2005 Index of Silicon Valley

How We Grow Has Changed: Implications for the Future
Joint Venture: Silicon Valley Network

Joint Venture: Silicon Valley Network provides analysis and action on issues affecting our region’s economy and quality of life. The organization brings together established leaders from business, government, labor, community-based organizations and academia to spotlight challenges and work toward innovative solutions. Our overarching goal is to nurture the unique habitat that makes the Bay Area a world capital for innovation and entrepreneurship—building and rebuilding a sustainable region that competes globally.

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Dear Friends:

So often the Index has a clear story to tell: our economy is growing or not; people are better off, or not.

There is much less clarity in 2005. What we have instead is a complex picture, and how you interpret it depends very much on your point of view. It also depends on the year you choose as a benchmark. If we measure ourselves against last year, then some signals are quite good: venture funding is up, per capita income—driven by rising productivity—is edging upward; R&D funding has reached new highs.

But if we run medium-term comparisons, then it is clear that many Silicon Valley residents have experienced a sharp decline in their economic prospects since 2000, and the region has lost ground. In fact, the Valley’s job losses these past four years are the largest percentage drop of any U.S. metropolitan area since 1939; wages, income, and VC funding are also dramatically short of the 2000 mark.

Perhaps it makes more sense to measure ourselves against the late 1990s, just before the dot-com phenomenon set the region to overheating. If that’s your point of reference, then we seem to have returned to similar levels of performance, and resumed an incremental pattern of growth.

However, the 2005 Index also shows there is something profoundly different this time around: how we grow has changed. The technology revolution and intense global competition have led Silicon Valley companies to achieve high productivity gains without adding to their payroll, creating a strange new world in which economic growth is strong even while job growth is sluggish. It suggests a future in which we grow qualitatively (in terms of productivity) but not quantitatively (in terms of jobs).

To keep pace with the competition, Silicon Valley companies must continue to innovate and boost productivity. Can we sustain the pace? Innovative, high producing economies are built on a foundation of productive people thriving in vital communities, so the key question is whether our region has the essential foundations in place. Are we preparing our workforce for new and transitioning occupations? Or will a new era of qualitative growth keep widening the disparities between those who prosper and those who struggle?

The signals reported here are not altogether encouraging. Health and education gaps persist by income and ethnicity. Housing is out of reach for too many, making it difficult to retain young talent, teachers, and service professionals. The incomes of the bottom 20 percent of households have fallen further behind. Our local governments face impossible budget choices as their revenue streams destabilize, leaving it an open question whether we’ll be investing in the kind of infrastructure an innovation economy requires.

This much is clear: we have a great deal to be grappling with as we contemplate Silicon Valley’s future. Joint Venture exists for this purpose, and in the coming months we hope to stimulate a broad regional conversation about how we grow forward, together.

Sincerely,

Russell Hancock
President & Chief Executive Officer
Introduction

**WHAT IS SILICON VALLEY?**
Joint Venture defines Silicon Valley as Santa Clara County plus adjacent parts of San Mateo, Alameda and Santa Cruz counties (see map on page 7). This definition reflects the core location of the Valley’s driving industries and most of its workforce. Silicon Valley’s concentration of industry cluster employment is unique in the Bay Area. With a population of almost 2.4 million, this region has more residents than 17 U.S. states. The indicators reflect this definition of Silicon Valley, except where noted. As the region continues to grow, Joint Venture’s initiatives will have an even wider geographic range, encompassing parts of San Benito County and the greater Bay Area.

**WHAT IS AN INDICATOR?**
Indicators are measurements that tell us how we are doing: whether we are going up or down, going forward or backward, getting better or worse, or staying the same. Good indicators:
- are bellwethers that reflect fundamentals of long-term regional health;
- reflect the interests and concerns of the community;
- are statistically measurable on a frequent basis; and
- measure outcomes, rather than inputs.

The 37 indicators that follow were chosen in consultation with the *Index* Advisors and the Joint Venture board.

Appendix A provides detail on data sources for each indicator.

**WHAT IS AN INDUSTRY CLUSTER?**
Several of the economic indicators relate to “industry clusters.” An industry cluster is a geographic concentration of interdependent firms in related industries, and includes a significant number of companies that sell their products and services outside the region. Healthy, outward-oriented industry clusters are a critical prerequisite for a strong economy. Cluster industries create demand for “community infrastructure” jobs in other industries such as business services, health and construction.

*Industry Cluster Groupings*
The *Index* presents industry cluster groupings that take advantage of the federal government’s transition to the new North American Industry Classification System (NAICS). NAICS restructures industry categories based on modern production processes and services, and thus greatly improves upon the old Standard Industry Classification (SIC) system. The *Index’s* industry cluster groupings represent current employment specializations in Silicon Valley relative to the nation. Together, they employ 32% of the region’s workforce.

These industry cluster groupings are an improvement on the earlier cluster definitions because they allow better tracking of software, business-related services and corporate offices, all of which are now significant employers in the regional economy. The driving industry clusters in Silicon Valley are:
- Computer and Communications Hardware Manufacturing
- Semiconductor and Semiconductor Equipment Manufacturing
- Electronic Component Manufacturing
- Biomedical, including biopharmaceuticals (15% of employment in this cluster), medical devices (50%) and research and development in the life sciences (35%)
- Software, including software publishers and software services
- Innovation Services, including technical services and business services (e.g., human resources, legal)
- Creative Services that integrate art, design and technology (e.g., graphic design, advertising, marketing)
- Corporate Offices, including headquarters, subsidiary and regional offices

In addition to tracking driving industry clusters, the *Index* provides employment and wage data for the other major industries in Silicon Valley, such as local services and construction.

Appendix B identifies the specific subsectors constituting each cluster.
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2005 Index Highlights

The 2005 Index shows that Silicon Valley is experiencing job losses and economic stress, as well as gains in income, productivity, entrepreneurship and new investments in innovation. In recent years, how we grow has changed, raising serious questions about how well people and communities are prepared for the region’s high-productivity, high-innovation economy.

The 2003–04 period is filled with mixed signals. Last year, the region lost an estimated 1.3% of its jobs and experienced a 1% decline in average pay. At the same time, value added per employee grew about 4% and per capita income increased about 3%. While industry cluster employment fell by more than 3%, jobs grew approximately 2% in business services, construction and health care. Industry cluster value added per employee continued to grow, but unlike the rest of the economy, average pay in cluster industries also grew, rising by more than 8% in 2003.

However, many residents are under economic stress and still face barriers to mobility. Household income was down, with the gap between low-income households and other households increasing. Housing became less affordable, especially for our poorest residents, as their incomes dropped faster than declining rental rates. Disparities in health and education mean that many of these residents also face much higher barriers to economic mobility than other households.

While jobs continued to decline, the level of entrepreneurship and investments in innovation increased. The region experienced a net gain of about 23,800 new companies between 2000 and 2002. For the first time since 2000, the region experienced an increase in venture capital investment. Federal R&D spending in both defense and nondefense fields also skyrocketed this past year. And levels of corporate R&D remain substantial, with patents per capita continuing to rise.

This year’s Special Analysis finds that “how our region grows” has changed substantially since the 1990s. Our population has grown much more diverse, international and educated. In a break from the past, our economy has grown qualitatively (in terms of productivity), but not quantitatively (in terms of jobs). The pattern of new development has shifted toward much more compact, transit-oriented housing and commercial uses, coupled with greater open-space preservation. However, housing has become more unaffordable. The 2005 Index shows a continuation of these trends.

These findings raise serious questions about the future. The foundation of our high-productivity, high-innovation economy is our productive people living in vital communities. The reality today is that many residents are not prepared to participate in this economy. Our communities face serious challenges, as local governments have lost 20% of their revenues and remained dependent on volatile and unpredictable sources of funding. Looking to the future, Silicon Valley will need to redouble its efforts, through regional stewardship, to ensure an innovative economy, inclusive society and livable environment.
DESPITE CONTINUING JOB LOSSES, PRODUCTIVITY AND PER CAPITA INCOME INCREASE

- Silicon Valley lost 1.3% of its jobs from the second quarter of 2003 to the second quarter of 2004, a much lower figure than the 5.3% and 10% rates in the previous two years.
- Industry clusters lost 3.2% of their jobs. At the same time, jobs grew incrementally in business services, construction and health care, and shortages exist for high-skilled occupations such as nursing.
- Silicon Valley’s value added per employee is nearly 2.5 times the U.S. figure, and has grown more than 5% annually for a decade. The productivity of the region’s industry clusters has been even higher and grown at a faster rate over this period.
- Silicon Valley’s average industry cluster pay rose 8.2% in 2003, while per capita income increased more than 2% annually from 2002 to 2004. In contrast, average pay in all other industries combined declined 1%.
- A high percentage of Software (70%), Semiconductor (58%) and Computer and Communications Hardware (57%) industry cluster jobs are in high-skilled design occupations.

MANY RESIDENTS UNDER ECONOMIC STRESS, FACE BARRIERS TO MOBILITY

- In 2003, household incomes at the 80th percentile declined 7%, while those at the median declined 4% and those at the 20th percentile lost the most ground, falling 8%.
- The percentage of households that can afford a median-priced house in Santa Clara County dropped from 26% in 2003 to 23% in 2004 and from 18% to 15% in San Mateo County.
- While average apartment rents fell 5%, incomes of the poorest households dropped further.
- Just 47% of Silicon Valley third graders scored at or above the national median on the CAT/6 reading test. Only 15% of English learners scored above the national median on the same test.
- Disparity in Intermediate Algebra enrollment persists; 22% of Hispanic and Pacific Islander 10th and 11th graders enrolled compared to 38% of White and 40% of Asian students in 2003–04.
- While child immunization rates rose and low-weight births declined, diabetes is much more prevalent in the lowest-income households.
- Only 79% of the lowest-income households have health insurance, compared to 94% of median-income households.

ENTREPRENEURSHIP AND INVESTMENTS IN INNOVATION GROW

- New business formations grew every year between 2000 and 2002 creating a net increase of about 23,800 firms. The average size of new firms was seven employees during this time.
- Silicon Valley venture capital investments increased by 15% in 2004—rising for the first time since the peak in 2000. The region now receives 35% of the nation’s venture capital, up from 14% in 1995.
- Silicon Valley defense R&D investment tripled, while non-defense spending rose more than 50% in 2003.
- Silicon Valley’s public companies continue to invest in R&D at about 3.5 times the national average as a percentage of sales.
- Silicon Valley patents increased 6% in 2003. Over the past decade, the region’s share of U.S. patents has grown from 4% to 10%, and of California patents from 28% to 45%.
- While firms are outsourcing jobs to other regions, about 450 foreign-owned firms “in-source” over 20,000 jobs to Silicon Valley, 80% of which are in the region’s industry clusters.

NEW HIGHS FOR EFFICIENT LAND USE AND OPEN SPACE PROTECTION, BUT SMALLER SHARE OF NEWLY APPROVED HOUSING UNITS WILL BE AFFORDABLE

- Newly approved housing is more compact than at any time in past six years. Average gross density of newly approved housing units per acre continues to rise in Silicon Valley, almost doubling from 6.6 units per acre in 1998 to a new high in 2003 of 12.9 units per acre.
- The percentage of permanently protected open space has grown from 22% of the region in 1998 to 26% in 2004.
- The approval of nonresidential space tripled from 2003 to 2004, with 59% located near transit, up from 28% near transit in 1998.
- Silicon Valley cities approved 37% more new housing units in 2004, but only 14% of approvals were “affordable” compared to 23% in 2003.

NEWS IS MIXED ON ENERGY, THE ENVIRONMENT, CRIME AND CIVIC AFFAIRS

- Total electricity consumption dropped in Silicon Valley in 2003, but actually rose on a per capita and per employee basis for residential and nonresidential users, respectively.
- Tests for mercury pollution in the San Francisco Bay show that the South Bay is of particular concern because of historic watershed contamination.
- The acquisition of the Cargill Salt ponds sets the stage for the largest wetlands restoration project in California history.
- The rate of adult violent crime fell 5% from 2002–03, while juvenile felony arrest rates for violent crimes increased 5% in the region.
- Voter registration and participation were up for the November 2004 presidential election.
- City revenues declined by 20% in 2002, as jurisdictions continue to rely on volatile sources of funding.
DEMOGRAPHIC PROFILE

THE SILICON VALLEY REGION: GROWING, DIVERSE, INTERNATIONAL, MORE EDUCATED

The region continues to grow, albeit more slowly. During the last ten years, Silicon Valley’s total population grew about 1% annually from 2.22 million residents in 1993 to 2.44 million in 2003. Natural population increase, births minus deaths, (231,426) has been fairly stable during this period, while net migration (–15,426) has been more variable. The largest losses because of out-migration in the past decade occurred during 2002 and 2003, when more than 35,000 people left the region.

THE REGION’S POPULATION IS INCREASINGLY DIVERSE

Between 1993 and 2003, the share of Asian/Pacific Islander (non-Hispanic) residents almost doubled, from 19% in 1993 to 36% in 2003. In 2003, the percentage of White (non-Hispanic) and Asian/Pacific Islander (non-Hispanic) residents was nearly equal, at 37% and 36% respectively. The share of Hispanic residents increased by half from 15% in 1993 to 23% in 2003. The percentage of the Silicon Valley population that is Black (non-Hispanic) decreased slightly from 1993 to 2003, while the share of American Indian/Alaskan Native/Other (non-Hispanic) remained virtually the same.

40% OF THE REGION’S POPULATION IS FOREIGN BORN, UP FROM 32% IN 2000

Two out of five Silicon Valley residents were born outside this country.

THE REGION’S POPULATION IS MORE EDUCATED THAN TEN YEARS AGO

Forty percent of residents now have at least a bachelor’s degree, compared to 31% ten years ago. The share of residents with at least a high school diploma has remained at 82–83%.

The regional age distribution of the population hasn’t changed substantially over the last ten years. In 2003, population by age was: 0–9 years old, 16%; 10–19, 13%; 20–44, 42%; 45–64, 21%; and age 65 or over, 8%.
The Index of Silicon Valley is organized according to the four theme areas and 17 goals of Silicon Valley 2010: A Regional Framework for Growing Together. Joint Venture published Silicon Valley 2010 in October 1998, after more than 2,000 residents and community leaders gave input on what they would like Silicon Valley to become by the year 2010.

Special Analysis

SILICON VALLEY 2010 AT MID DECADE: HOW HAVE WE CHANGED AND WHAT CHALLENGES LIE AHEAD?

WHO WE ARE HAS CHANGED
Our population has become much more diverse, international and educated (p. 6).

HOW WE GROW HAS ALSO CHANGED
The rapid job growth of the 1990s was reversed with major job losses after 2000. The quantity of jobs has now returned to 1996 levels. However, regional productivity has continued to rise and average cluster pay and regional per capita income (the broadest measure of prosperity) are rising again (see chart to right).

WHAT WE DO FOR A LIVING IS CHANGING
The economic structure of the region is shifting, as our established industry clusters such as software and semiconductors transform and new clusters such as biomedical emerge. In addition to needing high-paying innovation jobs, the region needs well-prepared people for critical mid-level occupations, including technicians and sales support and “community infrastructure” jobs, such as those in health care and education (p. 12).

HOW WE USE LAND HAS CHANGED
The pattern of new development has shifted toward much more compact, transit-oriented housing and commercial uses, coupled with greater open-space preservation.
**Goals, Assumptions, Progress and Questions for the Future**

What were the 2010 goals? What were the assumptions behind those goals? What progress has been made so far? What are the questions raised by these changes?

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<tr>
<td><strong>2010 Goal</strong></td>
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<td><strong>Innovative Economy</strong></td>
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<tr>
<td>Quantitative growth</td>
<td>Encourage quality growth through innovation and entrepreneurship</td>
<td>Number of jobs declined, back to 1996 level (pp. 10–12)</td>
<td>How does the region address increasing productivity with slower job growth? How does the region invest in innovation that creates jobs here?</td>
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<tr>
<td>Growing apart</td>
<td>Pursue broadened prosperity and access to opportunity</td>
<td>Gap between low- and high-income households widens (p. 21) Shortages in critical occupations (p. 22 as an example)</td>
<td>How does the region ensure that prosperity is widely shared? How does the region prepare people for critical innovation and community infrastructure jobs?</td>
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<td><strong>2010 Goal</strong></td>
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<td><strong>Communities</strong></td>
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<td>Using up nature</td>
<td>Protect nature, preserve open space, use land efficiently</td>
<td>Falling short in some areas of environmental quality and conservation (pp. 24–25 as examples) Permanently protected open space grows (p. 26) More efficient, transit-oriented use of land (pp. 26–27)</td>
<td>How does the region address gaps in environmental quality and conservation? How does the region sustain its commitment to compact, transit-oriented development?</td>
</tr>
<tr>
<td>Sprawling development</td>
<td>Provide housing choices and create livable communities</td>
<td>Traffic congestion rises, then falls with economic downturn (p. 27) Housing affordability declines (p. 28)</td>
<td>How does the region provide housing for the next generation, people with a range of incomes and newcomers to the Valley? How does the region connect open space, compact development, transportation and environmental restoration to improve the quality of all our communities?</td>
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### Our Inclusive Society Connects People to Opportunities

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<tr>
<td>Barriers to access</td>
<td>Promote bridges to opportunity</td>
<td>Reading scores improve, but region below national average (p. 30)</td>
<td>How does the region invest in educational transformation, including closing major achievement gaps? How does the region ensure basic health and safety for all?</td>
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<td>Algebra enrollments, graduation rates and UC/CSU qualifiers rise (p. 31)</td>
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<td>Educational gaps by ethnicity persist (pp. 30–31 and past Indexes)</td>
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<td>Child immunizations up, but health disparities by income (p. 33)</td>
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<td>Crime rates fall generally, with recent rise in juvenile arrests (p. 34)</td>
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<td>Fragmented social networks</td>
<td>Connect social networks</td>
<td>Many newcomers to the region (p. 6)</td>
<td>How does the region strengthen connections between residents and the broader community? How does the region use arts and culture to reach, link and celebrate the diverse communities of our region and to promote creativity?</td>
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<td>Arts and culture organizations benefited from boom in regional economy, but increasingly under pressure during economic downturn (p. 33 as an example)</td>
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### Our Regional Stewardship Develops Shared Solutions

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<td>Transcending boundaries</td>
<td>Cities work together in many areas (see past Indexes)</td>
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<td>Civic engagement by many</td>
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<td>Civic engagement on the rise (p. 36)</td>
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<td>Unreliable public revenue</td>
<td>Reliable, adequate public revenue</td>
<td>Public revenue remains unreliable (p. 38)</td>
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Regional Trend Indicators

Regional trend indicators provide overall context for and perspective on some of Silicon Valley’s key economic changes. Measured on an annual basis, these indicators track Silicon Valley’s progress in the following areas:

- **Regional Jobs**: Job gains or losses
- **Industry Cluster Portfolio**: A snapshot of the industry clusters, showing employment concentration, change and industry cluster size
- **Firm Churn**: Business births and deaths, firms moving in and out of Silicon Valley
- **Industry Jobs**: Industry cluster employment and change from 2003
- **Average Pay**: Regional average pay per employee
- **Industry Pay**: Average pay by industry cluster and other industries, with change from prior year
- **Commercial Space and Rents**: Rate of commercial space available and vacant, with average asking rents
- **Internet Connectivity**: Percentage of households connected to the Internet and percentage with broadband, compared to three other U.S. regions

### Job Losses Continue, but at a Slower Rate

**Why is This Important?**

Job gains or losses are a basic measure of economic health. This indicator reports total jobs on a quarterly basis in order to track overall job gains/losses and to show exactly when most of the change in regional employment has occurred in recent years.

**How are We Doing?**

Silicon Valley has continued to lose jobs, but at a slower rate. The region lost 1.3%, or about 14,700 of its jobs, from 1,168,800 jobs in the second quarter of 2003 to 1,154,100 jobs in the second quarter of 2004. In comparison, the region lost 5.3%, or approximately 64,800 of its jobs between the second quarter of 2002 and the second quarter of 2003. The rate of job loss has slowed substantially from the previous period when Silicon Valley lost 10% or 137,400 of its jobs (between the second quarter of 2001 and the second quarter of 2002).

Silicon Valley lost approximately 211,740 jobs from the peak of employment in 2001 to the second quarter of 2004. From 1992 to 2001, the region added nearly 345,200 jobs. Subtracting job losses from 2001–04, the net jobs gained since the beginning of 1992 (the first year of the regional data set) is approximately 128,200.
Industry Clusters Lose Jobs, but Employment Remains Intensely Concentrated in Region

**WHY IS THIS IMPORTANT?**

This chart provides an economic portfolio of Silicon Valley’s industry clusters, showing average annual cluster employment in 2003, the cluster’s employment concentration relative to that of the nation and the cluster’s change in employment concentration since 2001. Employment concentration is a calculation that compares the percentage of employment in a regional cluster to the percentage of employment in its national counterpart.

**HOW ARE WE DOING?**

Between 2001 and 2003, each of Silicon Valley’s eight driving industry clusters lost jobs at a faster rate than that of the same clusters nationally. The largest declines in employment concentration were in Corporate Offices, Innovation Services and Software. Biomedical, Semiconductors and Computer and Communications Hardware were least affected with declines in employment concentration of 6% annually.

Despite these losses, five of Silicon Valley’s industry cluster concentrations are substantially higher than the comparable U.S. cluster. Semiconductor employment remains 14 times as concentrated in the region as compared with the same cluster nationally. Computer and Communications Hardware employment is 10 times as concentrated; Software (5.5 times), Electronic Components (6 times) and Biomedical (3 times) as concentrated in the region than nationally.

Approximately 23,800 Net New Firms Created Between 2000–02

**WHY IS THIS IMPORTANT?**

Every year, thousands of new companies open and thousands of companies close, while a few hundred companies move in and out. These components of economic churn demonstrate the resilient nature of entrepreneurship within the Valley.

**HOW ARE WE DOING?**

New firm creation outpaced firm closures from 2000 to 2002 resulting in 4,500 net new firms in 2000; 6,700 in 2001 and 12,600 in 2002: a grand total of about 23,800 net new firms created during the period. On average, these new firms employed seven people.

From 1990 to 2002, births added 166,200 firms to the Silicon Valley economy, while deaths subtracted 125,000 firms. The birth of new firms yielded on average 13,000 firms per year from 1990 to 2002, while on average, 10,000 firms died annually during that time. During that same period, a very small proportion of all firms moved into or out of the region. About 3,200 firms moved into the region (an average of 248 annually) and 5,600 moved out (an average of 428 annually).

As a result of a strong churning of companies, 46% of all firms in Silicon Valley were started in the 5 years spanning 1998–2002. Those firms contain about 30% of the region’s jobs.
Industry Clusters Lose 3.2% of Jobs, Gain in Business Services, Construction, Health Care

**WHY IS THIS IMPORTANT?**

This indicator shows how employment in driving Silicon Valley industry clusters and other major industries changed in the most recent annual period.

**HOW ARE WE DOING?**

Overall, Silicon Valley’s industry clusters lost 3.2% of jobs in one year, declining from 356,400 jobs in the second quarter of 2003 to 345,000 in the second quarter of 2004. The rate of decline has slowed significantly from 2002 to 2003, when 9% of cluster jobs were lost. Cluster industry job loss is higher than overall regional job loss, which was 1.3% over the same time period.

Every cluster lost jobs during the latest period, but losses slowed for six clusters compared to the 2002 to 2003 period. Two clusters, Corporate Offices and Creative Services, lost more jobs in the most recent period.

Computer and Communications Hardware lost the greatest number of jobs (approximately 2,900), declining from 57,300 in the second quarter of 2003 to 54,400 in the second quarter of 2004. The second-largest decline was in Semiconductor and Semiconductor Equipment, which lost about 2,200 jobs from the second quarter of 2003 to the second quarter of 2004. Corporate Offices lost roughly 1,900 jobs over the same time period.

Beyond the driving clusters, six of the nine other industry groupings gained jobs. Business Services added 2,000 new jobs followed by Building/Construction/Real Estate (1,200 jobs) and Healthcare (900). This is a change from last year when only one industry, Healthcare Services, showed gains over the prior year’s employment figures.

**Source:** California Employment Development Department
Average Pay Declines 1%

**WHY IS THIS IMPORTANT?**
Growth of average annual pay in inflation-adjusted terms is an indicator of job quality. It is as important a measure of Silicon Valley’s economic vitality as is job growth. Average pay includes salary and wages, bonuses and stock options.

**HOW ARE WE DOING?**
Average pay is estimated at approximately $64,700 per employee in 2004. This represents a 1% decline from the 2003 level when average pay was about $65,100.
Average pay reached a peak of approximately $82,300 in 2000. Average pay in 2004 is slightly below what it was in 1999, after adjusting for inflation.

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Industry Cluster Pay Increases 8.2%; Pay Falls Slightly in Other Industries

**WHY IS THIS IMPORTANT?**
Average pay in Silicon Valley’s driving industry clusters reflects in part the wealth-generating impact of outward-oriented industries (industries that sell to customers outside the region). Average pay in the industry and other clusters reflects level of demand for skilled workers.

**HOW ARE WE DOING?**
In 2003, average pay increased in all cluster industries and overall cluster average pay increased by 8.2% from 2002 to 2003. Semiconductor and Semiconductor Equipment experienced the greatest pay increase (13.5% in inflation-adjusted terms) of all the industry clusters from approximately $107,000 in 2002 to more than $121,400 in 2003. Computer and Communications Hardware (8.9%) and Software (8.2%) also experienced substantial increases in average pay.
Software remains the highest paying of all the clusters, at roughly $123,400, while the lowest-paying industry cluster is Creative Services, with annual average pay per employee of $66,800 in 2003, up 3.7% from 2002. Pay rose in Healthcare (3.6%) and Miscellaneous Manufacturing (1.8%).
At the same time, seven of the nine other industries experienced a decline in annual average pay per employee. Financial Services experienced the greatest decline of 6% from $95,900 to $90,100.

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Source: California Employment Development Department
*Estimate based upon Q1 and Q2 data for 2004*
**Availability of Commercial Space Is Still Rising, but Rents Are Starting to Rise Too**

**WHY IS THIS IMPORTANT?**
This indicator tracks the rates of commercial space vacancy and availability, which are leading indicators of regional economic activity. The vacancy rate measures the amount of space that is not occupied. Available space includes both vacant and occupied space that is currently being marketed for lease or sale. Increases in both vacancy and availability, as well as declines in rents, reflect slowing demand relative to supply.

**HOW ARE WE DOING?**
A larger share of Silicon Valley commercial space is vacant and available in 2003. These rates have increased steadily since 2000, when the demand for commercial space was at its highest. Vacancy increased 20.3% during the 2003 to 2004 period, while the availability increased by 9.2%.

Increases in the vacancy (52%) and availability (8.6%) of warehouse space helped drive up overall rates for the 2003 to 2004 period. The R&D vacancy rate was up 28.7%, while R&D availability was up 16.2%. Only office space showed a decline in its vacancy (~7.5%) and (~10.4%) availability rate from the prior year.

For the first time since 2000, commercial-space rents are on the rise, with the exception of R&D. Industrial space experienced the largest average rent increase of 18.4% from 2003 to 2004. During the same time, the costs of office and warehouse space increased by 1.1% and 8%, respectively. R&D rents declined by 26.8% between 2003 and 2004.

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**Bay Area Rate of Broadband Connection Is Behind Rates of Other Comparable U.S. Regions**

**WHY IS THIS IMPORTANT?**
The Internet has become an integral part of our economic and community infrastructure. Broadband, generally defined as DSL or cable-modem service delivering at least 500,000 bits per second facilitates personal and business commerce, enables real-time research and makes video and data streaming possible. Communities that adopt broadband early gain a competitive advantage over communities relying on slower connection speeds.

**HOW ARE WE DOING?**
Compared to similar regions across the United States, the Bay Area has the lowest rate of households connected to the Internet. Sixty-one percent of Bay Area households have Internet access at home, compared to 73% in Seattle, 70% in Austin, 66% in Boston and 63% in San Diego.

The Bay area is also behind in the share of households using broadband to access the Internet: 29% compared to 41% of households in San Diego, 38% of households in Austin and 34% of households in Boston and Seattle. Nationally, about 22% of households use broadband.
# Silicon Valley 2010 Goals

## Our Innovative Economy Increases Productivity and Broadens Prosperity

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<th>Goal</th>
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<td><strong>Goal 1: Innovation and Entrepreneurship.</strong></td>
<td>Silicon Valley continues to lead the world in technology and innovation.</td>
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<tr>
<td><strong>Goal 2: Quality Growth.</strong></td>
<td>Our economy grows from increasing skills and knowledge, rising productivity and more efficient use of resources.</td>
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<tr>
<td><strong>Goal 3: Broadened Prosperity.</strong></td>
<td>Our economic growth results in an improved quality of life for lower-income people.</td>
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<tr>
<td><strong>Goal 4: Economic Opportunity.</strong></td>
<td>All people, especially the disadvantaged, have access to training and jobs with advancement potential.</td>
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## Our Inclusive Society Connects People to Opportunities

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<td><strong>Goal 10: Education as a Bridge to Opportunity.</strong></td>
<td>All students gain the knowledge and life skills required to succeed in the global economy and society.</td>
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<tr>
<td><strong>Goal 11: Transportation Choices.</strong></td>
<td>We overcome transportation barriers to employment and increase mobility by investing in an integrated, accessible regional transportation system.</td>
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<tr>
<td><strong>Goal 12: Healthy People.</strong></td>
<td>All people have access to high-quality, affordable health care that focuses on disease and illness-prevention.</td>
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<tr>
<td><strong>Goal 13: Safe Places.</strong></td>
<td>All people are safe in their homes, workplaces, schools and neighborhoods.</td>
</tr>
<tr>
<td><strong>Goal 14: Arts and Culture That Bind Community.</strong></td>
<td>Arts and cultural activities reach, link and celebrate the diverse communities of our region.</td>
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## Our Communities Protect the Natural Environment and Promote Livability

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<td><strong>Goal 5: Protect Nature.</strong></td>
<td>We meet high standards for improving our air and water quality, protecting and restoring the natural environment, and conserving natural resources.</td>
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<tr>
<td><strong>Goal 6: Preserve Open Space.</strong></td>
<td>We increase the amount of permanently protected open space, publicly accessible parks and green space.</td>
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<tr>
<td><strong>Goal 7: Efficient Land Reuse.</strong></td>
<td>Most residential and commercial growth happens through recycling land and buildings in existing developed areas. We grow inward, not outward, maintaining a distinct edge between developed land and open space.</td>
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<tr>
<td><strong>Goal 8: Livable Communities.</strong></td>
<td>We create vibrant community centers where housing, employment, schools, places of worship, parks and services are located together, all linked by transit and other alternatives to driving alone.</td>
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<tr>
<td><strong>Goal 9: Housing Choices.</strong></td>
<td>We place a high priority on developing well-designed housing options that are affordable to people of all ages and income levels. We strive for balance between growth in jobs and housing.</td>
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## Our Regional Stewardship Develops Shared Solutions

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<tr>
<td><strong>Goal 15: Civic Engagement.</strong></td>
<td>All residents, business people and elected officials think regionally, share responsibility and take action on behalf of our region’s future.</td>
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<tr>
<td><strong>Goal 16: Transcending Boundaries.</strong></td>
<td>Local communities and regional authorities coordinate transportation and land-use planning for the benefit of everybody. City, county and regional plans, when viewed together, add up to a sustainable region.</td>
</tr>
<tr>
<td><strong>Goal 17: Matching Resources and Responsibility.</strong></td>
<td>Valley cities, counties and other public agencies have reliable, sufficient revenue to provide basic local and regional public services.</td>
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**GOAL 1: INNOVATION AND ENTREPRENEURSHIP**  
Silicon Valley continues to lead the world in technology and innovation.

Number of Fast-growth Companies Rises for the First Time Since 2000

**WHY IS THIS IMPORTANT?**
High numbers of fast-growth companies reflect high levels of innovation in the Valley. By generating accelerated increases in sales, these firms stimulate the development of other businesses and personal spending throughout the region. Research shows that fast-growing firms generate the majority of new jobs in a region.

**HOW ARE WE DOING?**
As of the third quarter of 2004, there were 13 gazelle companies located in Silicon Valley, the largest number since 2002. The 13 public gazelle companies in 2004 were: Align Technology Inc., Artisan Components Inc., At Road Inc., Cepheid Inc., Connetics Corp., eBay Inc., Equinix Inc., Intuitive Surgical Inc., RAE Systems Inc., Socket Communications Inc., Supportsoft Inc., Symantec Corp., Webex Communications Inc.

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**WHY IS THIS IMPORTANT?**
Patents are one indicator of a region’s capacity to innovate by creating and applying new knowledge. The ability to generate and protect new ideas, products and processes is an important source of regional competitive advantage.

**HOW ARE WE DOING?**
In 2003, the U.S. Patent and Trademark Office awarded Silicon Valley inventors 8,809 patents: 10% of all U.S. patents awarded and nearly 45% of all patents awarded in California as a whole.

On a per capita basis, Silicon Valley produced 371 patents per 100,000 residents in 2003, an increase of 6% over 2002. In the last ten years, the number of patents per capita awarded to Silicon Valley inventors has more than tripled, from 103 patents per 100,000 in 1993 to more than 371 patents per 100,000 in 2003.

Silicon Valley inventors generate an increasing share of all U.S. and California patents awarded. The share of California patents rose from 28% in 1993 to nearly 45% in 2003. In its share of all U.S. patents, Silicon Valley grew from 4% in 1993 to 10% in 2003.
Venture Capital Investment Grows for First Time in Three Years

WHY IS THIS IMPORTANT?

New venture capital investment is a leading indicator of innovation. Companies that have passed the screen of venture capitalists are innovative, are entrepreneurial and have growth potential. Typically, only firms with potential for exceptionally high rates of growth over a 5- to 10-year period will attract venture capital. These firms are usually highly innovative in their technology and market focus.

HOW ARE WE DOING?

Venture capital investment increased for the first time in three years, from $6.2 billion in 2003 to an estimated $7.1 billion in 2004, an increase of 15%. Venture capital investment peaked in 2000 at $34.5 billion. Since that time, venture capital investment in Silicon Valley declined by about 80%. Despite this decline, Silicon Valley’s share of national venture capital investment has continued to grow every year since 1995, rising from 14% that year to 35% by 2004.

Semiconductor, Biotechnology and Medical Device firms saw the largest gains in venture capital funding from 2003—increasing 59%, 29% and 28%, respectively. Software companies accounted for the largest increase in the share of overall funding, rising from 21% in 2003 to 27% in 2004. The share of funding to Semiconductor firms also increased from 11% in 2003 to 15% in 2004. Even though Biotechnology and Medical Device firms increased the total amount of funding they received from venture capitalists, together they accounted for a smaller share of investment (18%), down from a combined total of 21% in 2003.
Federal R&D Investment in Valley Skyrockets in Both Defense and Nondefense Areas

WHY IS THIS IMPORTANT?
Federal R&D dollars invested in Silicon Valley’s universities, laboratories and private-sector companies help drive regional innovation. Federal R&D dollars support capital-intensive laboratories and the development of cutting-edge technologies. These activities may eventually spin off to be commercialized in the private sector. If commercialized, new technologies can create enormous economic benefits for the regions in which they are developed.

HOW ARE WE DOING?
In 2003, federal R&D investment in Silicon Valley skyrocketed from about $1 billion to $3.2 billion. The Department of Defense (DoD) accounted for much of this new investment, awarding about $2.4 billion to the region in 2003, compared to $516 million in 2002. Almost all this amount (95%) was awarded to Lockheed Martin Corporation. As a result, Silicon Valley’s share of national DoD R&D investment grew from 1% in 2002 to 4.1% in 2003.

Nondefense federal R&D investment also rose substantially, increasing 55% from $522 million in 2002 to $811 million in 2003. Most of the increase in nondefense R&D investment was from the Department of Energy (DOE; up 674% from $33 million to $257 million), the Department of Health and Human Services (HHS; up 18% from $287 million to $340 million) and the National Science Foundation (NSF; up 68% from $35 million to $58 million). As a result, Silicon Valley’s share of national DOE and NSF R&D funding increased substantially, with the DOE share rising from 0.5% to 4% and the NSF share growing from 1% to 3.3%. The HHS share increased slightly, rising from 1.2% to 1.3% of the national total.

Between 1993 and 2003, more than $13.6 billion in federal R&D was awarded to Silicon Valley. During this period, the annual federal R&D investment to Silicon Valley grew at 1.5% per year from $897 million in 1993 to more than $1 billion in 2002. The DoD contributed more than 50% of Silicon Valley’s federal R&D during the 1993 to 2003 period, awarding more than $7.1 billion. Other agencies contributing a share of R&D dollars were HHS ($2.5 billion or 19% of all regional dollars), NASA ($1.8 billion or 13%) and NSF ($522 million or 6%).
Corporate R&D Investment Declines, but Silicon Valley Companies Invest at Much Higher Rate than Does the U.S.

**WHY IS THIS IMPORTANT?**

Corporate research and development spending is an important indicator of how companies are investing in their future. Corporate R&D is essential for developing new products and services that help companies stay on the cutting edge.

**HOW ARE WE DOING?**

Corporate R&D spending as a share of sales declined from 14% in 2002 to 12% in 2003. Silicon Valley companies invested about three and a half times more in R&D than the national average, as a percent of sales. On average from 1990 through 2003, Silicon Valley companies invested about 11% of their total sales in R&D, compared to a national average of 3%.

Total R&D investment of publicly traded companies in Silicon Valley reached a value of more than $32.4 billion in 2003, a more than fivefold increase over investments in 1990 when companies spent $6.1 billion. R&D expenditures reached a peak of $35.6 billion in 2000, declining 10% since that time.

In 2003, approximately 328 Silicon Valley companies were both publicly traded and investing in R&D, an increase of more than 50% since 1990 (198 companies). This figure actually rose steadily to a peak of 478 companies in 1998 and then declined by about 9% annually to 2003.

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Foreign-owned Firms In-source about 20,000 Jobs Into Silicon Valley: 83% in Driving Industry Clusters

**WHY IS THIS IMPORTANT?**

In-sourced jobs are jobs created by overseas companies in Silicon Valley. These jobs provide an outside source of revenue for the region and outside capital investment in Silicon Valley facilities, people and plants. Proximity to markets, access to human capital and co-location in an industry hot-spot are all reasons why overseas companies keep employees here.

**HOW ARE WE DOING?**

While many firms outsource jobs to other regions, hundreds of companies with foreign ownership “in-source” nearly 20,000 jobs into Silicon Valley. In fact, 451 companies maintain approximately 24% of their jobs in Silicon Valley. These companies employ about 82,000 worldwide.

More than 16,100 jobs or 83% of all in-sourced jobs are based in Silicon Valley’s industry clusters. A total of 27% of in-sourced jobs were in Computers and Communications Hardware; 23% in Innovation Services; 12% in Software; and 9% in Semiconductors and Semiconductor Equipment.

Japan, Taiwan (ROC) and German companies employ the largest number of people in Silicon Valley. Japanese companies employ nearly 7,700 workers in the region; Taiwanese and German companies employ 3,100 and 1,350 Silicon Valley workers, respectively.
**GOAL 2: QUALITY GROWTH** Our economy grows from increasing skills and knowledge, rising productivity and more efficient use of resources.

**Regional Per Capita Income Rises Off 2002 Low for a Second Year**

**WHY IS THIS IMPORTANT?**
Growing real income per capita is a bottom-line measure of a wealth-creating, competitive economy. The indicator is total personal income from all sources (e.g., wages, investment earnings, self-employment) adjusted for inflation and divided by the total resident population. Per capita income rises when a region generates wealth faster than its population increases.

**HOW ARE WE DOING?**
Per capita income increased for a second year in a row to nearly $52,000 and outpaced national growth in per capita income. In inflation-adjusted terms, regional per capita income increased by 3% from approximately $50,300 in 2003 to nearly $52,000 in 2004. U.S. per capita income increased 2% from $32,120 in 2003 to more than $32,800 in 2004.

Silicon Valley’s per capita income reached a high of $61,100 in 2000; by 2004, this number had decreased by 7%. Nevertheless, the region’s per capita income remains much higher than the U.S. average of $32,800 in 2004.

**Valley Productivity Rises to 2.5 Times National Average**

**WHY IS THIS IMPORTANT?**
Value added is a proxy for productivity and reflects how much economic value companies create. Increased value added is a prerequisite for increased wages. Innovation, process improvement and industry/product mix are all factors that drive value added. Value added is the sum of compensation paid to labor within a sector and profits accrued by firms.

**HOW ARE WE DOING?**
In 2004, the region’s value added of $224,200 per employee is more than two-and-half times U.S. value added per employee of $85,800.

Silicon Valley’s value added per employee rose 5.9% annually in Santa Clara County and 5.2% annually in San Mateo County during the past ten years. By comparison, U.S. value added per employee grew 2% annually during the same period.

Growth in Silicon Valley’s value added per employee matched national growth from 2003 to 2004. In San Mateo County value added increased by 4.3% from 2003 to $226,000. Santa Clara’s value added increased 3.7% to $222,400 in 2004. These figures compare to a 4.0% increase in the U.S. value added per employee to approximately $85,800 over the same period.

Value added per employee in Silicon Valley’s industry clusters grew 6.1% from $307,400 in 2003 to $326,100 in 2004. Nationally, in the same clusters, value added per employee grew 4.6% between 2003 and 2004, but was about half of the Silicon Valley figure.
GOAL 3: BROADENED PROSPERITY  Our economic growth results in an improved quality of life for lower-income people.

Low-income Households Are Losing Ground Faster than Others

WHY IS THIS IMPORTANT?
This progress measure shows changes in standard of living among households at different income levels. This indicator tracks over time the income available to a representative four-person household at the 80th percentile, median and 20th percentile of the income distribution. Household income includes income from wages, investments, Social Security and welfare payments for all people in the household.

HOW ARE WE DOING?
In 2003, inflation-adjusted incomes of households in the 20th percentile declined by 8%. A representative household at the 20th percentile earned approximately $44,000 in 2003, compared to $47,600 in 2002. Nationally, household incomes at the 20th percentile fell by 2%, from $28,200 in 2002 to $27,750 in 2003. In contrast, household incomes at the 20th percentile in California rose by 1% ($26,600 in 2002 to $26,900 in 2003).

Between 1993 and 2003, national household incomes at the 20th percentile increased by 14%, to $27,750. By comparison, Santa Clara County household incomes at the 20th percentile fell 6% in inflation-adjusted terms. During that same period, the cost of living in Santa Clara County rose 15.5%.

For the second year in a row, incomes for households at the 80th percentile dropped by 7%, to $149,300. Incomes for households at the median also fell for the second year ($88,500 in 2003), but by less than incomes at the 20th and 80th percentiles (4%).

Disparities Exist in Health Insurance Coverage by Income and Ethnicity

WHY IS THIS IMPORTANT?
Access to quality health care is heavily influenced by health insurance coverage. Because health care is expensive, individuals who have health insurance are more likely to seek routine medical care and to take advantage of preventive health-screening services than those without coverage—resulting in a healthier population.

HOW ARE WE DOING?
On average, health insurance coverage in Silicon Valley (90%) was higher than that in California (86%) in 2001, but coverage varied widely by income and ethnicity. In Silicon Valley, the widest disparities in health insurance coverage are by household income level: 79% of adults whose household income fell at the 20th percentile or below had health insurance in 2001, while 99% of adults with household incomes at or above the 80th percentile had health insurance.

Latinos and American Indians had the lowest rates of coverage (80% and 67%, respectively), while Caucasians (95.8%) and African Americans (95%) had the highest rate of coverage. Insurance coverage among Asians was slightly above the regional average at 92%.
GOAL 4: ECONOMIC OPPORTUNITY All people, especially the disadvantaged, have access to training and jobs with advancement potential.

Many More Registered Nursing Jobs Available than Are Filled

WHY IS THIS IMPORTANT?
Silicon Valley depends on an adequate supply of licensed Registered Nurses (RNs) to ensure quality health care. An occupation that paid an average of $75,000 per year in Santa Clara County in 2003, the job of Registered Nurse also provides a quality employment opportunity for local residents. Differences between the number of qualified RNs available and the number required by regional employers creates labor market inefficiency. To fill these jobs, employers may hire 3-, 6- or 12-month contract RNs from outside the community instead of local residents. To gain a license, RNs must complete 2–3 years of required training and pass the California Board of Registered Nursing’s NCLEX examination.

HOW ARE WE DOING?
Projections indicate a 15% increase between 2001 and 2008 in the number of Registered Nurse jobs in Silicon Valley. On average, about 615 RN jobs will become available every year during the 2001–08 period. However, the region has produced only an average of about 224 RNs per year between 2001 and 2004. In response to growing demand, community and local colleges and universities have increased the number of slots available to train RNs. These actions have helped grow the number of graduates from 271 in 2001 to 390 in 2004, still well short of the need. To qualify to enter the labor market, graduates must also pass the state licensure (NCLEX) examination. Although the number of test takers increased, the first-time pass rate of 82% in 2004 resulted in only 285 of 390 test takers able to enter the labor market as RNs. The 2004 pass rate on the NCLEX examination for prelicensure RNs trained in the region is comparable to the statewide pass rate of 85%. In addition to an increase in the slots for students at training institutions, other government, foundation and consortium-based efforts have been launched to improve the quantity and quality of nurses available in the Bay Area and California.
Jobs in Silicon Valley’s Largest Industry Clusters Are Concentrated in Design Occupations

WHY IS THIS IMPORTANT?
Design and creativity are important skills in the innovation economy—and a major source of employment in Silicon Valley’s driving industry clusters. These occupations pay wages well above the cluster average. This indicator shows the percentage of design-related occupations across three industry clusters.

HOW ARE WE DOING?
Design occupations constitute a substantial share of employment in Silicon Valley’s industry clusters. In 2003, 70% of Software jobs were in design occupations, with special concentration in Software programming, network systems and computer engineering. Approximately 58% of jobs in Semiconductor and Semiconductor Equipment are in design occupations, especially electronic, industrial and computer software engineers. About 57% of the employment in Computer and Communications Hardware is design oriented, with the largest number of jobs concentrated in software applications, software engineers and computer hardware engineers.

Design occupations pay wages that are 10% to 25% higher than the industry cluster average. Average salary in design occupations was $96,800 in the Computers and Communication Hardware cluster, $88,700 in Semiconductors and $101,800 in Software.
**GOAL 5: PROTECT NATURE** We meet high standards for improving our air and water quality, protecting and restoring the natural environment, and conserving natural resources.

South Bay Mercury Levels Exceed Regulatory Guidelines

**WHY IS THIS IMPORTANT?**

Measuring the concentrations of mercury in the environment serves as an indicator of the overall health of the South Bay and the entire San Francisco Estuary ecosystem. This contaminant exists in the water and sediment of the Bay and accumulates in the tissues of birds and fish. Mercury moves through the food web from plankton to invertebrates to vertebrates (including mammals), increasing in concentration. Wildlife health and reproduction as well as human health can be affected by this contaminant.

This indicator tracks the level of mercury contamination throughout the San Francisco Estuary at both randomly selected and historical sites in 2002.

**HOW ARE WE DOING?**

According to the 2002 test results from the San Francisco Estuary Institute’s Regional Monitoring Program, 5 of 33 random sampling sites were above the regulatory guidelines for mercury. Three of these sites were in the South Bay region.

Although the Bay is one large connected water system, contaminant levels vary because of the dynamic nature of water and sediment movement and other factors such as runoff from rivers and creeks, atmospheric deposition, municipal and industrial wastewater effluent discharge and remobilization of contaminants from surface sediments into the overlying water. Contaminants of current environmental concern in the Estuary primarily originate in areas of the watershed that have been altered or disturbed by human activities through urbanization, industrial development and agriculture. In the South Bay in particular, historic mining activities have contributed to the elevated levels of mercury in that region.

In 2004, the San Francisco Bay Regional Water Quality Control Board released a cleanup plan (Total Maximum Daily Load Allocation plan) to control mercury loads entering the Bay. The Guadalupe River watershed was required to make the largest relative improvements in mercury reduction. If these efforts are completed, the South Bay should begin to meet water-quality goals.

*Source: San Francisco Estuary Institute, Regional Monitoring Program*
**Total Electricity Use Declines, but Per Capita and Per Employee Use Rises**

**WHY IS THIS IMPORTANT?**

The production, transportation, transmission and use of conventional energy all have impacts on the environment, including the emission of greenhouse gases and atmospheric pollutants through the combustion of fossil fuels. Energy use therefore plays a central role in affecting the natural environment. Sustainable energy policies include efficient use and saving of energy and increasing the proportion of renewable energy sources.

**HOW ARE WE DOING?**

In 2003, Silicon Valley homes and businesses consumed 20.5 billion kilowatt hours of electricity (27% residential and 73% nonresidential). While this total translates into a 13% growth in electricity consumption since 1990, it also represents a 2% decrease from 2002 to 2003. This decrease was driven by the nonresidential sector primarily because of a 5% decline in employment over the same period.

At the same time, total electricity use per resident and per employee has increased. Residential electricity consumption per capita increased 4.2% between 2002 and 2003, while nonresidential electricity consumption per employee rose 1% during the same period. Since 1990, both per capita consumption (9%) and per employee consumption (5%) have risen.

Since 1990, Silicon Valley has accounted for approximately 8% of California’s total electricity consumption. The region’s share of the state’s overall consumption was at its lowest in 13 years in 2003 at 7.7%.

The installation of solar photovoltaic (PV) systems is on the rise in the Silicon Valley region. Since 1998, 1,002 PV systems have been completed, with a combined total capacity of 1,380 kilowatts; the annual number of solar photovoltaic installations increased from 5 in 1998 to 315 by October of 2004. This capacity, when converted into energy generated, accounts for nearly 5 million kilowatt hours per year or about .02% of the energy consumed in 2003 in Silicon Valley.

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**Source:** California Energy Commission

*All kWh figures given in millions

**Data through July 2004**
**GOAL 6: PRESERVE OPEN SPACE** We increase the amount of permanently protected open space, publicly accessible parks and green space.

Permanently Protected Open Space Has Grown from 22% to 26% of the Region Since 1998

**WHY IS THIS IMPORTANT?**
Preserving open space protects natural habitats, provides recreational opportunities, focuses development and safeguards the visual appeal of our region.

This indicator tracks lands in Silicon Valley or along its perimeter that are permanently protected through public ownership or conservation easements.

**HOW ARE WE DOING?**
In 2004, 26% of land in Silicon Valley and along its perimeter was permanently protected open space. This share is up from 25% in 2001 and has increased 4 percentage points since 1998. In the most recent year, 19,500 acres were added to the Don Edwards National Wildlife Refuge.

This open space has also become more accessible over the years. Today, 64% of the region’s permanently protected open space is accessible to the public, up from 59% in 1998.

---

**GOAL 7: EFFICIENT LAND REUSE** Most residential and commercial growth happens through recycling land and buildings in existing developed areas. We grow inward, not outward, maintaining a distinct edge between developed land and open space.

Cities Push Land-use Efficiency to New High

**WHAT IS THIS IMPORTANT?**
By directing growth to already developed areas, local jurisdictions can reinvest in existing neighborhoods, use transportation systems more efficiently and preserve nearby rural settings.

This section looks at the average density of newly approved residential development. This indicator measures new housing units approved for development by Silicon Valley cities in each fiscal year and is a more “upstream” measure than actual housing starts.

**HOW ARE WE DOING?**
In 2004, Silicon Valley cities approved new residential development at an average density of 12.93 units per acre, a rise of 28% from 2003. Since the land-use survey was initiated in 1998, the average density of newly approved residential development has risen from 6.6 units per acre to a high this year of 12.93—an increase of 96%.

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**PERMANENTLY PROTECTED OPEN SPACE AND SHARE THAT IS PROTECTED AND PUBLICLY ACCESSIBLE IN SILICON VALLEY AND PERIMETER**

**AVERAGE UNITS PER ACRE OF NEWLY APPROVED RESIDENTIAL DEVELOPMENT**

Source: GreenInfo Network

Sources: City Planning and Housing Departments
GOAL 8: LIVABLE COMMUNITIES We create vibrant community centers where housing, employment, schools, places of worship, parks and services are located together, all linked by transit and other alternatives to driving alone.

Newly Approved Nonresidential Space Triples, Share Near Transit Hits New High

WHY IS THIS IMPORTANT?
Focusing new economic and housing development near rail stations and major bus corridors reinforces the creation of compact, walkable, mixed-use communities linked by transit. This helps to reduce traffic congestion on freeways and preserve open space near urbanized areas. This is a leading indicator of development, a more upstream measure than actual building permits.

HOW ARE WE DOING?
The share of newly approved space for jobs located within one-quarter mile of a rail station or a major bus corridor reached the highest level since the inception of the land-use survey. At 76.4%, this figure is almost three times the share of new nonresidential space for jobs that was located near transit in 1998 (26%).

The share of new nonresidential development close to transit has grown even as approvals for new space have increased substantially. The approval of nonresidential space more than tripled (rose 311%) from 2003 to 2004, from 3.2 million square feet to 10.4 million square feet (with space for 23,213 jobs in 2004, compared to space for 5,778 jobs in 2003). This is the highest level of new nonresidential development approved since 2001, when space for 62,160 jobs was approved.

At the same time, 34% of all new housing units approved in 2004 were located within one-quarter mile of a rail station or a major bus corridor. This represents 3,129 new units—a slight increase in number of new units compared to 2003. However, this figure also represents a decline in the share of new housing located near transit in the past year (down from 46% in 2003).

Peak Hour Traffic Delay Declines 12% from 2000 High

WHY IS THIS IMPORTANT?
Traffic congestion is a key factor affecting quality of life. Congestion is inefficient, consuming time and fuel as vehicles sit bumper to bumper. Regional design: the proximity of jobs to housing and the availability of alternative travel options, such as public transit, affects the level of traffic congestion experienced by everyone.

This indicator shows the average annual hours of delay to drivers (both all travelers and those traveling at peak travel times) on freeways and principal arterial streets in Santa Clara County.

HOW ARE WE DOING?
Traffic congestion has declined since 2000, and is substantially improved compared to hours of delay in the early 1990s. Hours of delay for peak travelers (those who begin their trips during commute hours) declined from 60 hours in 2000 to 53 hours in 2002, a 12% drop. Nonpeak travelers also saw an improvement in annual hours of delay, from 31 hours in 2000 to 29 in 2002, a 7% decline.
GOAL 9: HOUSING CHOICES  We place a high priority on developing well-designed housing options that are affordable to people of all ages and income levels. We strive for balance between growth in jobs and housing.

New Housing Approvals Rise, but Percentage Affordable Drops Even Lower

WHY IS THIS IMPORTANT?
Our economy and community life depend on a broad range of jobs. Building housing that is affordable to lower- and moderate-income households provides access to opportunity and maintains balance in our communities. This indicator measures housing units approved for development by Silicon Valley cities in each fiscal year; this is a more “upstream” measure than actual housing starts.

HOW ARE WE DOING?
The number of new housing units that Silicon Valley cities approved for development rose 37% from 6,780 units in 2003 to 9,260 units in 2004. Of these new units, 14% (1,147 units) will be affordable. (Affordable housing is for households making up to 80% of a county’s median income. In 2004, this income limit was $71,229 for a household of four in Santa Clara County, i.e., 80% of the median income of $89,036 for a four-person household.) These units are developed primarily by nonprofit housing developers or are set aside as “affordable” within market-rate developments.

Housing and Rental Affordability Declines

WHY IS THIS IMPORTANT?
The affordability, variety and location of housing affect a region’s ability to maintain a viable economy and high quality of life. Lack of affordable housing in a region encourages longer commutes, which diminish productivity, curtail family time and increase traffic congestion. Lack of affordable housing also restricts the ability of crucial service providers—such as teachers, registered nurses and police officers—to live in the communities in which they work.

HOW ARE WE DOING?
The percentage of households that can afford to purchase the median-priced home dropped in Santa Clara County from 26% in 2003 to 23% in 2004, reversing a three-year trend of increasing affordability. Affordability in San Mateo fell from 18% in 2003 to 15% in 2004. About 54% of all U.S. households can afford to purchase the median-priced home in 2004, down from 56% in 2003.

Unaffordable housing is not unique to Silicon Valley. The housing affordability rate in California fell from 18% in 2003 to 15% in 2004. About 54% of all U.S. households can afford to purchase the median-priced home in 2004, down from 56% in 2003.

Unaffordable housing is not unique to Silicon Valley. The housing affordability rate in California fell from 18% in 2004, following a three-year decline from 34%. In San Diego, only 10% of households can now afford a median-priced home, a drop from 26% in 2001. Sacramento County is now almost as unaffordable as Santa Clara County, with the percentage of households that can afford to purchase a median-priced home dropping from 41% to 26% just between 2003 and 2004.

The average apartment rental rate at turnover in 2004 was $1,285, a fall of 5% from 2003. However, with household incomes at the 20th percentile falling by 8%, rent was less affordable in 2004 than in 2003 for the region’s poorest households.
**GOAL 10: EDUCATION AS A BRIDGE TO OPPORTUNITY** All students gain the knowledge and life skills required to succeed in the global economy and society.

Preschool Education Prepares Students for Kindergarten

**WHY IS THIS IMPORTANT?**

One of our country’s national educational goals—as stipulated by the National Educational Goals Panel, an independent executive branch agency of the federal government charged with monitoring progress toward eight national goals—is to ensure that every child enters kindergarten ready to learn. As a national standard, the Panel recommended that “All children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.”

School readiness is a proven foundation for later academic success and is a function of the stimulation and experience of the child as an infant, toddler and preschooler. Brain development that occurs during the first years of life lays the foundation for cognitive and language skills, social functioning, motor skills and emotional well-being. Preparedness for kindergarten is an important indicator of the effectiveness of our region’s early childhood development efforts.

**HOW ARE WE DOING?**

This is the first time Santa Clara County has tracked the effect of preschool on the preparedness of children entering kindergarten. The Santa Clara County Partnership for School Readiness along with Applied Survey Research evaluated a representative sample of 700 entering students in 2004 on five dimensions of school readiness.

This year’s analysis examines the mean readiness scores of all observed students and compares readiness in two groups: those who had preschool experience and those who did not. On average, Santa Clara County students scored 3.3 in kindergarten readiness and performed best on measures of “Cognition” and worst in “Communication and Language Usage.”

Students with a formal curriculum-based preschool experience are more ready for kindergarten than students without this experience. The greatest differences between those who attended preschool and those who did not were in the areas of “Communication and Language Usage” followed by “Cognition” and “Approaches to Learning.”

**KINDERGARTEN READINESS IN SANTA CLARA COUNTY, 2004**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Overall Readiness Score</th>
<th>Attended Preschool</th>
<th>Did Not Attend Preschool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3.3</td>
<td>3.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Physical Development</td>
<td>3.2</td>
<td>3.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Social/Emotional Well-being</td>
<td>3.0</td>
<td>3.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Approaches to Learning</td>
<td>3.3</td>
<td>3.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Communication/Language Usage</td>
<td>2.5</td>
<td>3.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Cognition/General Knowledge</td>
<td>2.0</td>
<td>3.5</td>
<td>1.5</td>
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</tbody>
</table>

**KINDERGARTEN READINESS IN SANTA CLARA COUNTY BY PRESENCE OR HISTORY OF PRESCHOOL, 2004**

Sources: Santa Clara County Partnership for School Readiness, Applied Survey Research
Notes: 1) Scores reflect a four-point continuum of proficiency, with 4.0 being “proficient.”
2) Results are statistically significant between groups for each developmental skill area.
3) Data are preliminary.
Third-grade Reading Scores Improve, but Disparities Persist

**WHY IS THIS IMPORTANT?**
Research shows that students who do not achieve reading mastery by the end of third grade risk falling behind further in school. This indicator tracks third-grade reading scores on the California Achievement Test, sixth edition (CAT/6), which measures performance relative to a national distribution.

**HOW ARE WE DOING?**
In 2004, 47% of Silicon Valley’s third graders scored at or above the national median in reading, up slightly from 46% in 2003. In addition, 22% of third-grade readers in Silicon Valley scored in the highest quartile in reading, up one percentage point from the previous year. The percentage of third graders in the lowest quartile decreased by one percentage point, from 29% to 28%. Overall, these figures mean that Silicon Valley third graders as a group score just below the national median. Moreover, only 15% of English learners scored at or above the national median on the CAT/6 reading test, down one percentage point from last year. About six in ten English learners (58%) scored in the lowest quartile.

Source: California Department of Education
Share Enrolled in Intermediate Algebra Rises for Third Year; Hispanic Students Make Large Gains

**WHY IS THIS IMPORTANT?**

Completing Algebra I and moving on to advanced math courses is important for students planning to enter postsecondary education as well as for students entering the workforce after high school. This indicator shows the share of 10th- and 11th-grade students enrolled in Intermediate Algebra. Intermediate Algebra is one of the courses required for UC/CSU entry.

**HOW ARE WE DOING?**

During the 2003–04 school year, approximately 32% of Silicon Valley’s 10th and 11th graders were enrolled in Intermediate Algebra—an increase from 29% in 2002–03. Enrollment has steadily increased since a low of 26% in 2000–01.

Wide disparity in Intermediate Algebra enrollment across ethnicity and race persists across the region. On average, 22% of Hispanic students were enrolled in Intermediate Algebra during the 2003–04 school year. This is a substantial increase from 2001–02 when just 15% of Hispanic students were enrolled. Enrollment rates for African American, Pacific Islander and Filipino students were 21%, 22% and 26%, respectively. About 38% of white students and 40% of Asian students were enrolled in Intermediate Algebra.

More females than males enroll in Intermediate Algebra. The gender differences persist across ethnicity and race, with the largest differences among white and Pacific Islander females and males.

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Graduation Rates and Share of Students Meeting UC/CSU Entrance Requirements Increase

**WHY IS THIS IMPORTANT?**

High School graduation rates are a basic measure of educational attainment. In addition, graduates who pass a breadth of core courses required for college entry (UC/CSU requirements) demonstrate readiness for future learning. Completing some type of education beyond high school is increasingly important for participating in the medium- and high-wage sectors of the Silicon Valley economy.

**HOW ARE WE DOING?**

In 2004, 81.6% of students who entered high school as freshmen in 2000 graduated, up slightly from 81.3% in 2003. Graduation rates have generally fluctuated by a few percentage points since the early nineties. However, graduation rates substantially increased in the 2002 to 2003 period, rising from 74.1% to 81.2%.

In 2004, 38.4% of students who had entered high school as freshmen in 2000 both graduated and met the course requirements for entrance to UC/CSU, marking the third consecutive year of gains. This year's figure is also the highest rate recorded since the Index began tracking Silicon Valley data in 1994.
GOAL 11: TRANSPORTATION CHOICES We overcome transportation barriers to employment and increase mobility by investing in an integrated, accessible regional transportation system.

Transit Ridership and Available Transit Service Continue to Decline

WHY IS THIS IMPORTANT?
A larger share of workers using alternatives to driving alone indicates progress in increasing access to jobs and improving the livability of our communities. Pedestrian- and transit-oriented development in neighborhoods and in employment and shopping centers increases opportunities for walking, bicycling and using public transportation instead of driving.

HOW ARE WE DOING?
Annual per capita transit ridership declined by 10.3% from 2003 to 2004, the fourth consecutive year that per capita ridership has declined. Since its peak in 2000, per capita ridership has declined by 31%. Valley Transportation Authority experienced the largest decline in ridership (11.6%), while Altamont Commuter Express was the only Silicon Valley transportation provider to experience a ridership increase (0.2%).

Revenue hours measure the amount of public transit operating time or service. In 2004, total regional revenue hours declined about 11.7% from 2003. This is the second year of service reductions; revenue hours declined 8% in the 2002 to 2003 period.

Sources: Caltrain, SamTrans, Valley Transportation Authority, Altamont Commuter Express, Economy.com
Note: ACE train ridership began in October 1998.
*Estimate
**GOAL 12: HEALTHY PEOPLE** All people have access to high-quality, affordable health care that focuses on disease- and illness-prevention.

Child-immunization Rate Continues to Rise; Diabetes Incidence Is Higher among Lower-income Households

**WHY IS THIS IMPORTANT?**

This section reports on three key measures of health: low-weight births, childhood immunization rates and incidence of adult diabetes.

The proportion of children with low birth weight is a predictor of future costs that communities will incur for preventable health problems, special education and crime.

Timely childhood immunizations promote long-term health, save lives, prevent significant disability and reduce medical costs.

Incidence of diabetes is on the rise in California and is most likely to strike those who have the least access to health services and the knowledge necessary to keep this preventable disease in check.

Poor health outcomes generally correlate with poverty, which correlates with poor access to preventive health care and education.

**HOW ARE WE DOING?**

The percentage of low-weight Silicon Valley births declined slightly from 6.3% in 2002 to 6.1% in 2003. About 2,300 births were low weight in 2003. This rate fails to meet the Healthy People 2010 Target of 5%.

The share of children ages 18–35 months with timely immunizations in Santa Clara County climbed from 85% in 2002 to 89.6% in 2003. The share of children with timely immunizations nationally was 84% and 83% in California.

Approximately 5.1% of Silicon Valley adults ages 18 and up are diabetic. Diabetes is more prevalent among residents of low-income households. The incidence of diabetes was 7% among Silicon Valley residents of households whose incomes fell below the 20th percentile (roughly $40,000). The incidence in the highest-income households (above $135,000) was 2.8%. Middle-income households had a diabetes incidence of 4.8%, slightly below the regional average.

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**PERCENTAGE OF BIRTHS THAT ARE LOW WEIGHT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Silicon Valley</th>
<th>Healthy People 2010 Target</th>
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<tbody>
<tr>
<td>1991</td>
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<td>2003</td>
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</tbody>
</table>

**RATE OF IMMUNIZATION FOR CHILDREN AGES 18–35 MONTHS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Santa Clara County</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
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<td></td>
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<td>1996</td>
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<td>2002</td>
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<td>2003</td>
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</tbody>
</table>

**INCIDENCE OF ADULT DIABETES BY HOUSEHOLD INCOME LEVEL, 2001**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Silicon Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>20th Percentile and Below</td>
<td></td>
</tr>
<tr>
<td>20th Percentile and Above</td>
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<tr>
<td>Middle</td>
<td></td>
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<tr>
<td>80th Percentile and Above</td>
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</tbody>
</table>

Sources: National Immunization Survey, National Center for Health Statistics, Centers for Disease Control, California Center for Health Statistics, Vitality Data Tables, CalDiabetes
GOAL 13: SAFE PLACES All people are safe in their homes, workplaces, schools and neighborhoods.

Crime Rates Are Well Below State Average, but Juvenile Felony Arrests and Child Abuse Increase

WHY IS THIS IMPORTANT?
The level and perception of crime in a community are significant factors that affect quality of life. In addition to economic costs, the fear, frustration and instability resulting from crime chisels away at our sense of community. For juveniles, involvement in crime severely limits their options for the future. Child abuse is extremely damaging to the abused child and increases the likelihood of criminality later in life. Safety for the community must start with safety for children in their homes.

HOW ARE WE DOING?
The rate of adult violent crime fell 5% from 342 violent crimes per 100,000 adults in 2002 to 325 in 2003. Silicon Valley’s rate of adult violent crime is 34% less than that of California.

At the same time, juvenile felony arrest rates for violent crimes in Santa Clara and San Mateo counties increased 5% from 2002 to 2003. The increase among residents age 10-17 was from 274 violent crimes per 100,000 in 2002 to 287 in 2003. Despite this increase, juvenile crime is 22% lower in Silicon Valley than in California.

In 2003, there were 3,541 substantiated reports of child abuse in Santa Clara and San Mateo counties, an increase of less than 1% from 2002 to 2003 (or a rate of 5.9 per 1,000 children). The rate of substantiated child abuse cases fell slightly in Santa Clara County, from 6.6 to 6.1, while the rate rose slightly in San Mateo County, from 4.2 to 5.3 in 2003. During this time, the rate of child abuse fell by 3.5% in the state of California.

Sources: FBI Uniform Crime Reports, Child Welfare Services, California Department of Justice
GOAL 14: ARTS AND CULTURE THAT BIND COMMUNITY Arts and cultural activities reach, link and celebrate the diverse communities of our region.

WHY IS THIS IMPORTANT?
Ensuring that our arts and cultural institutions are able to provide services to the community is important even in an economic downturn. Art and culture are integral to our community’s economic and civic future. Creative expression is essential for an economy based on innovation. And participation in arts and cultural activities connects diverse people to each other and to their community.

This indicator tracks the percentage of Silicon Valley’s 15 largest arts organizations whose current unrestricted assets exceeds their current liabilities; a measure of financial health.

HOW ARE WE DOING?
In 2004, 71% of the largest regional arts organizations had more unrestricted current assets than unrestricted current liabilities. This share was down to its lowest level since 1998. However, arts and cultural organizations with enough current assets to meet their needs do so by a great margin. In 2003, 30% of reporting organizations had large enough endowments to cover more than a year of operating expenses, which reduces the likelihood of service cuts during times of economic stress. At the same time, a few organizations have very small endowments and would need substantial investment to weather a fiscal storm.

Share of Regional Arts Organizations with More Unrestricted Assets than Liabilities

<table>
<thead>
<tr>
<th>Year</th>
<th>Share</th>
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</thead>
<tbody>
<tr>
<td>1998</td>
<td>80%</td>
</tr>
<tr>
<td>1999</td>
<td>75%</td>
</tr>
<tr>
<td>2000</td>
<td>70%</td>
</tr>
<tr>
<td>2001</td>
<td>65%</td>
</tr>
<tr>
<td>2002</td>
<td>60%</td>
</tr>
<tr>
<td>2003</td>
<td>55%</td>
</tr>
<tr>
<td>2004</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source: Collaborative Economics Survey of 15 Arts Organizations
GOAL 15: CIVIC ENGAGEMENT All residents, business people and elected officials think regionally, share responsibility and take action on behalf of our region’s future.

82% of Eligible Residents Are Now Registered to Vote, Much Higher than Just 6 Years Ago

![Share of Eligible Residents Who Registered and Voted in General Elections]

**WHY IS THIS IMPORTANT?**

Voter participation is an indicator of civic engagement and reflects community members’ commitment to a democratic system, confidence in political institutions and optimism about the ability of individuals to affect public decision making.

**HOW ARE WE DOING?**

Voter registration as a percentage of eligible voters in Silicon Valley increased by more than 12% from 2002 to 2003, compared to a 9% rise in California as a whole. This increase continues a six-year upward trend in voter registration for general elections in Silicon Valley, from 67% in November 1998 to 82% in November 2004.

The share of eligible residents who participated in the November 2004 election was considerably higher than in recent years. In Silicon Valley, 60% of eligible residents (citizens ages 18 and over without prior felony convictions) participated in the last election, compared with only 51% who voted in the 2000 presidential election. Turnout was lower for California as a whole: only 54% of eligible residents voted in November 2004.

Source: California Secretary of State, Elections and Voter Information Division
About 85% of the San Francisco Bay’s wetlands have been filled in, dried out or converted to salt ponds. In 2000, a major landowner of Bay wetlands, mineral rights and salt ponds, Cargill Incorporated, offered to sell almost 19,000 acres of land in both the North and the South bay to the state and federal governments. The appraised value of the sale was more than $300 million. No individual agency could raise the funds for the acquisition. Regional collaboration would be required to restore substantial wetlands to the San Francisco Bay.

**WHY WAS THIS ACQUISITION SO IMPORTANT?**

Few large, undeveloped lands, immediately adjacent to the Bay, suitable for restoration and available from a single owner exist today. Failing to complete one coordinated acquisition for the excess Cargill lands could have resulted in these lands’ being sold in pieces to different purchasers to be developed or used for dredge spoils, holding ponds and other purposes losing the restoration potential of these lands forever. Eventually, the state and federal governments with the assistance of foundations were able to negotiate for and acquire approximately 16,500 acres of Bay salt ponds, wetlands and mineral rights that when restored could increase the Bay’s tidal wetlands by nearly 50%, preserve open space, improve water quality, act as natural flood control, prevent shoreline erosion, provide critical habitat for endangered species and generate opportunities for scientific study and public access in an urbanized region. This project has special significance for the Silicon Valley, as 15,100 acres (92%) of the lands acquired are located in the South Bay.

**WHO IS COLLABORATING?**

Under the leadership of Senator Dianne Feinstein, four regional foundations collaborated to raise a portion of the funding required to meet the costs of acquisition. The Hewlett, Moore and Packard Foundations each contributed more than $6.3 million to the acquisition; the Goldman Foundation contributed $1 million. The Hewlett, Moore and Packard Foundations are also providing $15 million toward the cost of initial stewardship and long-term restoration planning.

**WHAT HAS BEEN ACCOMPLISHED THUS FAR?**

- In March 2003, California Senator Dianne Feinstein, Governor Gray Davis and U.S. Interior Secretary Gale Norton announced the transfer of 16,500 acres of land and salt-making rights to the California Department of Fish and Game and the U.S. Fish and Wildlife Service.
- With the purchase also came a commitment by the Department of Fish and Game, Fish and Wildlife Agency and the Hewlett, Moore and Packard Foundations to undertake a five-year planning effort that would result in a scientifically sound, broadly supported long-term restoration plan. The agencies agreed that the California Coastal Conservancy’s San Francisco Bay Program would lead this planning effort.
- Additionally, the agencies and foundations agreed to begin working immediately to halt industrial salt making, stabilize salinities and ensure maintenance of the levees surrounding the ponds and neighboring communities. In July 2004, the first of a series of ponds was reconnected to the Bay. By fall, more than 4,000 acres in the South Bay had been opened to tidal influence as part of initial stewardship.
- Over the next few decades, these salt ponds, ringing the South Bay from Hayward in the East Bay to Menlo Park on the Peninsula, will be restored to a mix of tidal marsh, mudflat, managed ponds, upland and other habitat. The project will also provide for wildlife-oriented public access and recreation and for flood management.
GOAL 17: MATCHING RESOURCES AND RESPONSIBILITY

Valley cities, counties and other public agencies have reliable, sufficient revenue to provide basic local and regional public services.

Local Governments Lose 20% of Revenues, Relying on Most Volatile Revenue Sources

WHY IS THIS IMPORTANT?

To maintain service levels and respond to a changing environment, local government revenue must be reliable. City government revenues come from locally generated property taxes, sales taxes and other taxes and revenue sources (e.g., transportation taxes, transient lodging taxes, business license fees, other nonproperty taxes and franchise taxes). Property tax is the most stable source of city government revenue, fluctuating much less over time than do sales and other taxes and revenue sources. Since only about 13% of city revenue derives from property taxes and approximately 25% comes from revenues not generated locally (e.g., intergovernmental transfers from the state and federal governments), sales and other tax and revenue sources account for about 46% of overall city revenues and thus are critical in determining the overall volatility of local government funding.

HOW ARE WE DOING?

Silicon Valley city revenues declined 20% from a total of $2.9 billion in 2001 to $2.3 billion in 2002. All sources of revenue declined except property tax revenue, which increased by 14%. Sales tax revenue declined by 22%; “other taxes” and “other revenue sources” declined by 14% and 27%, respectively. These categories include sales and use tax, transportation taxes, transient lodging taxes, business license fees, other nonproperty taxes and franchise taxes.

In 2002, cities derived 87% of their revenue from the most volatile sources: sales tax, other taxes and other sources of revenue. Property taxes, the only growing revenue source (also the most stable and predictable) constituted only 13% of aggregate city revenue in 2002.

During the 1990–91 to the 2001–02 period, sales-tax revenues jumped by as much as 20% and fell by as much as 14% from one year to the next. Similarly, revenues from other taxes during this period experienced a one-year jump of as much as 27% and a one-year drop of as much as 29%. Other locally generated revenue sources jumped as much as 87% and fell as much as 16% from one year to the next during this period. In contrast, property-tax revenue never rose or fell more than 8% in any year from 1990–91 to 2000–01. Property taxes did increase by a larger margin in 2002, increasing by 14% over the previous year’s taxes.

Local revenues are affected by economic fluctuations and by state takings of locally generated revenue. State takings of locally raised property taxes for Educational Revenue Augmentation Funds (ERAF) have resulted in a 24% decline in city revenue derived from property taxes.
Appendix A: Data Sources

CHANGING DEMOGRAPHICS
Data for the composite population table are from the California Department of Finance, 1993–2003 and aggregate Santa Clara and San Mateo counties. Natural change is births minus deaths and net migration is the sum of domestic and international in- and out-migration.

Population comparison data (on ethnicity and race, educational attainment and age) are derived from the Current Population Survey, March Supplement. The sample is drawn for the San Jose MSA only. Because of the small size of the Silicon Valley sample, figures from any given year may be unstable. To stabilize the data and account for sampling error, we create a rolling average of three years so that, for example, the 2003 data point is the combined average of years 2002, 2003 and 2004. In Census data, ethnicity and race are self-designated categories. All respondents who self-reported “Hispanic” origin are counted as such in that category only. Respondents who self-identified more than one race in 2001–03 were not counted in the data set; this group represents less than 2% of the population. Educational attainment is calculated for San Jose MSA adults as a share of the adult population. Other U.S. Census datasources, e.g. The American Community Survey, may report different results by race and ethnicity in 2003.

REGIONAL TREND INDICATORS

JOB LOSSES CONTINUE, BUT AT A SLOWER RATE
The California Employment Development Department (EDD) and Joint Venture: Silicon Valley Network have constructed a unique data set to track employment and pay in the Silicon Valley region on the basis of unemployment insurance filings. This data set begins in 1992 and is updated quarterly. This data set does not include self-employment, agriculture workers or military personnel. Job data include both part-time and full-time employees, or all people on the payroll. Joint Venture’s Silicon Valley data set provides the most up-to-date employment estimates for the entire region through the second quarter of 2004.

INDUSTRY CLUSTERS LOSE JOBS, BUT EMPLOYMENT REMAINS INTENSELY CONCENTRATED IN REGION
Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network’s unique data set. Corresponding national-level employment data are provided by the U.S. Bureau of Labor Statistics, Quarterly Covered Employment and Wages (QCEW) series.

APPROXIMATELY 23,800 NET NEW FIRMS CREATED BETWEEN 2000–02
Firm-level data are from Walls and Associates, as compiled from Dun & Bradstreet annual firm data. Collaborative Economics cleans the data in order to identify Silicon Valley trends. Firms self-report data to Dun & Bradstreet and are incentivized to do so in order to obtain a credit rating for access to credit cards, bank accounts and other sources of capital. Dun & Bradstreet cross-check firm reports against other public and private corporate databases. For the purpose of this indicator, a firm is “born” in the first year it self-reports to Dun & Bradstreet and “dies” in the year it last reports data. The methodology of this indicator owes a great debt to the work of Junfu Zhang of the Public Policy Institute of California and his paper “High-Tech Start-Ups and Industry Dynamics in Silicon Valley.”

INDUSTRY CLUSTERS LOSE 3.2% OF JOBS, GAIN IN BUSINESS SERVICES, CONSTRUCTION, HEALTH CARE
Average pay per employee for each cluster was derived from the EDD/Joint Venture: Silicon Valley Network data set and is based on the North American Industry Classification System (NAICS). Appendix B provides NAICS-based definitions for each of Silicon Valley’s industry clusters. Average pay per employee in the clusters is calculated by summing quarterly payroll and dividing by average annual employment in the cluster in 2003. All wages have been adjusted into 2004 dollars using the annual average Consumer Price Index (CPI) of urban consumers in the San Francisco–Oakland–San Jose region, published by the Bureau of Labor Statistics.

AVERAGE PAY DECLINES 1%
Data are derived from the EDD/Joint Venture: Silicon Valley Network data set, the Average Annual Wage Levels in Metropolitan Areas report of the Bureau of Labor Statistics and Economy.com. This information comes from individual-firm reporting of payroll amounts in compliance with unemployment insurance rules. All wages have been adjusted into 2004 dollars using the annual average of urban consumers in the San Francisco–Oakland–San Jose Consumer Price Index (CPI) published by the Bureau of Labor Statistics.

Pay includes bonuses, stock options, the cash value of meals and lodging and tips and other gratuities. Pay per employee is calculated by dividing annual (quarter two to quarter two) payroll for each industry by annual average employment (quarter two to quarter two).

INDUSTRY CLUSTER PAY INCREASES 8.2%; PAY FALLS SLIGHTLY IN OTHER INDUSTRIES
Average pay per employee for each cluster was derived from the EDD/Joint Venture: Silicon Valley Network data set and are based on the North American Industry Classification System (NAICS). Appendix B provides NAICS-based definitions for each of Silicon Valley’s industry clusters. Average pay per employee in the clusters is calculated by summing quarterly payroll and dividing by average annual employment in the cluster in 2003. All wages have been adjusted into 2004 dollars using the annual average Consumer Price Index (CPI) of urban consumers in the San Francisco–Oakland–San Jose region, published by the Bureau of Labor Statistics.
AVAILABILITY OF COMMERCIAL SPACE IS STILL RISING, BUT RENTS ARE STARTING TO RISE TOO
Colliers/Parrish calculates the availability rate and vacancy rate for Santa Clara County. Vacancy rate is the amount of unoccupied space. It is calculated by dividing the sum of the direct vacant and sublease vacant space by the building base. The availability rate includes space that is leased but unoccupied in addition to vacant space. It is calculated by dividing the sum of the direct vacant, sublease vacant, direct occupied and sublease occupied space by the building base.

BAY AREA RATE OF BROADBAND CONNECTION IS BEHIND RATES OF OTHER COMPARABLE U.S. REGIONS
Connectivity data are from Census Population Survey October 2003 Internet Use Survey. The San Francisco Bay Area is made up of San Francisco, San Mateo, Santa Clara and Alameda counties. “Broadband” describes a connection to the Internet by Digital Subscriber Line (DSL) or cable modem. “Dial-up” describes a connection to the Internet using a modem to dial into an Internet Service Provider.

PROGRESS MEASURES FOR SILICON VALLEY 2010
NUMBER OF FAST-GROWTH COMPANIES RISES FOR THE FIRST TIME SINCE 2000
The data for publicly owned gazelles was provided by Standard & Poor’s. Gazelles are companies that sustain an annual growth rate of 20% or more for four consecutive years, beginning with revenues of at least $1 million. This indicator uses annual average revenue reported for publicly traded companies in Silicon Valley. 2004 revenue growth is revenue for the latest 12 month period (September 2003 to September 2004) divided by annual average revenues for 2003.

SILICON VALLEY PATENT GENERATION INCREASES 6% OVER 2002, IS A GROWING SHARE OF U.S. AND CALIFORNIA PATENTS
Patent data are provided by the U.S. Patent and Trademark Office and consist of utility patents granted by inventor. Utility patents are the most common patents, covering many types of inventions. Utility patents describe and claim the composition of an invention—how it works, or what the process is. Population figures are from Economy.com. Geographic designation is given by the location of the first inventor named on the patent application. Silicon Valley patents include only those patents filed by first inventors named on the patent who are residents of Silicon Valley cities.

VENTURE CAPITAL INVESTMENT GROWS FOR FIRST TIME IN THREE YEARS
Data are provided by PricewaterhouseCoopers/Thomson Venture Economics/National Venture Capital Association MoneyTree™ Survey. For the Index of Silicon Valley, only investments in firms located in Silicon Valley, based on Joint Venture’s ZIP-code-defined region, were included. Total 2004 venture capital funding level is an estimate based on the first three quarters of data and historical growth patterns in the fourth quarter.

FEDERAL R&D INVESTMENT IN VALLEY SKYROCKETS IN BOTH DEFENSE AND NONDEFENSE AREAS
Data are extracted from RAND’s Radius database for all cities in Joint Venture’s Silicon Valley region. Data are the sum of total Federal Research and Development (R&D) dollars awarded to entities (universities, labs, private companies, Federally Funded Research and Development Centers [FFRDC] and Federal Labs) in each fiscal year from 1993 to 2003. The numbers presented in this analysis will not directly match those published by the National Science Foundation (NSF)—R&D dollars are generally a subset of Science and Technology Obligations. The NSF publishes numbers with a larger scope but less detail on specific R&D activities. U.S. data are provided by RAND at the following Web location: https://davinci.rand.org/radius/federal_rd.html.

CORPORATE R&D INVESTMENT DECLINES, BUT SILICON VALLEY COMPANIES INVEST AT MUCH HIGHER RATE THAN DOES THE U.S.
Data are provided by Standard & Poor’s Compustat database and consist of total research and development expenditures as a share of total sales for publicly traded Silicon Valley companies. For each year from 1990 through 2003, the Compustat database was screened for companies located in the Silicon Valley region. This screen was performed by matching a list of Zip codes provided by Joint Venture: Silicon Valley Network with address information as it was historically available on the database.

FOREIGN-OWNED FIRMS IN-SOURCE ABOUT 20,000 JOBS INTO SILICON VALLEY: 83% IN DRIVING INDUSTRY CLUSTERS
Data are provided by Dun & Bradstreet. Data consist of DUNS identified companies whose ultimate parent is headquartered outside the U.S. Employment in Silicon Valley is calculated as a share of total employment of companies with foreign ownership. No comprehensive data set tracks outsourced employment from Silicon Valley firms. A 2004 report, The Future of Bay Area Jobs published by Joint Venture: Silicon Valley, the Bay Area Economic Forum and the Stanford Project on Regions of Innovation and Entrepreneurship (SPRIE) analyzed the impact of outsourcing jobs.
REGIONAL PER CAPITA INCOME RISES OFF 2002 LOW FOR A SECOND YEAR
Data are from the U.S. Census Bureau and Economy.com. Data for Santa Clara and San Mateo counties are inflation adjusted using the annual average Consumer Price Index (CPI) of all urban consumers in the San Francisco–Oakland–San Jose region, published by the Bureau of Labor Statistics.

VALLEY PRODUCTIVITY RISES TO 2.5 TIMES NATIONAL AVERAGE
Value added is the sum of compensation paid to labor within a sector and profits accrued by firms. Value added estimates are constructed using productivity estimates at higher geographic levels (state and national) and applying them to employment and wage/income data at the metropolitan level.
With regard to temporary employees: At the industry level, value added is shared between personnel-supply companies and the companies that utilize the labor services of those contracted employees.

LOW-INCOME HOUSEHOLDS ARE LOSING GROUND FASTER THAN OTHERS
Data are from the March Supplement of the Census Bureau’s Current Population Survey (CPS). The CPS sample was determined to be generally representative of Santa Clara County by comparing variables of income, age, gender and race/ethnicity to data reported in the 1990 Census.
Household income includes both earned and unearned income for all persons living in the same household. Household income is adjusted for household size by doubling household income and dividing it by the square root of the number of household residents. All incomes are adjusted for inflation using the San Francisco–Oakland–San Jose CPI.

DISPARITIES EXIST IN HEALTH INSURANCE COVERAGE BY INCOME AND ETHNICITY
All data on insurance coverage are drawn from the 2001 California Health Interview Survey, located at www.chis.ucla.edu. Data are for San Mateo and Santa Clara counties. This indicator measures the share of people who answered “yes,” when asked by an interviewer whether or not they were covered by health insurance. This gives no indication of the quality or comprehensiveness of insurance coverage.

MANY MORE REGISTERED NURSING JOBS AVAILABLE THAN ARE FILLED
County occupational projections are provided by the CA Employment Development Department, Labor Market Information Division. Projections were made in the spring of 2003. Occupational projections represent aggregate data for Santa Clara and San Mateo counties. Six Silicon Valley colleges accredited by the Board of Registered Nursing train RNs. The supply of qualified registered nurses is the number of Silicon Valley prelicensure examinees who pass the NCLEX examination. This number is derived from the California Board of Registered Nursing (BRN). Data is available at the following Website, http://www.rn.ca.gov/schools/passrates.htm.

JOBS IN SILICON VALLEY’S LARGEST INDUSTRY CLUSTERS ARE CONCENTRATED IN DESIGN OCCUPATIONS
Data are provided by the California Employment Development Department and consist of the SOC-based occupational breakdown of employment within specific NAICS-based industry clusters. Design occupations include managerial, engineering services, specialized design and management/technical consulting, scientific research and creative occupations. The sum of these occupations is shown as a percentage of all employment in the industry cluster. Please see Appendix B for industry cluster definitions.

SOUTH BAY MERCURY LEVELS EXCEED REGULATORY GUIDELINES
Data are provided by the San Francisco Estuary Institute’s Regional Monitoring Program and show annual monitoring results from 2002. Regulatory guidelines for mercury are the Life Basin Plan objective of 0.025 g/L, which applies to the samples north of the Dumbarton Bridge and the EPA’s California Toxics Rule for Human Health criterion of 0.051 g/L, which applies to the Lower South Bay region.

TOTAL ELECTRICITY USE DECLINES, BUT PER CAPITA AND PER EMPLOYEE USE RISES
Data are provided by the California Energy Commission. Electricity is measured for Santa Clara and San Mateo counties. Population and employment figures are supplied by Economy.com.

PERMANENTLY PROTECTED OPEN SPACE HAS GROWN FROM 22% TO 26% OF THE REGION SINCE 1998
Data are from GreenInfo Network and are for Santa Clara, San Mateo and Santa Cruz counties and for all of Alameda County excluding the cities of Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont. Data include lands owned by the public and lands that are protected as open space solely through local General Plans and zoning regulations. Parcels of open-space land less than five acres are not included. “Publicly accessible open space” is defined as lands that are open to the public with no special permit required.
CITIES PUSH LAND-USE EFFICIENCY TO NEW HIGH
Land-use data for cities in Silicon Valley were provided by city planning and housing departments as well as city managers. Data were compiled and analyzed by Joint Venture and Collaborative Economics. Participating cities include Campbell, Cupertino, Foster City, Fremont, Gilroy, Hillsborough, Los Altos, Los Altos Hills, Los Gatos, Menlo Park, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Newark, Palo Alto, Portola Valley, Redwood City, San Carlos, San Jose, San Mateo, Santa Clara, Saratoga, Scotts Valley, Sunnyvale, Union City and Woodside. Unincorporated Santa Clara County and San Mateo County are also included. Data are for fiscal year 2004 (July 2003–June 2004). Data on urban service area were provided by California Department of Conservation, Farmland Mapping and Monitoring Program.

Average units per acre for existing residential development was calculated for Santa Clara County by dividing the total housing units by the total acres of residential development. The Association of Bay Area Governments and the California Department of Finance provide data.

NEWLY APPROVED NONRESIDENTIAL SPACE TripLES, SHARE NEAR TRANSIT HITS NEW HIGH
Joint Venture conducted a land-use survey of all cities within Silicon Valley. Collaborative Economics completed survey compilation and analysis. Affordable units are those units that are affordable for a four-person family earning up to 80% of the median income for a county. Cities use the U.S. Department of Housing and Urban Development’s (HUD’s) estimates of median income to calculate the number of units affordable to low-income households in their jurisdiction.

PEAK HOUR TRAFFIC DELAY DECLINES 12% FROM 2000 HIGH
Data are from the Texas Transportation Institute’s “2004 Urban Mobility Study” for Santa Clara County. Delays are determined by the difference between the actual Free-flow speeds and the optimal threshold speeds (60 mph on freeways and 35 mph on principal arterials). Peak period travelers are those who begin a trip during the peak period (6 a.m. and 4 to 7 p.m.).

NEW HOUSING APPROVALS RISE, BUT PERCENTAGE AFFORDABLE DROPS EVEN LOWER
Joint Venture conducted a land-use survey of all cities within Silicon Valley. Collaborative Economics completed survey compilation and analysis. See previous indicator. The number of new jobs near transit is a calculation that assumes different rates of job creation per square foot of new commercial, R&D, office and light industrial space located near transit. The number of new housing units within one-quarter mile of transit is reported directly for each of the cities participating in the survey. Places within one-quarter mile of transit are considered “walkable” (i.e. within a 5- to 10-minute walk, for the average person).

Data on the efficacy of Transit Oriented Development are from the California Department of Transportation (http://transorientateddevelopment.dot.ca.gov).

HOUSING AND RENTAL AFFORDABILITY DECLINES
Apartment data are from RealFacts survey of all apartment complexes in Santa Clara County of 40 or more units. Rates are the prices charged to new residents when apartments turn over and are adjusted for inflation. The 2002 estimate is based on third-quarter numbers. Homeownership rates are from the U.S. Census Bureau.

PRE-SCHOOL EDUCATION PREPARES STUDENTS FOR KINDERGARTEN
Data are preliminary and are provided by the Santa Clara County Partnership for School Readiness. Santa Clara County Partnership for School Readiness is led by the United Way Silicon Valley and American Leadership Forum Silicon Valley. Significant financial and staffing contributions for the School Readiness Assessment came from 17 members including The John L. and James S. Knight Foundation, The Morgan Family Foundation, United Way Silicon Valley, Bella Vista Foundation, Kids in Common, FIRST 5, The David and Lucile Packard Foundation and West Ed. The School Readiness Assessment methodology leveraged a model developed by the Peninsula Partnership for Children, Youth and Families in San Mateo County. In the preschool comparison chart, the analysis is based on 395 observed children with complete child and parent data (weighted N). To isolate the effects of preschool, the means have been adjusted for English learner-status, special-needs status, gender, parental education level, English as the primary household language, family income, number of times parents read to their children each week, child age, school API scores and the number of days between start of school and kindergartener-teacher observation date.

THIRD-GRADE READING SCORES IMPROVE, BUT DISPARITIES PERSIST
Data are from the California Department of Education, CAT/6 research files and are compiled specifically for the Silicon Valley region. In 2003, the California Achievement Test CAT/6 replaced the Stanford Achievement Test, ninth edition (SAT/9), as the national norm-referenced test for California public schools. CAT/6 is a norm-referenced test; students’ scores are compared to national norms and do not reflect absolute achievement in reading. English learners are students reporting a primary language other than English on the state-approved “Home Language Survey.” They also do not meet the English language skills on the state-approved oral language assessment procedure (listening, comprehension, speaking, reading and writing) needed to succeed in the schools’ regular instruction program.
SHARE ENROLLED IN INTERMEDIATE ALGEBRA RISES FOR THIRD YEAR; HISPANIC STUDENTS MAKE LARGE GAINS
Data are from the California Department of Education, for public schools in Silicon Valley. Data are the share of 10th- and 11th-grade students enrolled in Intermediate Algebra.

GRADUATION RATES AND SHARE OF STUDENTS MEETING UC/CSU ENTRANCE REQUIREMENTS INCREASE
Graduation rates are the number of graduates divided by ninth-grade enrollment four years prior. Rates of UC/CSU completion are the number of graduates meeting UC/CSU coursework requirements divided by ninth-grade enrollment four years prior. Data for the 2003–04 school year were provided by Silicon Valley school districts and were compiled by Collaborative Economics. 2003–04 data are preliminary and are not finalized until February of the following year.

TRANSIT RIDERSHIP AND AVAILABLE TRANSIT SERVICE CONTINUE TO DECLINE
Data are the sum of annual ridership on the light rail and bus systems in Santa Clara and San Mateo counties and rides on Caltrain. Data are provided by Sam Trans, Valley Transportation Authority, Altamont Commuter Express and Caltrain. Population estimates were obtained from Economy.com.

CHILD-IMMUNIZATION RATE CONTINUES TO RISE; DIABETES INCIDENCE IS HIGHER AMONG LOWER-INCOME HOUSEHOLDS
Data on low-birth-weight infants are from the California Department of Health Services, Vital Statistics Data Tables: www.dhs.ca.gov/hisp/ohrr/vssdata/tables.htm for San Mateo and Santa Clara counties. Data on child immunizations are from the Centers for Disease Control for Santa Clara County. Children immunized with the 4:3:1 series immunizations between the ages of 18 and 35 months are included in the results.

CRIME RATES ARE WELL BELOW STATE AVERAGE, BUT JUVENILE FELONY ARRESTS AND CHILD ABUSE INCREASE
Violent crime data are from the FBI's Uniform Crime Reports, as reported by the California Department of justice in its annual "Criminal Justice Profiles" (http://caag.state.ca.us/cjic/pubs.htm). Violent offenses include homicide, forcible rape, assault and kidnapping. Child maltreatment data are from the Child Welfare Services 2003 Quarter 4 Extract, downloaded from the Center for Social Services Research at the University of California, Berkeley. Population data come from Claritas Inc. population projections based on the 2000 U.S. Census.

FEWER ARTS ORGANIZATIONS HAVE MORE ASSETS THAN LIABILITIES
The 15 regional arts and cultural organizations with the largest budgets were identified by the Silicon Valley Arts Council and surveyed by Collaborative Economics. The survey respondents were American Musical Theater, Arts Council Silicon Valley, Children’s Discovery Museum, Children’s Musical Theater San Jose, Community School of Music & Arts, Cultural Initiatives Silicon Valley, Montalvo Center for the Arts, Opera San Jose, San Jose Repertory Theatre, Tech Museum of Innovation, Theatreworks and the Triton Museum of Art.

82% OF ELIGIBLE RESIDENTS ARE NOW REGISTERED TO VOTE, MUCH HIGHER THAN JUST 6 YEARS AGO
Data are from the California Secretary of State, Elections and Voter Information Division. The eligible population is determined by the Secretary of State using Census population data provided by the California Department of Finance.

SILICON VALLEY FOUNDATIONS COLLABORATE WITH GOVERNMENT AGENCIES TO PURCHASE 16,500-ACRE BAY WETLANDS PARCEL: SET STAGE FOR LARGEST WETLANDS RESTORATION PROJECT IN STATE’S HISTORY
Information for this indicator was compiled by Collaborative Economics with a special assistance and review by the office of U.S. senator Diane Feinstein, the Resources Law Group, the Hewlett, Moore and Packard Foundations.

LOCAL GOVERNMENTS LOSE 20% OF REVENUES, RELYING ON MOST VOLATILE REVENUE SOURCES
Data are from the State of California Cities Annual Report, Fiscal Years 1987–88 to 2001–02. Data include all cities and towns and dependent special districts and do not include redevelopment agencies and independent special districts. Data include all revenue sources to cities except for utility-based services (which are self-supporting from fees and the sale of bonds), voter-approved indebtedness property tax and sales of bonds and notes. The “other taxes” and “other revenue” include revenue sources such as sales and use tax, transportation taxes, transient lodging taxes, business license fees, other nonproperty taxes and franchise taxes.
Appendix B: Definitions

**INDUSTRY CLUSTERS**

**Computer and Communications Hardware Manufacturing**

- 334111* Electronic Computer Manufacturing
- 334112 Computer Storage Device Manufacturing
- 334113 Computer Terminal Manufacturing
- 334119 Other Computer Peripheral Equipment Manufacturing
- 334210 Telephone Apparatus Manufacturing
- 334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
- 334290 Other Communications Equipment Manufacturing
- 334511 Search, Detection, Navigation, Guidance, Aeronautical and Nautical System and Instrument Manufacturing
- 334613 Magnetic and Optical Recording Media Manufacturing

**Semiconductor and Semiconductor Equipment Manufacturing**

- 333295 Semiconductor Machinery Manufacturing
- 333314 Optical Instruments and Lens Manufacturing
- 334413 Semiconductor and Related Device Manufacturing
- 334513 Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
- 334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
- 334519 Other Measuring and Controlling Device Manufacturing

**Electronic Component Manufacturing**

- 334411 Electron Tube Manufacturing
- 334412 Bare Printed Circuit Board Manufacturing
- 334415 Electronic Resistor Manufacturing
- 334416 Electronic Coil, Transformer and Other Inductor Manufacturing
- 334417 Electronic Connector Manufacturing
- 334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing
- 334419 Other Electronic Component Manufacturing
- 3359 Other Electrical Equipment and Component Manufacturing

**Software**

- 334611 Software Reproducing
- 511210 Software Publishers
- 518 Internet Service Providers, Websearch Portals and Data Processing Services
- 541511 Custom Computer Programming Services
- 541512 Computer Systems Design Services
- 541519 Other Computer-Related Services

**Biomedical**

- 325411 Medicinal and Botanical Preparation Manufacturing
- 325412 Pharmaceutical Preparation Manufacturing
- 325413 In-Vitro Diagnostic Substance Manufacturing
- 325414 Biological Product (except Diagnostic) Manufacturing
- 334510 Electromedical and Electrotherapeutic Apparatus Manufacturing
- 334516 Analytical Laboratory Instrument Manufacturing
- 334517 Irradiation Apparatus Manufacturing
- 339111 Laboratory Apparatus and Furniture Manufacturing
- 339112 Surgical and Medical Instrument Manufacturing
- 339113 Surgical Appliance and Supplies Manufacturing
- 339114 Dental Equipment and Supplies Manufacturing
- 541710 Research and Development in the Physical, Engineering and Life Sciences (50%)

**Creative Services**

- 54131 Architectural Services
- 54132 Landscape Architecture Services
- 54134 Drafting Services
- 541410 Interior Design Services
- 541420 Industrial Design Services
- 541430 Graphic Design Services
- 541490 Other Specialized Design Services
- 541613 Marketing Consulting Services
- 5418 Advertising and Related Services
- 54191 Marketing Research and Public Opinion Polling
- 54192 Photographic Services
- 7111 Performing Arts Companies
- 711510 Independent Artists, Writers and Performers

**Corporate Offices**

- 551114 Corporate, Subsidiary and Regional Managing Offices

*S*The numbers correspond to North American Industry Classification System (NAICS) codes.
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