both reality and humility to business and community leaders. It reminds us that our competition is not only on the other side of the globe, but also next door – in our sister states.

Yes, other states and regions of the world have become more hospitable in the eyes of employers. That is a fact that Silicon Valley must accept. We can no longer afford to rest on our laurels. We may be the "birthplace of high-tech", but our ongoing success is not a "birthright". We must move forward – and that means finding new and innovative ways to reignite our business climate and revamp our political and regulatory frameworks. How can we do this quickly and effectively? The answer is simple: We can and must learn from others and replicate successful programs and reforms.

When we learn of a good idea, we shouldn’t be hesitant about stealing it and adapting it for our benefit. America's most famous inventor, Thomas Alva Edison, put it this way: "Keep on the lookout for novel ideas that others have used successfully. Your idea has to be original only in its adaptation to the problem you're working on." In other words, it is perfectly acceptable for us to emulate the successes and leadership of other regions, states, and nations to boost our competitiveness in a global market.

Wisdom comes from a willingness to listen and learn. By doing so, we can lead. Our workers, constituents, and economy deserve no less.
The Silicon Valley Leadership Group, created in 1978 by David Packard of Hewlett Packard, represents 195 of Silicon Valley's most respected employers. SVLG members collectively provide approximately 250,000 jobs — or nearly one in every five — in Silicon Valley. SVLG, a coalition-building force for Silicon Valley, is organized to involve member companies in a cooperative effort with local, regional, state, and federal government officials to tackle major public policy issues affecting the economic health and quality of life in Silicon Valley. Creative solutions will be required to restart our vibrant economy in the years ahead. SVLG is proud to present Silicon Valley Projections 2006 to inform decision-makers and to help facilitate solutions.

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Trends Shaping the Valley
Silicon Valley is showing increasing signs of recovery, as the economy slowly emerges from a period of what one famous economist, Joseph Schumpeter, would so vividly describe as a period of “creative destruction.” Like the saplings that emerge after a forest fire has ravaged a tract of forest, the Silicon Valley infrastructure and dynamics that sustained the economy in the 1990’s remains intact, able to foster a new growth cycle.

Silicon Valley continues to maintain its leadership in semiconductors, network equipment and software venture capital. The Valley still has the nation’s largest concentration of information and biotechnology companies, the largest pool of venture capital, and a re-emerging entrepreneurship that are sowing the seeds of renewed economic vitality and growth. But it is also clear that competitive pressures have only intensified as cities and countries around the world try to emulate Silicon Valley’s past success. This means Silicon Valley firms will need to create new demand by creating new products through innovation if they are to exceed past milestones of success.

Manufacturing dislocations are no longer an impediment to growth, but manufacturing is not yet a major contributor to growth either. Increased defense spending has helped cushion the blow, leading to a higher number of procurement contracts for the Valley’s major defense contractors. Consumer and business spending has been on the rise, concentrated primarily on upgrading and replacing telecommunications and computer equipment, and helping to support semiconductor and semiconductor equipment manufacturers. Temporary tax incentives for the repatriation of overseas profits could create considerable upside potential for expanded local R&D investment. Moreover, increased IPO activity could spur even more investor interest and investment in new Silicon Valley startups. Earnings and revenues are growing robustly for a number of Silicon Valley technology companies from Intel and AMD to e-commerce and internet portals such as E-bay, Google, and Yahoo, allowing them to at least tentatively ramp-up hiring and investment spending.

Yet technology company payroll growth will continue to be held back by the high cost of doing business and the structural changes occurring in the technology industry. The technology industry has become much more global and competitive since 2000. Major technology bellwethers like Intel have announced their intention to do much of their future hiring outside the United States, closer to where their fastest growing markets and an increasing share of their customers now reside. HP’s ouster of CEO Carly Fiorina raises uncertainty about that company’s future direction. HP is the fifth largest employer in San Jose metro area with approximately 9,400 employees. Oracle has laid off 5,000 employees following its merger with PeopleSoft. Even small startup companies in the Valley are increasingly focused on the global market, and that includes opening offices and production facilities overseas instead of in the states.

The pace of total non-farm employment growth has remained disappointing compared to the state and national averages, marking four consecutive years now of underperformance. Professional and business services employment is still reeling from the dislocation and out-migration that has stymied the Valley’s economy since 2000. And there are good reasons to remain cautious on the technology outlook as well. Better earnings growth has triggered increases in merger and acquisition activity and consolidation continues to reign. Global industrial production and leading economic indicators have been historically good predictors of technology industry prospects. Both indicators look weaker than a year ago. Consumer confidence is waning, which could crimp demand for consumer portable devices, a high growth part of the market. Asian demand is probably the key, and here the outlook appears mixed. Japan, South Korea, Taiwan and Thailand look weak, while China continues to see solid growth.

On balance the Silicon Valley’s economic recovery continues to broaden and sustainability is likely. Most local economic indicators still point toward continued improvement in the economy and faster total payroll growth through 2016.
EMPLOYMENT
The Valley economy has shed a net 185,500 jobs over the past five years, a decline of 12.3 percent in total employment from its cyclical peak. San Jose/Milpitas and Northwest Santa Clara County has accounted for the bulk of the decline, shedding a net 119,200 or nearly 16 percent of their total payrolls. San Mateo County has lost a considerable 38,300 net jobs over the period, or 9.9 percent of the County’s total employment. It may take as long as a decade for the Valley to replace those lost jobs, but all signs point to the fact that the recovery process has begun. Payrolls across the Valley have been virtually flat over the past year, a marked improvement over the past three years. Employment growth in the region is expected to advance at a rate near the national average next year, as the region bounces back further from the depths of the recession; statewide job growth will exceed the national average due to greater expansion in the Central Valley. Large cash balances at VC firms, a more stable manufacturing environment, and pick-up in the moribund professional and business services sectors such as legal, accounting, and advertising should help improve the overall labor market environment. Indeed, there is anecdotal evidence that some firms are already having difficulty finding skilled labor to fill available positions. Employment is expected to grow by 1.6 percent in 2006, adding approximately 21,282 jobs. Yet longer-term, employment growth through 2016 will likely average far below the rates experienced from 1993 to 2000, as the evolving structure of supply and demand in the technology industry creates a growing share of the employment growth overseas.
### Trends Shaping the Valley

#### 2006 SVLG Projections

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### Comparisons Within Silicon Valley

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Source: U.S. Bureau of Census; Economy.com, (adjusted – Scott Anderson, Senior Economist, Wells Fargo & Co.)
HOUSEHOLDS
More people are staying in the Valley as the economy regains its footing, but net outflows continue. People have been leaving the Valley since 1999 as job prospects dried up and punishing housing costs forced many households to leave Silicon Valley for cheaper housing in other Bay Area communities such as parts of Oakland, or even in surrounding metro areas such as Sacramento. Others left to other emerging tech centers in Phoenix, Austin, Portland, and Seattle. Yet natural population increases and positive foreign net-migration has allowed the absolute number of Silicon Valley households to grow by 37,800 households or 4.0 percent from 2000 to 2005. Another sign of stronger household growth returning, residential permits in Santa Clara County are running about 50 percent above year ago levels. This has prompted us to slightly raise our forecasts for household growth over the forecast horizon. With improved job prospects ahead and rental rates on apartments averaging well below their 2001 peak, migration trends should continue to stabilize, re-establishing an even steeper upward trend in household growth through 2016. There could be more than 1.1 million households in the Valley by 2016.

POPULATION
All indications are that Silicon Valley population growth is still on a solid upward path despite the economic stumbles and contracting labor force. The decline in out-migration is likely a major factor in the recent reversal, as layoffs have slowed markedly. Foreign in-migration and natural population growth will remain important supports for population growth longer-term. Housing affordability remains the largest long-term risk factor for population growth. Home prices in the Valley remain extremely high compared to incomes. Other risks include a deteriorating transportation infrastructure and an uneven quality of local education and services, which could make people think twice before relocating to the Valley. In the extreme, these risks could potentially discourage business relocations and expansions, and in turn slow migration and population growth trends. Population growth is expected to average approximately 0.8 percent over the coming year, below the state and national averages, and grow 8.3 percent over the following ten years. Silicon Valley’s population is expected to exceed 3.15 million people by 2016, an increase of 13.5 percent, or 375,067 people, since 2000.
Housing
Median home prices remain front page news in Silicon Valley. In July 2005, the San Jose Mercury News reported that median home prices hit an all-time high of $725,914 in Santa Clara County. If you compare this with median home prices of $550,000 in Fairfax County or $375,000 in the Seattle area, you see why 114 of Silicon Valley CEOs list housing as number one on their list of business challenges. The question then becomes: how can Silicon Valley continue to remain competitive when the cost of homes restricts the ability of companies to recruit and retain a world class workforce?

CURRENT CONDITIONS IN SILICON VALLEY: BURSTING BUBBLES? STILL WAITING...

Housing prices continue to rise with the median price of a home in Silicon Valley at $723,914, about a 21% increase over last year. For families who are financially and emotionally ready to make a competitive offer on a home, it takes 16 days to sell a home in Santa Clara County and two days less for a townhome or condominium. In comparison, single and multi family homes in Seattle are on the market an average of 29 days and single family homes in the Raleigh-Durham area are on the market for an average of 92 days.

While the ownership market remains strong, the rental market has slowly been picking up. Rents are rising, vacancy rates are decreasing and banners advertising move-in specials are no longer widespread. According to RealFacts, in Santa Clara County the occupancy rate went from a peak of 98.7% in 2000 and bottomed out at 93.4% in 2002. Today, occupancy rates have risen slightly to 94.1%. At the same time, there is an uptick in the number of apartment communities being converted to condominiums. Twelve apartment communities were converted in 2000 while in 2004 that figure jumped to 195.

The most telling indicator of the housing market is on the construction side. In Santa Clara County and the San Francisco area, construction starts totaled 20,750, down by about 1,000 from the previous year, but up from 2002.

LOOKING FORWARD

Projections indicate that by 2011 the population of Silicon Valley will have increased to 3,036,425, creating a need for 70,620 new homes. Based on past performance, building these 70,000 new homes will be a challenge.

Land use planning is a local decision that has the power to motivate those who would otherwise be considered apathetic and apolitical. Not in my backyard (NIMBY) movements can quickly coalesce around a fear of change and a concern over the perceived and real impacts associated with growth. Nowhere is this demonstrated more perfectly than in Cupertino where three ballot measures to severely restrict growth will be voted on in November. If these measures pass, building condominiums and apartments would not be permitted without a citywide vote, effectively stopping any new compact residential proposals. In Redwood City, a measure to defeat a high rise residential community was passed by the voters at the end of 2004. And, some residents in San Mateo are currently working against a plan for transit-oriented development of homes, office, and retail, preferring to keep a racetrack on 83 acres of land that is right next to a Caltrain stop.

Planning for the number of people expected by 2025 is important but we must also understand that disparate ages, cultures and income levels have differing housing desires. Consumer preference surveys, for example, indicate that aging babyboomers may wish to scale down into a condo or townhome. Couple this information with the knowledge that by 2040 the senior population in Santa Clara County will make up 25% of the overall population, a 12% increase from 2000, and it quickly becomes clear that we may need to build more condos and townhomes.

Fortunately, several measures at the local and state level are helping to ensure that the actions we take today will result in a community in which housing affordability and availability does not impede our success.

LOCAL CITIES LOOK FORWARD

In order to achieve the projected need for homes, local governments must constructively engage neighborhoods in land use planning. The City of San Jose continues to lead the way in this respect and is a good example of how to successfully lay the groundwork for more homes.

In addition to setting bold housing production goals, the City of San Jose has been very aggressive in using planning tools that can tackle future problems today by engaging the community early in the planning process.

At present, the City of San Jose is undergoing several specific and master planning processes-Coyote Valley, North San Jose, Hitachi, Evergreen and more. In North San Jose, the City of San Jose has taken a comprehensive look at a 4,700 acre area and determined that the potential for redevelopment should not be missed. The area is currently home to 60,000 jobs mainly housed in two-story tilt-up office campuses with typical surface parking.

1 Greater Capitol Area Association of Realtors and Northwest Multiple Listing Service
2 Creekside Realty, 1st Quarter 2005 data
3 Santa Clara County Association of Realtors
4 Northwest Multiple Listing Service and Triangle Multiple Listing Service
5 California Department of Real Estate
6 National Homebuilder’s Association
7 National Association of Homebuilders
8 Counting California
The North San Jose proposal would intensify development in this area and add up to 32,000 new homes while directing future growth to an area that is already supported by transit. This type of forward thinking holds the promise of:

- Providing new homes on developed land that was largely unavailable for housing;
- Moving the controversial debate over land use planning further up the food chain to help streamline approval at the project level;
- Better plan communities through a more holistic and comprehensive planning approach.

Through specific planning, San Jose is leading the way in growing the economy while providing for the homes needed to accommodate that growth. Other communities are following suit. In San Mateo, a five year planning process for the Rail Corridor Plan has been approved, making way for transit-oriented development of jobs and housing. And, in Milpitas, the Midtown Specific Plan adopted in 2002 is now coming to fruition as developers are seeking to build highrise housing within the planning area.

CONVERSIONS AND LOCAL GOVERNMENT FINANCE

So the story goes…home prices escalate while office space lies vacant. This trend has lead many to propose a seemingly obvious solution. Why not convert industrially zoned land to residential? For the past two years, cities have seen an increase in the number of permits seeking to change industrially zoned land to residential. Although there are land use compatibility issues that must be taken into consideration, this trend could free up the land needed to significantly increase housing production. However, there is a huge barrier to the success of this solution – local government.

Cities claim that homes are a fiscal drain while businesses add revenues to city coffers. The term fiscalization of land use is used to describe the result – cities make land use decisions based on the costs and revenues associated with the proposed uses. Under this framework, housing is seen as a less desirable use.
Although last year voters passed Proposition 1A, a measure to help stabilize local government revenues, continued resistance to converting industrially zoned land tells a different story. Cities still site the loss of tax revenues as a reason to oppose conversions. Perhaps not enough time has passed in order to assess the implications of Proposition 1A. However, if housing needs go unmet, office buildings remain vacant, and employers site housing availability and affordability as the top impediment to doing business, policy-makers will need to revisit local government finance reform ideas.

THE STATE’S ROLE
Although it has been almost two years, the effects of Governor Schwarzenegger’s election continue to emerge. As well, changes in legislative leadership, term limits and new cabinet appointments all signal the potential for significant change in housing policy.

The State of the State address was one indicator of the Governor’s commitment to housing. In it, he referenced the need to eliminate regulatory and legal hurdles that negatively impact housing construction. In addition, Sunne McPeak, a strong advocate of housing, was appointed Secretary of the Business, Transportation & Housing Agency. And Senators Perata, Lowenthal and Torlakson jointly proposed legislative reforms to promote smart growth. Collectively, these changes could equate to meaningful reform in some key areas:

- **Administration’s ideas:** The Administration has proposed a comprehensive package of housing reforms including creating a 20 year planning horizon and inventory of land suitable for housing, requiring HCD review of growth control measures and modifying housing element law.

- **CEQA improvement:** Senator Perata has introduced a bill intended to modify the California Environmental Quality Act. Many builders allege that CEQA, though well-intended, serves to delay proposals and increase costs. Some environmental organizations insist there is nothing wrong with CEQA. Regardless, several concepts are being forwarded that would provide incentives for infill and disincentives for sprawl development.

### WHAT IS AFFORDABLE HOUSING IN SANTA CLARA COUNTY?

<table>
<thead>
<tr>
<th>Family Size</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low Income</td>
<td>$37,150</td>
<td>$42,450</td>
<td>$47,750</td>
<td>$53,050</td>
</tr>
<tr>
<td>Low Income</td>
<td>$59,400</td>
<td>$67,900</td>
<td>$76,400</td>
<td>$84,900</td>
</tr>
<tr>
<td>Area Median Income</td>
<td>$73,850</td>
<td>$84,400</td>
<td>$94,950</td>
<td>$105,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Programmers</td>
<td>$74,040</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>$69,450</td>
</tr>
<tr>
<td>Technical Writers</td>
<td>$65,960</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>$65,100</td>
</tr>
<tr>
<td>Loan Officers</td>
<td>$62,120</td>
</tr>
<tr>
<td>Teachers</td>
<td>$56,160</td>
</tr>
<tr>
<td>Police, Fire, Ambulance Dispatchers</td>
<td>$43,610</td>
</tr>
<tr>
<td>Child, Family and Social Workers</td>
<td>$42,720</td>
</tr>
<tr>
<td>Massage Therapists</td>
<td>$30,100</td>
</tr>
<tr>
<td>Library Assistants</td>
<td>$27,950</td>
</tr>
<tr>
<td>Paramedics</td>
<td>$27,950</td>
</tr>
<tr>
<td>Teacher’s Assistants</td>
<td>$24,690</td>
</tr>
</tbody>
</table>
Specific planning: Senate Bill 223 by Senator Tom Torlakson would tie together the need for up-front planning and funding by providing a revolving loan program to fund the development of specific plans.

These measures could have a remarkable impact on helping to create a regulatory environment that does not discourage infill housing construction.

Outside of the legislature, a serious and committed movement is afoot to tackle the affordable housing crisis by establishing a permanent source of funding. The Campaign, led by Housing California and the California Housing Consortium, would attempt to provide a more secure funding source for affordable housing in the amount of $1 billion per year. A study commissioned to analyze state housing trusts around the nation identified several potential revenue streams that are now being tested in polling and focus groups. If successful, the $1 billion per year generated by the measure would be a huge step in helping to solve today and tomorrow’s affordable housing needs.

Over the past five years the housing story has not changed dramatically. The downturn in the economy helped alleviate some of the housing pressures but with only 18% of California households able to afford a median-priced home, supply and demand are still not in balance. While local, regional, and state measures are providing hope to evening the jobs vs. housing imbalance, neighborhood opposition to proposed new developments are threatening to make building the needed 70,000 homes very challenging. Ensuring that we plan for how we are going to house the population of tomorrow requires our combined efforts today.
Opportunities for Action

Housing Action Coalition
224 Airport Parkway, Suite 620
San Jose, CA 95110
(408) 501-7864
www.svlg.net

The Housing Action Coalition (HAC) works to increase the supply of affordable, well-constructed and appropriately located housing in Silicon Valley. The Coalition is staffed by SVLG and composed of more than 100 diverse individuals and organizations concerned about housing. To date, HAC has successfully advocated for more than 40,000 homes for workers and their families in Silicon Valley.

Affordable Housing Network
PO Box 5313
San Jose, CA 95150
(408) 265-1554

The Affordable Housing Network is an advocacy group working to increase the construction and rehabilitation of affordable housing.

Housing Leadership Council of San Mateo County
690 Broadway
Redwood City, CA 94063
(650) 364-4576
www.hlcsmc.org

The Housing Leadership Council promotes building enough well-designed, sensibly located places to live so that anyone who works, lives or grows up here will have adequate housing.

Housing Trust of Santa Clara County
1786 Technology Drive
San Jose, CA 95110
(408) 436-3450
www.housingtrustscc.org

The Housing Trust is a public/private initiative that seeks to boost the creation of more affordable housing, first-time homebuyers purchasing ability, and low-income housing assistance. The Housing Trust is a revolving loan fund and grant-making program that complements and leverages other housing resources throughout Silicon Valley. In its first three years, the Housing Trust has loaned out $186 million in voluntary contributions, which has leveraged $786 million in private development, and has already helped more than 4,500 families secure housing opportunities.

Peninsula Interfaith Action
1336 Arroyo Ave
San Carlos, CA 94070
(650) 592-9181
www.piapico.org

Peninsula Interfaith Action (PIA) is a federation of congregations organized to assist congregations, neighborhoods and schools as they seek to improve the quality of life for families throughout the San Francisco Peninsula. Specifically, PIA works to involve the faith community in affordable housing issues.

Housing California, Housing Trust Fund Campaign
801 12th Street, Suite 512
Sacramento, CA 95814
(916) 447-0503, ext. 111
http://www.housingca.org/index.php
http://www.homes4ca.org/

Housing California is a statewide coalition of over 1,000 regional and local housing advocates, nonprofit developers and homelessness service organizations. The organization lobbies on state-level policy and budget matters in an effort to increase housing opportunities for homeless and very low-income households. The organization is also one of a few housing organizations leading the effort to establish a statewide, permanent source of funding for affordable housing.
Two and a half days. That’s how much time Silicon Valley motorists lost stuck in traffic in 2003 – approximately $1,000 per motorist in wasted gas and time. And that was at the nadir of the recession. Factor in record high gas prices and rising traffic congestion, and the costs increase.

Silicon Valley motorists aren’t the only ones feeling the pinch. High tech areas around the nation are confronting similar problems. But thus far they have the edge. Our traffic delays exceed theirs, in some cases by a significant margin. But, many of the states that are home to Silicon Valley’s high tech peers are investing more per capita to address the problem. There’s our challenge.

While we can squeeze more efficiency out of our existing system, we will need to increase our investment in transportation for Silicon Valley to remain competitive.

WHERE DO WE STAND?

In 2003, the latest year for which data is available, traffic flowed more freely in the nine-county Bay region than in any year since 1998, according to data compiled by the California Department of Transportation (Caltrans). Not surprisingly, traffic congestion eased as the economy slipped further into a recession-most noticeably in Santa Clara County, which was hardest hit by the dot-com recession.

Nevertheless, Silicon Valley had among the highest levels of traffic delay in the nation in 2003. According to the Texas Transportation Institute’s (TTI) 2005 annual mobility report (which is based on 2003 data), the San Francisco-Oakland urbanized area, which includes San Mateo and Alameda counties, ranked 2nd in the nation at 72 hours per motorist of annual rush hour delay. Santa Clara County (the San Jose urbanized area), came in 11th with 53 hours of delay, closely followed by San Diego and Austin. Of the seven national high tech clusters, only Fairfax County commuters (included in the Washington DC urbanized area) came close to San Francisco-Oakland’s hair-pulling levels of delay at 69 hours. But all seven high tech clusters averaged 27 or more hours of delay per motorist in 2003.

Although comparable data is not yet available, there is plenty of anecdotal evidence that since 2003 Silicon Valley’s traffic congestion has increased. However, several extraordinarily lean budget years at every level of California government have eroded potholes into craters, delayed numerous highway improvements, and sharply reduced transit services. And demand is expected to continue to outpace resources.

Per capita, Silicon Valley (captured in the San Jose and San Francisco-Oakland metropolitan areas) has the worst congestion costs compared to the seven other top high tech regions in the nation. However, we invest less than most of the others in transportation – we rank third from the last in terms of state and local investment, tied with San Diego. Only Austin, TX and Raleigh-Durham, NC spend less.

According to projections by the Association of Bay Area Governments and the Metropolitan Transportation Commission, by 2030 the Bay Area population will grow by 23 percent, or 1.7 million, and commuters to the region will nearly double in number, to 219,000.

Approximately four out of five of those commuters will be using a car to get to work, compared to one in 17 taking public transit. Traffic will grow by 37 percent, especially on I-580 and Hwy 101, two of the Valley’s most congested corridors. Yet, more than 80 percent of the $113 billion in transportation funds the region anticipates receiving over the next 25 years will be devoted to basic maintenance and on-going operation of our existing transportation system. In other words, the region will be unable to fully fund its existing system, let alone expand capacity to address our projected growth. It’s a similar situation at the state level.
INVESTING IN TRANSPORTATION – HOW WE STACK UP

Governor Schwarzenegger’s proposal to commit $1.3 billion to transportation in fiscal year ’06 will allow construction projects shelved for lack of funding to proceed. But California still owes $3.4 billion borrowed from transportation funds over the last four years to help close the state deficit. And next year the state is anticipating another shortfall. That debt compounds a long-standing infrastructure shortfall in California.

In 1999, the California Transportation Commission (CTC) and Caltrans reported that the state faced a ten-year unfunded infrastructure need in excess of $100 billion. According to the US Bureau of Transportation Statistics, between 1995 and 1999 California consistently ranked below the national average in terms of state and local investment per capita in transportation infrastructure, ranging from 29th to 32nd in the nation. In 2000, California rose to the national average after passage of the Traffic Congestion Relief Act, a $6.8 billion, six-year package that included 149 specific traffic improvements across the state plus funding for local street and roads, public transit, and the state transportation capital improvement program. Then the recession hit and the state borrowed the money back. At the rate California has been borrowing those funds, the CTC now estimates the state’s backlog at nearly $160 billion.

In comparison, between 1995 and 2000 Massachusetts, Washington, and Oregon – states with major high tech regions – were investing well above the national average in transportation. Virginia hovered at or above the national average, while Texas and North Carolina were well below it.

Part of California’s problem has been its heavy reliance on the gas excise tax – an 18 cents per gallon tax on gas and diesel fuel – to fund transportation. The tax, which generated $1.2 billion in fiscal year 2005, has lost nearly one-third of its value to inflation since it was last raised in 1994. Plus, more fuel-efficient cars are reducing the amount of money generated by this tax. Yet, demand for transportation improvements continues to grow. California adds about 600,000 people and 500,000 vehicles to its roadways every year. Actual vehicle miles traveled have been increasing even faster.

ROAD AND HIGHWAY CONDITIONS IN HIGH TECH REGIONS

<table>
<thead>
<tr>
<th>Metro Area</th>
<th>Poor Roads</th>
<th>Annual Additional Vehicle Repair Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Valley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Jose</td>
<td>67%</td>
<td>$689</td>
</tr>
<tr>
<td>San Francisco-Oakland</td>
<td>60%</td>
<td>$656</td>
</tr>
<tr>
<td>San Diego</td>
<td>58%</td>
<td>$623</td>
</tr>
<tr>
<td>Boston</td>
<td>49%</td>
<td>$522</td>
</tr>
<tr>
<td>Washington DC</td>
<td>24%</td>
<td>$370</td>
</tr>
<tr>
<td>Austin</td>
<td>22%</td>
<td>$365</td>
</tr>
<tr>
<td>Seattle</td>
<td>18%</td>
<td>$263</td>
</tr>
<tr>
<td>Portland, OR</td>
<td>14%</td>
<td>$272</td>
</tr>
<tr>
<td>North Carolina</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durham</td>
<td>11%</td>
<td>$235</td>
</tr>
<tr>
<td>Raleigh</td>
<td>7%</td>
<td>$186</td>
</tr>
</tbody>
</table>

Compared to its top high tech peers, Silicon Valley has the worst roads and highest vehicle repair bills in the nation, followed closely by its California neighbor, San Diego.

Source: TRIP’s May 2005 study: “Rough Ride Ahead.”
Nationally, gas excise taxes vary widely, from a low of eight cents per gallon in Alaska as of November 2004 to a high of 29 cents per gallon in Wisconsin, according to the American Petroleum Institute. California's rate is slightly below the 18.4 cents per gallon US average. However, the Valley's high tech peers are collecting between 19.5 (Northern Virginia) and 28 cents per gallon in (Washington). And it's all going to transportation.

Some California leaders have proposed raising California's gas tax. But the idea has been extremely unpopular with voters given that California's gas prices are among the highest in the nation. Plus, California, like four other high tech states, imposes a sales tax on fuel. In California it's 7.25%, of which 5.25% is dedicated to transportation.

Rising gas prices generated a bit more money for the state in 2005, and by extension transportation. This year will be the first since voters approved Proposition 42 in 2002, dedicating the sales tax on fuel to transportation, that the tax will be used as voters directed. That additional $1.3 billion will double the state's investment in transportation. But, it's still a drop in the bucket compared to the $160 billion shortfall. And, given the state's structural deficit, it is not clear whether Prop. 42 funds will be available next year.

Recognizing the historical inadequacy of state and federal funding, some California counties have passed local transportation sales tax measures to fund local transportation projects. Santa Clara County was the first in the state to do so in 1984, followed by San Mateo and Alameda counties. In fact, today 16 local sales tax measures in California provide almost half of all transportation funding in the state. But, the tax is highly volatile – ebbing and flowing with the economy – and still falls far short of the need.
WHERE DO WE GO FROM HERE?
According to TTI, we would need to add 40 lane (freeway & street) miles or 65,000 daily transit or carpool riders in the San Jose urban area and another 69 lane miles or 130,000 transit/carpool riders in the San Francisco-Oakland urban area to maintain 2003 congestion levels. Public transportation saved Bay Area travelers 87 million hours in travel time in 2003, according to TTI. The rub is there is not enough room to add all of those lane miles, and transit funding – particularly operating funds – is in short supply.

Many transportation agencies are expanding their use of technology to stretch the capacity of their existing transportation systems. For example, traffic engineers are remotely managing ramp metering lights and traffic signals to maximize traffic flow on arterials and highways; mounting variable message signs on highways to warn motorists of upcoming traffic snarls; and posting real-time bus and train arrival times on websites and at transit stations using automated vehicle location (AVL) systems, computer-aided dispatch (CAD) systems, and remote vehicle and facility surveillance cameras.

According to TTI, California’s high tech clusters – Silicon Valley (San Francisco-Oakland and San Jose urban areas) and San Diego – have invested the most per capita in “Intelligent Transportation Systems” than any of their peers. The investment shaved 14 hours off Bay Area travelers’ peak hour delays in 2003 – a significant time saving.

Still, Silicon Valley has a long way to go to get ahead of the congestion curve. To do that, we will need to expand the commute options available to commuters and improve the capacity and reliability of the systems we already have in place. Technological advances can help us make the most of those improvements. The challenge will be finding ways to fund them. It’s critical to our future.

Source: Texas Transportation Institute
Real Time Traffic Information Pilot
www.svlg.net
SVLG and OUTREACH, Santa Clara County’s paratransit provider, are launching a pilot program in the Bay Area to provide commuters with real-time and forecast traffic information. The program will get underway in November 2005, in conjunction with the ITS World Congress being held in San Francisco. The data will be collected (anonymously) from a variety of sources, including volunteer commuters using GPS-equipped PDAs. The data will be posted on the internet and eventually integrated into MTC’s 511 system. We are particularly interested in recruiting long-distance Silicon Valley commuters as volunteer data gatherers, but anyone interested is welcome and encouraged to participate. For more details and updates, visit SVLG’s website.

Surface Transportation Policy Project (STPP)
http://www.transact.org/ca/default.htm
STPP is a nationwide coalition, with a state chapter, that works to ensure safer communities and smarter transportation choices that enhance the economy, improve public health, promote social equity, and protect the environment. STPP California helps build regional and statewide coalitions, conducts research and analysis, and identifies funding sources for innovative transportation projects and programs in California.

Metropolitan Transportation Commission (MTC)
http://www.mtc.ca.gov/get_inolved/
MTC is the Bay Area’s regional transportation planning, coordinating and financing agency. The agency’s website is an excellent source of information on federal, state and regional transportation issues and legislation. Check out the "Get Involved" section for openings on ongoing and project-specific citizen’s advisory committee or to register your opinions on occasional surveys conducted by MTC. MTC also operates an internet-based ride-matching service for commuters (http://www.rideshare.511.org).

City Carshare
www.citycarshare.org
(415) 995-8588
A car-sharing organization whose members have access to a neighborhood-based network of cars they can reserve for short or long periods of time. City CarShare operates in neighborhoods throughout San Francisco, the East Bay, and the Peninsula. Cars are available to members on a per-use basis. You pay based on how much you drive. The fees include gas, insurance, maintenance, etc. The program is particularly useful for people who have only occasional need for a car or a second vehicle.

County Transportation Planning Agencies
To participate in decisions being made on transportation projects and programs in your community, consider attending meetings of your county transportation planning agency and serving on their advisory committees.

Santa Clara Valley Transportation Authority (VTA)
http://www.vta.org

City/County Association of Governments of San Mateo County (C/CAG)
http://www.ccag.ca.gov/

Alameda Congestion Management Agency
http://www.accma.ca.gov/pages/index.aspx

Silicon Valley bicycle and pedestrian advocacy organizations:

Silicon Valley Bicycle Coalition (SVBC)
http://www.svbcbikes.org/

Peninsula Bicycle & Pedestrian Coalition (PBPC)
http://penbiped.org/index.html

East Bay Bicycle Coalition (EBBC)
http://www.ebbc.org/
Education and Workforce Preparation
A highly skilled, trained and adaptable workforce remains the key to sustaining Silicon Valley. Innovation continues to fuel the Valley. But Silicon Valley and the state are at a crossroads in how we prepare our children and train our workers.

There is constant tension between the call for funding and the call for greater efficiencies in our state’s K-12 and higher education systems, and the debate continues to polarize. It is further complicated by an international labor force that is becoming increasingly well educated; the friendlier business environments in other states; the slow growth in our economy; the escalating cost of housing; entangling voter and legislative mandates; and prohibitions against bringing in foreign talent to fill gaps.

In spite of the challenges that continue to hamper the valley’s education system, SVLG’s “CEO Business Climate Survey” (April 2005) found that a highly skilled labor force and access to elite universities stood out as the most important benefits of doing business in Silicon Valley. Valley CEOs continue to rely on local talent and research capacity to energize our innovation economy.

WORKFORCE

Historically, Silicon Valley could remain innovative and agile by harnessing the power of its higher education institutions. The Valley’s inherent risk taking has provided the region with a competitive advantage. However, homegrown talent is becoming a scarce resource as other regions, states, and nations attempt to replicate the Valley’s successes.

With the economic downturn in 2001, companies continue to do more with less. Moreover, with changes in federal immigration policy around that same time and the alarming decline in the number of American students training to be scientists, as reported by the National Science Board, companies must either train from within, look outside or change course. This is particularly concerning as emerging fields like nano- and biotechnology will require employees with a well-rounded background including math, science, engineering, business, and ethics.

The State Employment Development Department projects that chemists, biomedical engineers and computer systems administrators are among the fastest growing fields in the region. The department’s 2001-2008 figures, for example, project upwards of 40-50% increases in these areas. Thus, there has never been a more important time for universities, community colleges, vocational education and other training programs to ensure that Silicon Valley companies have access to a workforce with the skills needed to compete with other regions in and outside of the United States.

The following data, gathered by NOVA, a nonprofit, federally funded employment and training agency, shows a steady increase in the number of individuals with at least a bachelor’s degree that seek out NOVA’s job placement services.

On the one hand, this data demonstrates the ripple effect through a region with a highly educated population when the unemployment rate spikes. However, on the opposite hand Silicon Valley may indeed have a pool of talent within reach that can adapt to the changing tides. It will take a determined effort on the part of the private sector, community colleges and universities, and state and local government to retrain displaced and incumbent workers and to bolster the state’s education pipeline.
One of the greatest points of agreement among the participants of the recent "listening tour" conducted by the Campaign for College Opportunity was that today's economy necessitates a college degree or vocational certification and that there would be a massive ripple-effect through the state's economy (e.g., increasing demands on public services, declining state revenues) if these pathways are somehow limited.

**HIGHER EDUCATION**

Silicon Valley still boasts some of the best universities in the world; however, with the state's growing population of students headed for college and consecutive years of state budget reductions, there still are a number of challenges that face the Valley's local public and private universities and colleges. Of note:

- Remediation rates for entering freshman in the state's higher education system remain high and continue to burden CSU, UC and community college campuses.
- By 2013, it is estimated that the state's community colleges may need to expand their capacity by 50% – an additional 52,000 students in Silicon Valley alone – to ensure adequate facilities like lecture space and labs.
- Since 1999, student fees in the California State University system alone have risen nearly 60%.

As student fees are increased, services are trimmed and competition rises among constituent groups for limited spots, there is growing concern that the state's system will be unable to meet the growing needs of our workforce and compete for top talent. It should be noted however, that when comparing U.S. universities as a whole with other nations, the United States is not far behind its European counterparts in affordability and access because higher education costs in the U.S. are offset by higher student aid and higher national incomes. And while the US ranks 13 out of 15 developed countries in affordability, it is fourth in accessibility.

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1. Source: Campaign for College Opportunity
2. Educational Policy Institute, Global Higher Education Report, 2005
In the larger picture, California’s students have made gains in recent years compared with their peers nationwide, but the state as a whole ranks near the bottom. And according to a January (2005) Rand Corporation report, "between 1996 and 2003, California gains in grade 4 mathematics scores were larger than the gains made in the nation and by any of the four other most populous states, [but] California is still the lowest scoring of the five most populous states."

While keeping in mind California’s low standing compared with other states, if one views these with an international "lens" and what that means for our state (and nation)’s future economic competitiveness, the picture is alarming.

The percentage of top-achieving 15-year-old math students in the United States is about half that of other industrialized countries, according to a study through the Organization for Economic Coopera- 
tion and Development (OECD), a Paris-based organization of industrialized countries. The nation’s performance was about the same as Poland, Hungary and Spain, with Finland, Korea, and Japan leading the world. Moreover, the 2003 Trends in International Mathematics and Science Study (TIMSS) found that, although U.S. fourth-grade students exceeded the international averages in both mathematics and science, U.S. fourth-graders ranked 12th out of 25 in math, and 6th in science, consistently behind countries like Singapore, Japan, Taiwan, and England.

And, rigorous math and science courses will not just be the foundation for future high tech workers; rather, the changing nature of the job place will require all students be proficient in these areas. For example, today’s auto mechanic now must understand the engineering, physics and chemistry behind hybrid automotive technology.

Eric A. Hanushek, senior fellow at the Hoover Institution of Stanford University, best summed it up by stating that, "performance on international math and science assessments are 'early warning signals' for later economic welfare."3

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3Education Week, 2/2/05
PUSHING FORWARD

In an innovation economy, the key piece of “infrastructure” remains our K-12 system, higher education institutions and workforce training programs. There are numerous cracks in its structure in need of repair – about which other states and nations will not await the outcomes. The state’s high school dropout rate is comparatively large and difficult to pinpoint; higher education access and affordability are critical; and rigorous K-12 instruction in math and science must be bolstered with professional development resources.

There are some encouraging signs on the horizon, however. Through the state P-16 Council and the Governor’s Advisory Committee on Education Excellence, the state can take a comprehensive look at what it costs to educate students to meet state standards. There is also an effort to increase high school course rigor by making the university entrance (“A-G”) requirements the default curriculum for all California high school students – a program successfully implemented by the 32,000 student San Jose Unified School District. Moreover, the state’s university systems are clearing paths for undergraduate students to become math and science teachers. Finally, SVLG has helped charter “SV Works,” a coalition of private and public sector leaders in business, education, labor, and local government to prepare the “next wave” of workers.

In an April statewide survey by the Public Policy Institute of California, nearly 3 of 5 Bay Area respondents (and 52% statewide) said that the quality of K-12 public schools in California is a “big problem.” That same survey found a similar number who believe that school funding is inadequate. The results were mixed, though, on how to improve schools, and a majority of respondents looked to taxing “the other guy” to support K-12 and higher education.

Having high expectations is worth little if the supporting action does not follow. Silicon Valley stands to gain, and lose, the most if our education infrastructure does not keep it on the leading edge.
Opportunities for Action

Industry Initiatives for Science and Math Education (IISME)
5301 Stevens Creek Blvd
Santa Clara, CA 95052-8059
(408) 553-2249
www.iisme.org

Founded in 1985 by a consortium of Silicon Valley companies, Industry Initiatives for Science and Math Education (IISME) seeks to transform teaching and learning through eight-week paid Summer Fellowships for teachers. IISME Fellowships provide opportunities for more than 175 teachers each year to learn how science and math are applied in industry and research settings, and transfer this new knowledge to their students. IISME focuses on teachers as the primary agents for effecting meaningful change in education.

SVWorks – Silicon Valley Workforce Development Coalition
Contact: SVLG Office
(408) 501-7864

SVWorks was formed by the Silicon Valley Leadership Group to bring together business, industry, education & workforce development providers, and local government to develop regional strategies for addressing Silicon Valley’s evolving workforce and business needs.

EdVoice
1107 9th Street, Suite 730
Sacramento, CA 95814
(916) 448-3868
www.edvoice.org

EdVoice is a statewide grassroots network focused on passing legislation that will reshape California’s public education policy, enabling our students to excel in the 21st Century. True education reform requires a seismic shift from process to outcomes. Today, there are too many rules from the state, and, worse, often poor outcomes. All California schools can achieve excellence. EdVoice helps create the political muscle to get there.

Resource Area for Teachers (RAFT)
1355 Ridder Park Dr.
San Jose, CA 95131
(408) 451-1420
www.raft.net

RAFT, a non-profit service organization, collects a wide variety of manufacturing by-products, over-runs and other scrap material and redistributes them to schools and community groups. RAFT also works with companies, providing onsite assessments that identify reusable items and arranges their pickup.

Campaign for College Opportunity
5779 Trailwood Drive
Santa Rosa, CA 95404
(415) 596-4528
www.collegeopportunity.org

The Campaign for College Opportunity, a new California non-profit organization, has the sole goal of securing the opportunity for the next generation of students to go to college, as promised by California’s Master Plan for Higher Education. The Campaign for College Opportunity forms statewide and supporting regional coalitions including business, labor, and civic and education leaders to promote awareness and to help shape alternate courses of action to ensure college accessibility for students.

EdSource
4151 Middlefield Road, Suite 100
Palo Alto, CA 94303-4743
(650) 857-9604
www.edsource.org

EdSource, a not-for-profit organization established in 1977, seeks to provide a neutral and clear explanation of complex education issues to a wide audience, including policymakers, parents, researchers and the media, and to promote thoughtful decisions about public school improvement. During the last twenty years, EdSource has worked to develop a firm reputation as a trusted information source of K-12 education.

Housing Assistance for Teachers

Housing Trust of Santa Clara County
1786 Technology Drive
San Jose, CA 95110
(408) 436-3450
www.housingtrustscc.org

City of San Jose Teacher Homebuyer Program
4 North Second Street, Ste. 1350
San Jose, CA 95113
(408) 277-4747
www.sjhousing.org/program/thp.html
Energy and Environment
Silicon Valley organizations are taking action now to address the related challenges of competitiveness and environmental protection by implementing cost effective energy efficiency and energy reliability projects. The effects of energy use and distribution, the impacts of emissions and climate change and the ties of commerce all move on a global scale. By addressing these challenges locally, Silicon Valley organizations are demonstrating feasible and effective ways to remain competitive and address these global issues.

Operating costs and business competitiveness are immediate forces that compel changes in resource use and behavior. However, climate change occurs over decades and is much harder to address in a timeframe corresponding to business or electoral cycles. Nevertheless, many municipal and corporate organizations have acknowledged the probable link between human activity and climate change, understand that at least some of the potential negative effects of climate change could adversely impact their interests and so are taking actions now to reduce direct and indirect CO₂ emissions.

ENERGY EFFICIENCY
California’s electrical energy costs are 51 percent higher than other Western states. Consequently, California businesses including those in Silicon Valley have pursued energy efficiency to reduce their operating costs and thus improve their competitiveness.

Sustainable Silicon Valley (SSV), a regional public-private partnership, is working with several SVLG member companies and regional municipalities to achieve and report on individual organization energy and emissions goals and work toward a regional emissions reduction goal of a 20% reduction in CO₂ emissions by 2010 based on 1990 levels. In 2004, the first group of participating organizations began tracking performance toward their own goals. The following are a few examples of SSV participant’s successes.

SUCCESS STORIES IN SILICON VALLEY

Since 2000, the Roche Palo Alto campus has reduced natural gas use by 32%, and electricity use by 36%. Since 2000, Roche has saved $2.06+ million on electricity and $783+ Thousand on natural gas costs.

Ames Research Center has committed to reducing CO₂ emissions 30% by 2010 (based on 1990 levels). Ames has invested in facility management control systems and lighting upgrades and renewable energy systems to shave peak demand.

LifeScan, a Johnson & Johnson company, sites in Milpitas and Cabo Rojo have saved $1.3 Million per year through energy conservation projects including HVAC upgrades and chiller retrofits. LifeScan pledged to reduce CO₂ emissions by 22.4% (2001 baseline) in 2005.

Oracle has reduced energy use ~10% each year from their 2000 baseline year, at the same time they have significantly expanded their workforce. Oracle invested ~$750K over 3 years for a $3 Million dollar return in energy cost reductions.

The City of Palo Alto now uses landfill gas to supply the sludge incinerator at the sewage treatment plant thereby reducing natural gas use by 50%. Additionally, projects planned for the City Hall and the Waste Water Treatment Facility will result in projected CO₂ emissions reductions of 37% for City Hall and 32% for the Waste Water facilities by 2010.

The City of San Jose has saved more than 100 million kilowatt hours (kWh) and over $13 million in energy costs since 2001 by installing variable speed drives on water pumps, retrofitting lighting and HVAC systems, and encouraging city employees to turn off lights and computers when not in use.
ENERGY EFFICIENCY IN CALIFORNIA
In 2004, the Californian Public Utilities Commission (CPUC) adopted ambitious energy savings targets for California’s largest utilities. Combined, the electricity and natural gas savings will reduce carbon dioxide (CO₂) emissions by more than 9 million tons per year by 2013, equivalent to taking 1.8 million passenger vehicles (40% of Bay Area vehicles) off the road. The CPUC’s natural gas savings goals will triple the annual gas saving by the end of the decade. By 2013, the cumulative effect of the programs will be annual natural gas savings of 444 million therms (MMTh), enough to serve one million households or nearly all households in both Alameda and Santa Clara Counties. Energy efficiency will continue to be a vital resource to meet California’s energy needs.

COMPARING THE AVERAGE COST OF POWER IN HIGH TECH REGIONS
There is a wide disparity in power costs between the seven ‘high tech’ regions. It ranges from a low of 6 cents per kilowatt hour to a high of more than 12 cents per kilowatt hour. (a range of 100%)

- Which high tech region is most competitive? Portland, Oregon, because of inexpensive hydropower
- Which is least competitive?: California and Boston have the highest costs.
- There are two pockets of low cost power in Silicon Valley, Palo Alto and Santa Clara, with power at 7 cents per kWh – making them very competitive
- However, for most high-tech organizations, power costs are marginal compared to the costs of power outages or poor power quality, which can be significant, because of lost product.

The map below shows average retail electric rates across the country (cents per kWh). Warm colors show more expensive power. California energy policies have created the existing “island” of high-cost electricity in California.
NATURAL GAS, TRANSPORTATION SECTOR ENERGY USE AND EMISSIONS

According to the California Energy Commission, about one-third of the natural gas used in California is for the generation of electricity. Another third is used by industry. Of that third, two thirds, or more than 20% of the total, is directly or indirectly related to creating fuel for the transportation sector. According to the California Air Resources Board, increases in vehicle miles traveled (VMT) for California are projected to increase 27% to 1.1 billion miles per day over the next 15 years and increase in the San Francisco Bay Area 24% in the next 15 years. Thus, demand for vehicle fuels will only increase competition and upward price pressures on natural gas supplies. This in turn will put upward pressures on electricity prices, because most California power plants utilize natural gas. Additionally, transportation sources account for about half of Silicon Valley’s and California’s CO₂ emissions, in addition to other smog-forming pollutants, providing an added incentive to reduce VMT.

CO₂ EMISSIONS REDUCTION GOALS ACROSS THE NATION

Silicon Valley, the Bay Area, and California are not unique in their efforts to respond to increasing concerns over human impacts on global climate. Most other high tech areas around the nation have similar emissions reductions targets. Plans to accomplish these goals employ a wide variety of tasks: energy and fuel efficiency, public outreach and education, building and appliance standards, reducing commute travel through public transportation and ‘smart growth’, utilization of non-carbon and less carbon-intensive energy sources and many other cost effective initiatives.

IN OTHER NATIONS

The Kyoto Protocol has taken a great step to reducing greenhouse gas emissions. Businesses can choose to participate in an emissions trading system and earn an 80% rebate of the carbon levy. Countries like Belgium, France, Ireland, and Norway are planning to introduce taxes on energy, carbon emissions, or fossil fuel consumption, all aimed at reducing the levels of greenhouse gas emissions. Notable international companies and their U.S. or Australian operations are under no legal obligation to comply with Kyoto Protocol, but they do. Furthermore, businesses, at the request of shareholders, are proactively adding environmental performance and energy conservation metrics in corporate reports.

<table>
<thead>
<tr>
<th>CLIMATE STABILIZATION – COMPARING OTHER CITIES AND HIGH TECH REGIONS TO SILICON VALLEY</th>
<th>Baseline Year</th>
<th>CO₂ Emissions Reduction Goal</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silicon Valley and Bay Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td>1990</td>
<td>20%</td>
<td>2012</td>
</tr>
<tr>
<td>Oakland</td>
<td>1990</td>
<td>15%</td>
<td>2010</td>
</tr>
<tr>
<td>Berkeley</td>
<td>1990</td>
<td>15%</td>
<td>2010</td>
</tr>
<tr>
<td>San Jose</td>
<td>1990</td>
<td>10%</td>
<td>2010</td>
</tr>
<tr>
<td>Sonoma County</td>
<td>1990</td>
<td>25%</td>
<td>2015</td>
</tr>
<tr>
<td><strong>Other High Tech Regions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego, California</td>
<td>1990</td>
<td>15%</td>
<td>2010</td>
</tr>
<tr>
<td>Austin, Texas</td>
<td>1990</td>
<td>20%</td>
<td>2010</td>
</tr>
<tr>
<td>Portland, Oregon</td>
<td>1988</td>
<td>20%</td>
<td>2010</td>
</tr>
<tr>
<td>Seattle, Washington</td>
<td>1990</td>
<td>&gt;7%</td>
<td>2010</td>
</tr>
<tr>
<td>Boston, Massachusetts</td>
<td>1990</td>
<td>10%</td>
<td>2020</td>
</tr>
<tr>
<td>Fairfax Co., Virginia</td>
<td>No goal</td>
<td>No goal</td>
<td>No goal</td>
</tr>
<tr>
<td>Raleigh/Durham, North Carolina</td>
<td>No goal</td>
<td>No goal</td>
<td>No goal</td>
</tr>
</tbody>
</table>
CONCLUSIONS AND RECOMMENDATIONS

Businesses increasingly compete in a global marketplace and so have intense pressures to keep costs to a minimum. Energy efficiency, especially in high-cost areas, is critical to business competitiveness.

Leadership on carbon emissions reductions accomplishes both environmental and business benefits. Most often, changes in energy management and emissions reductions require some kind of investment. Businesses and municipalities require long lead-times for planning capital investments. Future policies regarding subsidies and investment credits that encourage the development and implementation of new technologies and methods for improving energy efficiency and reducing emissions should be as consistent and predictable as possible over a long enough span of time to ensure their full implementation, and to ensure that California benefits from the jobs these developments will create, as well as the energy and environmental improvements.
Opportunities for Action

Business
Sustainable Silicon Valley (SSV)
www.sustainablesiliconvalley.org
A non-profit, public/private partnership addressing high priority environmental issues in Silicon Valley, starting with energy use, CO₂ emissions and fresh water use.

Flex Your Power Silicon Valley (FYPSV)
www.fypower.org
Connects businesses to peak energy demand response programs helping California’s power grid.

PG&E Programs:
Standard Performance Contract (SPC)
www.pge.com/spc
Funds energy savings retrofits, and energy efficient equipment to reduce energy bills and maintain energy reliability

500 Plus
www.pge.com/500plus
For customers using more than 500kw per month – energy-efficient equipment rebates up to $300,000 per service accountant, per customer, per fuel, per year.

2005 Express Efficiency Program
www.pge.com/express
Rebates to small and medium-sized commercial customers for replacing old equipment with new energy-efficient technologies.

Pacific Energy Center
http://www.pge.com/pec/
Offers educational programs, design tools, and advice regarding energy efficient buildings and comfortable indoor environments, focusing on Commercial and Industrial building environments.

Silicon Valley Power Santa Clara
http://www.siliconvalleypower.com/bus/?doc=bussave
SVPSC offers a variety of programs that help businesses reduce electric bills and save money.

City of Palo Alto Utilities (CPAU)
Commercial Advantage Program is now offering financial incentives to Palo Alto businesses for installing state-of-the-art efficient equipment.

Leadership in Energy and Environmental Design (LEED)
Voluntary standards created by the U.S. Green Building Rating System® for developing high-performance buildings.

Personal Action
Energy Efficient Appliances
http://www.energystar.gov

Commute Smart Silicon Valley
http://www.commutesmart.com
Telecommute, car/van pool, bus/walk/bike instead of drive, high efficiency cars.
Healthcare
A recent report by the California Department of Insurance cites the crushing weight of healthcare costs and warns of a coming economic "death spiral." While there are many cost drivers to contend with on the insurance and delivery sides of the cost equation, Silicon Valley companies are leading the way to provide technology breakthroughs in electronic records, efficient outpatient care, and pharmaceutical delivery systems. Our region is uniquely poised to benefit from many emerging trends in healthcare, but must contend with the unique obstacles of the American healthcare financing system, as well.

Is healthcare a significantly different cost issue for Silicon Valley employers and working families, or is it a common pressure among many that we share with the rest of the U.S.? A 2004 survey conducted both nationally by the Kaiser Family Foundation/HRET and on a California-specific basis by the California HealthCare Foundation tells us that our average annual premiums are very similar to the national average: $3,685 vs. $3,695 for an individual; $10,013 vs. $9,950 for a family.

A look at the results of SVLG’s second annual CEO survey provides some answers. One hundred and fourteen CEOs who responded were asked to list the top business climate issues for their employees and their companies in Silicon Valley. The answers were not surprising: with respect to their employees, 78% of the CEOs cited healthcare among the top five cost of living challenges in Silicon Valley. For a company’s economic competitiveness, the issue of healthcare costs was identified with the fourth highest frequency, after housing, business regulations and worker’s compensation costs.

### HEALTHCARE COST DRIVERS

What are the main healthcare cost drivers? According to a recent Blue Cross/Blue Shield "Medical Cost Reference Guide," there are four in order of impact: Hospital, Physician, Pharmacy and Technology. Hospital care and physician services make up the largest segments of the cost at 30% each. These are followed by prescription drugs, administration and other medical services. Nursing home and home health with durable medical products make up 4% of the total.

What are the fastest growing components of healthcare costs? Hospital outpatient costs are increasing fastest, and have been so over the past ten years, attributable in part to increases in the number of uninsured patients who utilize emergency care services. Other costs with significant run rates are prescription drugs, hospital inpatient costs, and physician services, in that order.

### ANNUAL GROWTH RATES – NHE VS. CPI

Health spending refers to National Health Expenditures (NHE). CPI is the Consumer Price Index.

<table>
<thead>
<tr>
<th>Year</th>
<th>NHE Growth</th>
<th>CPI Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>10%</td>
<td>2%</td>
</tr>
<tr>
<td>1973</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>1976</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>1979</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>1982</td>
<td>16%</td>
<td>2%</td>
</tr>
<tr>
<td>1985</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>1988</td>
<td>13%</td>
<td>1%</td>
</tr>
<tr>
<td>1991</td>
<td>10%</td>
<td>1%</td>
</tr>
<tr>
<td>1994</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>1997</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td>2000</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2003</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

HEALTHCARE AVAILABILITY TRENDS

Like many parts of California, Silicon Valley is beginning to experience limitations on access to quality care, primarily in a shortage of nurses and Primary Care Physicians.

SUPPLY/DEMAND FOR REGISTERED NURSES (NATIONAL) 2002-2020

The systemic shortage of nurses increases in-patient hospital costs.

Cost of Nursing Shortage
- Hospitals spent $71 million in 2001 using agency/traveling nurses to fill vacant slots (AHA 2002).
- Shortage of about 808,000 nurses in 2002

Key Facts
- Nationally, administrative costs account for 31 cents of every healthcare dollar.
- Healthcare costs are expected to significantly outstrip inflation for the next several years.
- There are 6.6 million uninsured Californians costing $7.4 billion in annual direct costs.
- Health insurance premiums for a family of four average nearly $10,000 per year.
- The healthcare industry represents 15-20% of the California economy.

Healthcare policy in California

“Californians, it seems, have come to expect more services than they are willing to pay for.”
– Jason Shuffler, uninsured student in an article for the SJ Mercury News

“My fear is that we will go through this entire year, we will talk about healthcare, and at the end of the year we will have done nothing again.”
– Assemblymember Joe Nation

California leaders are struggling: how do we most efficiently provide healthcare coverage without violating basic economic principles? Is there a way to embrace sound economic principles while making reasonable coverage available to all? What model might work? In our current hybrid system, we seem to get the problems and benefits of both.

With ever rising expectations of quality health care, a chronic shortage of doctors and nurses, and a large percentage of hospitals in the red, a California healthcare crisis is looming.

COMPARISON OF STATES WITH MAJOR HIGH TECH CENTERS

Percentage without health insurance coverage in selected states (2002-04)

<table>
<thead>
<tr>
<th>States</th>
<th>Percentage uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>25.1%</td>
</tr>
<tr>
<td>California</td>
<td>18.4%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>16.6%</td>
</tr>
<tr>
<td>Oregon</td>
<td>16.1%</td>
</tr>
<tr>
<td>Washington</td>
<td>14.2%</td>
</tr>
<tr>
<td>Virginia</td>
<td>13.6%</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>13.5%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>10.8%</td>
</tr>
</tbody>
</table>
With double-digit increases each year easily outstripping inflation, what are companies doing to control costs?

One of the trends is a re-emergence to employee wellness. Companies are encouraging their employees to adopt more healthy behaviors, particularly motivating obese employees to lose weight and managing the treatment of workers with chronic illnesses.

Another trend is to give employees more control over their health-care decisions and expenditures, such as with healthcare savings accounts (HSAs). Recent law allows companies and employees to contribute pretax dollars to tax-free savings accounts used to pay for out-of-pocket medical expenses, and requires that an HSA be coupled with a high-deductible health-insurance plan ($1,000 per year is the minimum for individuals, $2,000 for families). So far, few are using this strategy, but that number is expected to increase with employer's interest.

“*When you talk about controlling healthcare costs, are you talking about your healthcare costs or mine?*”

– Anonymous

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### Business strategies to control cost and maintain quality

> "When you talk about controlling healthcare costs, are you talking about your healthcare costs or mine?"

– Anonymous

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Future trends in Silicon Valley and California: healthcare and information technology

“Amazon knows more about me than my doctor does.”
– Craig Barrett, Chairman of Intel Corporation

According to Intel Chairman Craig Barrett in a recent interview, “there is enormous potential for chip technology to revolutionize the healthcare industry.” He believes that inefficiencies in the medical industry, combined with advances in chip manufacturing and design provide chipmakers with one of their big opportunities for growth. “Healthcare is still potentially one of the big sleepers. The sleeper is using the technology in the diagnostic sense – small-scale sensors the size of human proteins,” he said.

The first steps are already being taken. Kaiser Permanente has committed to spending more that $2.58 billion on a system-wide information technology (IT) infrastructure program to shift its hospitals to a “virtually paperless” clinical information system. A recent study from PricewaterhouseCoopers tells us that at current run rates, hospitals will be spending over $20 billion annually on IT by 2013, and even a modest 1% increase in that spending will push it to over $30 billion a year.

CONCLUSION

As a policy advocacy group, SVLG will become increasingly involved in statewide healthcare policymaking, advocating for policy based on sound economics that balances the interests of customers and providers while incentivising public and private investment in healthcare infrastructure, products and services.

Long-term Outlook

- **More innovation leads to greater use:** The accelerating pace of innovation in medical technology and pharmaceuticals will lead to greater use.

- **Technology promised efficiency gains:** This could be the key to cheaper, more efficient, and perhaps universal healthcare.

- **Electronic files will become widely used:** With universally available remote devices (e.g. flash memory), increased care quality will result.

- **Huge stem cell research investment will bring next innovation wave:** Our state’s $3 billion bond investment in research, centered in San Francisco, will drive the most ambitious scientific research program in the country and create a new wave of private investment and innovation in Silicon Valley.

### HOSPITAL IT SPENDING FORECASTS

![Bar graph showing Hospital IT spending forecasts from 2005 to 2013.](image)

Source: Centers for Medicare and Medicaid Services, PricewaterhouseCoopers, 2004
Opportunities for Action

SVLG Healthcare Subcommittee
www.SVLG.net
Meets monthly at member company locations.

Children's Health Initiative/Healthy Kids
www.chikids.org
Children’s Health Initiative (CHI) was established to provide access to health insurance to the estimated 71,000 uninsured children in Santa Clara County. CHI includes three health insurance programs: Medi-Cal, Healthy Families and a new regional program called Healthy Kids.

Kaiser Permanente
www.kaiserpermanente.org
"Thrive" – Health Insurance Plans, Healthcare Information, Health Advice – for healthcare information, advice, and quality insurance coverage. We help promote wellness by combining preventive care, health education, and appropriate treatment.

Catholic Healthcare West
www.chw.edu
Not-for-profit health care provider serving Arizona, Nevada, and California.

Stanford Hospital and Clinics
www.stanfordhospital.com
Known worldwide for providing advanced patient care, particularly for the treatment of rare, complex disorders in areas such as cardiac care, cancer treatment, neurology, neurosurgery, obstetrics and organ transplants.

Lucile Packard Children's Hospital
www.lpch.org
Information about clinical specialties and services, doctor locator, news, directions, and volunteering.

California HealthCare Foundation
www.chcf.org
Mission is to expand access to affordable, quality health care for underserved individuals and communities and to promote improvements in Californians' health status.

California Healthcare Institute (CHI)
www.chi.org
Researches, develops, and advocates policies and actions that promote biomedical science, biotechnology, pharmaceutical and medical device innovation in California.

California Assembly Healthcare Committee
http://www.assembly.ca.gov/acs/newcomframeset.asp?committee=10

California State Senate
http://www.senate.ca.gov/ftp/sen/committee/STANDING/HEALTH/_home1/PROFILE.HTM

California Department of Health Services
www.dhs.ca.gov
Provides information about public health services, programs, health statistics, health professional licensure and more.

Kaiser Family Foundation Reports
www.kff.org
An independent U.S.-based think tank which specializes in the study of healthcare and health policy in the U.S.A.

Center for Health Transformation
http://www.healthtransformation.net/home/
A collaboration of public and private sector leaders dedicated to the creation of a 21st Century Intelligent Health System in which knowledge saves lives and saves money for every American.

Health Access California (single payer advocates)
http://www.health-access.org
A statewide health care consumer advocacy coalition of over 200 organizations working for the goal of quality, affordable, health care for all Californians.

Camino Medical Group
www.caminomedicalgroup.com
Camino Medical Group, a division of the not-for-profit Palo Alto Medical Foundation, is a recognized leader in providing Silicon Valley residents with a broad range of quality medical services from locations in Sunnyvale and surrounding cities.

Good Samaritan Hospital
www.goodsamsj.org
Good Samaritan Hospital opened in Santa Clara County in 1965 as a general acute-care hospital. A key to their success has been a commitment to taking a leadership role in researching and adopting the latest in technological and clinical practices.

Sequoia Hospital
www.sequoiahospital.org
Founded in 1950, Sequoia Hospital is an accredited, not-for-profit community hospital providing innovative medical care to Bay Area residents. Sequoia is rebuilding a state-of-the-art facility at its historic Redwood City site to meet the future healthcare needs of the community.
Tax Policy
In a recent survey of 114 Silicon Valley executives, state and local tax burdens were cited as a major contributor to the high cost of living and doing business in the Valley. We must reverse this trend. California’s ability to lead the nation in innovation and R&D relies, in part, on the soundness and quality of the state’s tax system. Frequently, California’s system for generating revenue—principally income, property, and sales and use taxes—lacks coherence, predictability and long-term policy direction. Tax policy changes in the past ten years have too frequently resulted in a patchwork of political compromises in which many tax policies are in direct conflict with one another. The result, in part, is a convoluted, excessively complicated and unreliable system that is neither business friendly nor fiscally sound for the State’s long-term future.

Taxes paid and investments made by job providers and the people they employ are the source of resources used by local, regional and state governments to provide and implement the services and infrastructure that enable and support our society. As demonstrated below, California has a comparatively high tax burden hampering the attraction and retention of companies. In addition to the comparative tax burdens with other state’s high-tech centers, the volatility of revenue has had a significant impact on California’s competitiveness.

Improving the state’s tax structure and revenue programs to help emerging, new industries while retaining existing ones can occur if key principles are considered, such as these: 1) recognition of the complexity and competitiveness of a global economy, 2) fairness and equity among taxpayers, 3) transparency and visibility, 4) certainty, 5) convenience of payment, 6) simplicity and low-cost collection, 7) balance between the desired level of compliance, the costs of enforcement, and the level of intrusiveness of the tax system, 8) promotion of growth and capacity of the economy, 9) provision of reliable sources of revenue at all levels of government.

**CURRENT CALIFORNIA TAX POLICY TRENDS**

The chart below shows current trends and realities of doing business in California through a tax policy lens. California’s taxes rank among the highest in three of four categories (sales tax, corporate income tax, and personal income tax rates) compared with other states in the nation and competing high-tech centers.

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1. SVLG, “Assessing the Competitiveness of California’s Business Climate” report, 2005

2. Select tax principles as described by the American Institute of Certified Public Accountants (AICPA) and the California Commission on Tax Policy in the New Economy

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**COMPARATIVE STATE TAX RATES – STATES WITH MAJOR HIGH-TECH CENTERS**

<table>
<thead>
<tr>
<th>State</th>
<th>Personal Income Tax</th>
<th>Corporate Income Tax</th>
<th>Sales Tax</th>
<th>Property Tax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Valley</td>
<td>14%</td>
<td></td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Boston</td>
<td>12%</td>
<td></td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Raleigh/Durham</td>
<td>10%</td>
<td></td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Portland</td>
<td>14%</td>
<td></td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Austin</td>
<td>10%</td>
<td></td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Fairfax</td>
<td>12%</td>
<td></td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>Redmond-Seattle</td>
<td>14%</td>
<td></td>
<td>6%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Board of Equalization and Franchise Tax Board, 2005. This comparative data above does not reflect specific negotiated arrangements including those enabled by state statute that can considerably reduce taxes (for example, strategic investment programs that can substantially reduce property taxes in states such as Oregon and Texas for sizable capital investments).
### SALES TAX EXEMPTIONS, INVESTMENT AND RESEARCH CREDITS

<table>
<thead>
<tr>
<th></th>
<th>Investment Credit</th>
<th>Research Credit</th>
<th>Sales Tax Exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td><strong>No</strong> (post 2003)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Massachusetts</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Yes. 3% of cost of qualifying Massachusetts tangible personal property, after deduction of federal credit.</td>
<td>Yes. Similar to federal credit base. 15% qualified research expenses, or may elect alternative incremental credit. 24% of basic research payments.</td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td>New York</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing, farm machinery, and utilities (e.g. fuel used in the manufacturing process) are all exempt from sales taxes.</td>
</tr>
<tr>
<td></td>
<td>Yes. 4-5% of investment credit base for qualified property, including buildings.</td>
<td>Yes. 9% R&amp;D property if no employment incentive credit claimed.</td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td>North Carolina</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing, farm machinery, and utilities are taxed at a reduced rate.</td>
</tr>
<tr>
<td></td>
<td>Yes. 4-7% of excess of eligible investment amount over applicable threshold for qualified machinery and equipment (15-20% for “technology commercialization” equipment).</td>
<td>Yes. Credit equal to 1) 5% of excess North Carolina Research &amp; Development expenditures under IRC. Sec. 41; or 2) 25% North Carolina apportioned share of federal credit under alternative incremental method.</td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td>Texas</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td></td>
<td>Yes. 7.5% cost of machinery and equipment in designated strategic investment areas.</td>
<td>Yes. 5% of excess qualified Texas R&amp;D expenses over base amount, plus basic research payments under IRC. Sec. 41(e)(1)(A).</td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td>Virginia</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td></td>
<td>Yes. 50% capital investment in information technology or biotechnology company in a tobacco-dependent locality; 30-50% qualified investment in enterprise zone.</td>
<td>Yes. 50% of eligible R&amp;D activity in a tobacco-dependent locality; max. $500,000 per year.</td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td>Nearby States</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td><strong>No</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing and farm machinery are exempt. Utilities (e.g. fuel used in the manufacturing process) are taxable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes. Credit based on federal credit under IRC Sec. 41, limited to Arizona research. 11% basic research credit.</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td><strong>No</strong></td>
<td><strong>Yes</strong></td>
<td>No (has no sales tax).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes. Similar to federal credit, except amount equals 5% of qualified research expense over base amount, plus 5% of basic research payments; alternative credit equal to 5% of amount by which qualified research expenses exceed 10% of Oregon sales.</td>
<td></td>
</tr>
<tr>
<td>Utah</td>
<td><strong>Yes</strong></td>
<td><strong>Yes</strong></td>
<td>Yes. Manufacturing, farm machinery, and utilities are all exempt from sales taxes.</td>
</tr>
<tr>
<td></td>
<td>Yes. For qualified manufacturing businesses in enterprise zones, 10% of the first $250,000 and 5% of the next $1 million investment in plant, equipment, and other depreciable property.</td>
<td>Yes. 6% cost of machinery and equipment used primarily to conduct qualified research; 6% of excess qualified Utah R&amp;D expenses over base amount.</td>
<td></td>
</tr>
<tr>
<td>Washington</td>
<td><strong>No</strong></td>
<td><strong>No</strong></td>
<td>Yes. Manufacturing equipment is exempt and utilities (e.g. fuel used in the manufacturing process) and farm equipment are taxed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(for more detailed information, see: [http://www.cch.com/default.asp](http://www.cch.com/default.asp))
Property tax rates also merit a closer look. The property tax rates in California fluctuate from county to county and even at times from city to city and school district to school district, depending on parcel tax measures and special district levies. Generally, Silicon Valley’s property tax rate is higher than the state average of 1.08%, with 1.25% for Santa Clara County, 1.20% for San Mateo County, and 1.31% for Alameda County. Compare this with San Diego’s high-tech area where the property tax rate is only 1.11% – closer to the state average.

What do these rates mean? They are all measures of California’s competitiveness with other states throughout the country. Tax policy has increasingly become an important indicator relative to the cost of doing business and what states are using to attract and retain businesses. To remain competitive, Silicon Valley and California must recognize what is helpful and harmful tax policy relative to other U.S. high-tech centers.

How do California and Silicon Valley compare versus similar U.S. high-tech centers in terms of offering incentives for technology businesses? The chart on the preceding page shows various incentives offered in California versus other locations.

**SUGGESTED SOLUTIONS**

Several proposals have been made to the state legislature, some of which take positive steps toward improving California’s competitiveness. Since budget balancing at state and local levels of government has a direct impact on the state’s business climate, California must be fiscally prudent with its spending and identify efficiencies in addition to promoting long-range investments. In stark contrast to encouraging new and additional investments, curtailing the few existing programs contributing to high technology retention and growth, such as the R&D tax credit, and implementing adverse tax measures such as split roll property tax that would disproportionately burden job providers, would only further accelerate the departure of the very businesses California hopes to attract and retain.

California’s past and future success in the high technology and biotechnology sectors is deeply rooted in R&D and manufacturing and must continue to encourage capital investments in these areas. California’s challenge of attracting potential new job providers is increasing due to emerging international markets and incentives offered by other states. As we attempt to level the playing field, much can be learned from other states. Various options include:

- Expand the R&D credit to the full federal rate
- Enact a full sales tax exemption on manufacturing, R&D, and other equipment
- Apply credits on a unitary basis
- Consider a single sales apportionment factor for multi-state companies (rather than apportioning taxes based on a three-factor formula – payroll (jobs), property (facilities), and sales into the state versus elsewhere, a single-sales apportionment factor as exercised in other states would provide an incentive to do business in California by not penalizing jobs and facilities that are currently taxed).

The use of static revenue estimates prohibits California’s ability to assess the benefits of its tax policies. To ensure the long-term health of the state, California’s leaders should apply “dynamic” economic modeling and estimating to more realistically gauge the impacts of tax changes on California’s competitiveness.

“Static” economic modeling, which is widely used, ignores taxpayer behavior due to tax rate or policy ebbs and flows. Further, it would estimate the amount of tax “lost” if an exemption is granted, whereas a “dynamic” revenue estimate attempts to include the stimulus effects of tax exemptions or incentives that offset the projected revenue losses. And while a “static” estimate will compute the amount of new revenue generated if a tax rate is increased, a “dynamic” model will also take into consideration future taxpayer behavior when faced with tax increases. The time is ripe for Silicon Valley to take the lead in dispelling the myth that the impact of tax policy is “static” rather than “dynamic.”

In summary, California’s competitiveness on which future jobs rely is contingent on our resolve to remain globally focused while also responding to the tantalizing tax offers being made domestically. To remain an economic leader, California must embark on solutions in the following areas: leveling the playing field with other states; rationalizing the tax system, piece by piece; and creating simplicity and predictability in the state’s tax structure so it is fair, easily understood, and reflects the complexities of the new global economy.

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**Opportunities for Action**

Various Silicon Valley organizations are engaged in this dialogue. Silicon Valley Leadership Group has joined forces with regional and statewide organizations and public officials to identify and apply various solutions to help stabilize California’s fiscal picture. To contact various public offices and organizations, see the list below.

**Board of Equalization**
www.boe.ca.gov

**Bay Area Economic Forum**
www.bayeconfor.org

**California Assessors Association**
www.caa.org

**Joint Venture Silicon Valley**
www.jointventure.org

**San Jose Silicon Valley Chamber of Commerce**
www.sjchamber.com

**Alameda County Assessor**
http://www.co.alameda.ca.us/assessor/

**Santa Clara County Assessor**
www.scc-assessor.org

**San Mateo County Assessor**
http://www.smcare.org/

**Silicon Valley Tax Directors Group**
www.svtdg.org

**California Franchise Tax Board**
www.ftb.ca.gov
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