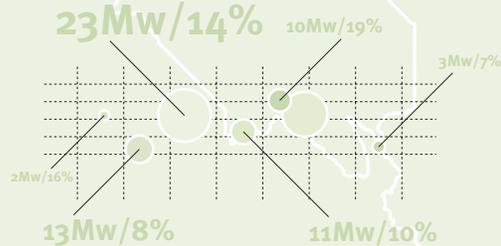
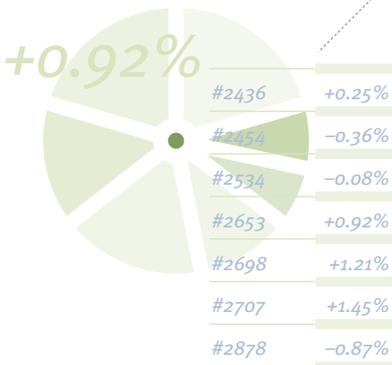
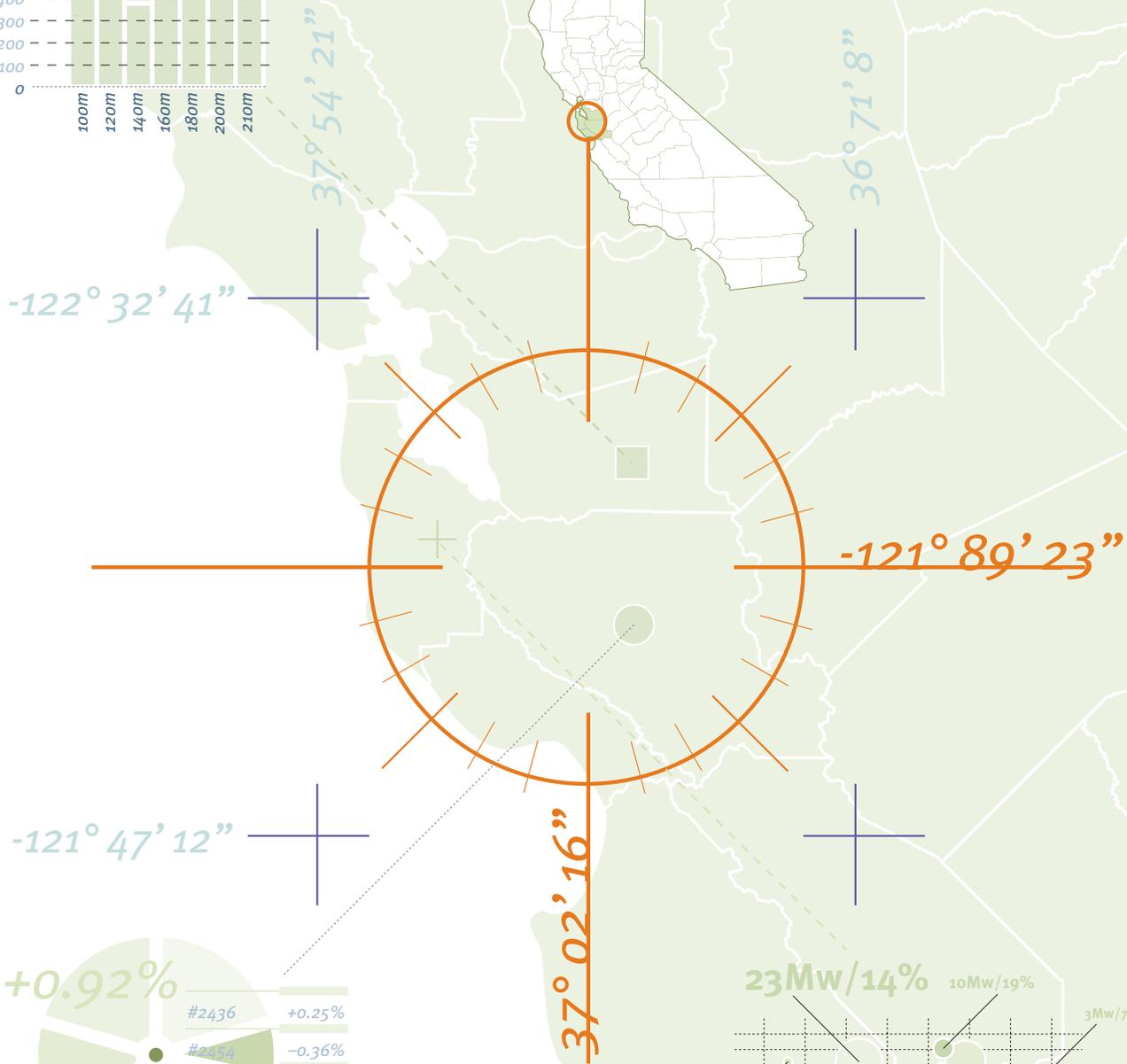
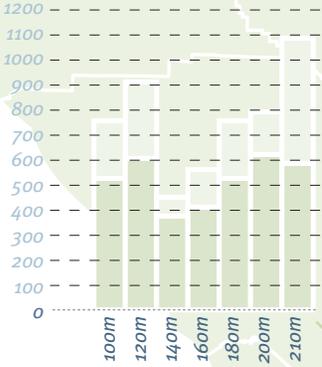


i n d e x

OF

SILICON VALLEY

2009



GOVERNANCE

PLACE

SOCIETY

ECONOMY

PEOPLE

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ABOUT THE 2009 SILICON VALLEY INDEX

Dear Friends:

The year past was one of dramatic change for our region.

Twelve months ago Silicon Valley was experiencing above-average growth rates and we were still somewhat insulated from the financial crises taking hold on the nation. This is no longer the case. Since November we have seen a steep spike in job losses and a sharp rise in commercial vacancies. The pace of these losses is increasing.

Over the years, the *Index* has documented the way Silicon Valley has weathered many similar downturns. In the 1980s, we faced down stiff global challenges in our mainstay, the semiconductor industry. In the 1990s, we coped with major downsizing in the defense sector. In the early stages of this decade, we dealt with the dot-com bust and some severe external shocks. Each time Silicon Valley retrenched, restructured and rebounded.

Today we're racked by the collapse of our nation's financial institutions, a meltdown in the housing markets and a global climate crisis, *and yet here too we may already be seeing the seeds of a Valley comeback*. It is being driven by our newly emerging "green" economy and the pages here show investment in clean technology growing 94 percent since 2007. Jobs in this sector grew 23% since 2005. We document how we've become a magnet for green innovation and a new epicenter for solar technology. We see these as hopeful trends, and not merely because they chart a path out of recession; they also show the nation a path to a new energy future.

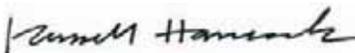
Capitalizing on the opportunity requires some fundamental restructuring, particularly with respect to our region's workforce. The growth sectors have functional characteristics that require training and re-tooling, and transitioning our present workforce out of the old and into the new is far from automatic. More than ever, we need effective institutions helping the Valley's workers upgrade their skills and shift occupations.

In response to these changes—and to seize upon our opportunities—this year's *State of the Valley* conference features the release of three complementary reports:

- The *Index*, expanded this year to include all of San Mateo County, continues to track overall trends in the economy and community.
- A separate "Special Analysis" provides a more in-depth look at the impact of economic restructuring on workforce transitions.
- Additionally, Joint Venture is providing a "Greenprint" outlining the region's opportunities in the green economy and proposing a game plan for the coming decade.

Our two organizations are proud to provide a careful accounting of where Silicon Valley stands, and to do it on an annual basis. Regions that want to thrive first of all need a means to assess themselves, and we're glad to provide it.

Sincerely,



Russell Hancock, Ph.D.
President & Chief Executive Officer
Joint Venture: Silicon Valley Network



Emmett D. Carson, Ph.D.
CEO & President
Silicon Valley Community Foundation

THE SILICON VALLEY REGION

Area: 1,854 square miles

Population: 2.52 million

Jobs: 1,412,372

Average Annual Earnings: \$79,116

Foreign Immigration: +22,513

Domestic Migration: -4,745

Adult educational attainment:

14% Less than High School

18% High School Graduate

24% Some College

26% Bachelor's Degree

18% Graduate or Professional Degree

Age distribution:

13% 0-9 years old

13% 10-19

36% 20-44

26% 45-64

11% 65 and older

Ethnic composition:

40% White, non-Hispanic

28% Asian, non-Hispanic

25% Hispanic; **3%** Other

3% Black, non-Hispanic

<1% American Indian, Alaskan Native

Foreign Born: 36%

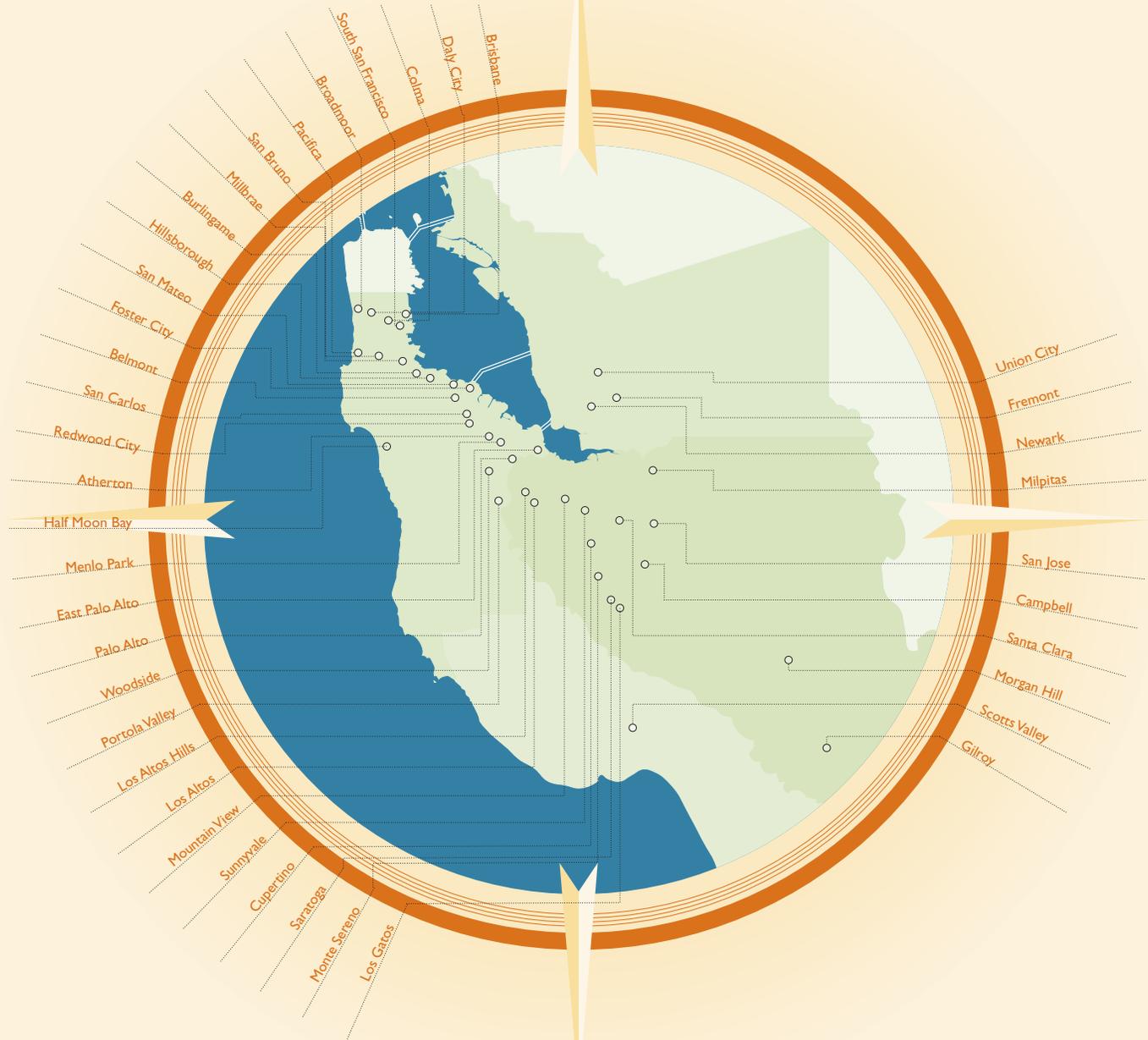
Origin:

57% Asia

32% Americas

9% Europe;

1% Oceania; **1%** Africa



The geographical boundaries of Silicon Valley vary. The region's core has been defined as Santa Clara County plus adjacent parts of San Mateo, Alameda and Santa Cruz counties. In order to reflect the geographic expansion of the region's driving industries and employment, the *2009 Index* includes all of San Mateo County. Silicon Valley is defined as the following cities:

Santa Clara County (all)

Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale

Alameda County

Fremont, Newark, Union City

San Mateo County (all)

Atherton, Belmont, Brisbane, Broadmoor, Burlingame, Colma, Daly City, East Palo Alto, Foster City, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Pacifica, Portola Valley, Redwood City, San Bruno, San Carlos, San Mateo, South San Francisco, Woodside

Santa Cruz County

Scotts Valley

TABLE OF CONTENTS

2009 INDEX HIGHLIGHTS	4
INDEX AT A GLANCE	6

PEOPLE

Silicon Valley's population growth is driven by foreign immigration, and nearly half of adult residents have at least a four-year university degree.

Talent Flows and Diversity	8
----------------------------	---

ECONOMY

By the end of 2008, the region began revealing job losses and investment slowdown. However, bright spots exist in the growth in cleantech investment and in green jobs in the region.

Employment	12
------------	----

Income	16
--------	----

Innovation	18
------------	----

SOCIETY

Challenges persist especially in the areas of education and health where disparities by race/ethnicity continue.

Preparing for Economic Success	26
--------------------------------	----

Early Education	28
-----------------	----

Arts and Culture	30
------------------	----

Quality of Health	32
-------------------	----

Safety	36
--------	----

PLACE

As a result of choices residents and local policymakers are making, progress is being made on many fronts in the region in reducing negative environmental impacts.

Environment	38
-------------	----

Transportation	42
----------------	----

Land Use	44
----------	----

Housing	46
---------	----

Commercial Space	50
------------------	----

GOVERNANCE

While Silicon Valley's residents are engaging in the political process at record levels, our cities are facing mounting fiscal challenges.

Civic Engagement	52
------------------	----

Revenue	54
---------	----

APPENDICES	56
------------	----

ACKNOWLEDGMENTS	61
-----------------	----

2009 INDEX HIGHLIGHTS

Until the last quarter of 2008, Silicon Valley seemed to be weathering the global financial crisis and economic recession better than the nation. This is no longer the case. Since November we have witnessed a spike in job losses and a significant drop in the commercial property markets.

- While the U.S. economy has been in recession since December 2007, total Silicon Valley jobs held relatively steady through October 2008. However, December 2008 reported net job losses of 1.3% over the previous year compared to drops of 1.7% statewide and 2% nationally.
- After slowing since the end of 2007, demand for commercial space dropped precipitously in the last quarter of 2008, and vacancies shot up across all property types.

While the impact of the current economic slowdown is now emerging, some of the region's core competitiveness measures remain relatively strong and new strengths are coming to the fore.

- Silicon Valley is at the epicenter of the development of clean technology and new related business models. Just since 2005, the number of jobs in businesses providing green products and services increased 23%.
- In the first half of 2008, growth was reported in some of Silicon Valley's key industries. Employment in Information Products and Services grew more than 4% from Q2 2007 to Q2 2008 (the latest figures available). Life sciences also grew more than 3% during this period.
- While venture capital investment is down for the first time since 2005 in the region and nationally, the Valley maintained its 29% national share of venture capital in 2008.
- While total patents slowed slightly, the Valley actually increased its contributing share of California and U.S. patents.
- Silicon Valley's per capita income stalled for the first time since 2003 along with statewide and national incomes. However, Silicon Valley incomes have grown much faster (14%) than the national average (9%) over the past five years.

Silicon Valley continued to increase its investment in key areas of innovation despite global financial turmoil.

- Even though total venture capital investment is down 7.7%, investment in clean technology increased 94% in the region between 2007 and 2008, reaching almost \$1.9 billion. Silicon Valley now accounts for 31% of total U.S. cleantech VC investment.
- IT services, media and entertainment, biotechnology, telecommunications, and medical devices and equipment—all attracted more venture capital investment in 2008 than in 2007.

A cautionary note is called for on two fronts concerning our region's competitiveness: stalling productivity and lagging residential access to high-speed internet.

- For the first time since 2001, value added per employee stalled in 2008 shaving off a half percentage point from the previous year. On par with levels in 2000, regional productivity continues to exceed the U.S. but now equals the statewide average.
- Only six percent of households have access to very high-speed broadband internet services exceeding 10 Mbps while all other California metro areas have far greater access: Los Angeles (95%), San Diego (91%), Inland Empire (78%), and Sacramento (52%).

The national mortgage crisis has hit the Valley particularly hard.

- Home foreclosure sales went up faster in Silicon Valley than California as a whole in 2008.
- While home prices in Silicon Valley have dropped less than in other major regions of California, falling prices have reduced the net worth of many households.
- Housing affordability improved somewhat for first-time homebuyers in 2008, but it improved more in other California regions because of sharper price decreases. This meant that Silicon Valley became the least affordable region for housing in California.

Our youth are moving in two directions.

- Some are doing better. Immunization rates are at an all-time high. Of eighth-graders enrolled in algebra, 78% scored as advanced on the statewide Algebra II test.
- Some are doing worse. The teen birth rate rose substantially for the first time in more than a decade. The rate of child abuse increased for the fourth year in a row during a time when California's rate has been in decline.

We are sustaining a long-term commitment to improving our natural and built environments—but also a pattern of underinvestment in arts and culture.

- On a range of indicators—from waste diversion to water use efficiency and to protected open space—Silicon Valley has continued to make steady gains over time.
- We are growing more efficiently. We have sustained a density of about 20 units per acre for newly-approved housing since 2005—a level twice that of 2003, and three times that of a decade ago. We have experienced a significant increase in the percentage of newly-approved housing near transit from 40% in 2006 to 69% in 2008.
- Our contributions to art and cultural organizations as a proportion of our region's income ranks far below that of leading U.S. metropolitan areas—and only about half the average of the top twenty metropolitan areas by population.

We are making tangible progress in changing our travel patterns to less-polluting means.

- As a whole, Silicon Valley residents have been driving fewer miles since 2001. Our total fossil fuel consumption per capita has dropped 10% since 2000, compared to just 1% for California. The number of newly registered gasoline-powered vehicles in Silicon Valley has dropped by a quarter since the beginning of the decade.
- Silicon Valley commuters are using more alternatives to driving alone. In 2007, 75% of commuters drove alone, down from 78% four years before. In 2008, transit ridership in Silicon Valley reached a five-year high.
- We are at the forefront of alternative fuel vehicles. Silicon Valley now accounts for 15% of newly registered hybrids, 10% of electric, and 5% of natural gas vehicles in California.

THE 2009 INDEX

AT A GLANCE

WHAT IS THE INDEX?

The Silicon Valley Index has been telling the Silicon Valley story since 1995. Released early every year, the indicators measure the strength of our economy and the health of our community—highlighting challenges and providing an analytical foundation for leadership and decision making.

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.

Appendix A provides detail on data sources for each indicator

PEOPLE

Silicon Valley's population growth is driven by foreign immigration. Nearly half of adult residents have at least a four-year university degree.

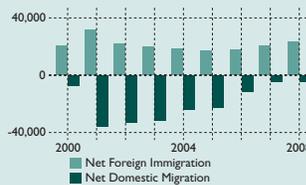
Net Population Change



Percent Change between 2007 and 2008:

Silicon Valley **+1.6%** ↑
California **+1.2%** ↑

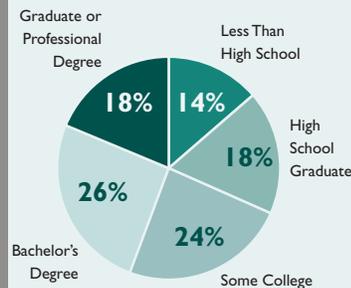
Net Migration Flows



Population Change between 2007 and 2008

Net Foreign Immigration **+9%** ↑
Net Domestic Migration **-9%** ↓

Educational Attainment



ECONOMY

By the end of 2008, the region began revealing job losses and investment slowdown. However, bright spots exist in the growth in cleantech investment and in green jobs in the region.

Change in Jobs Relative to December 2007

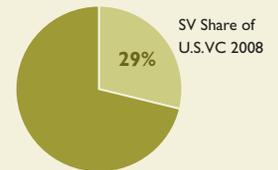


Green Business Establishments & Jobs



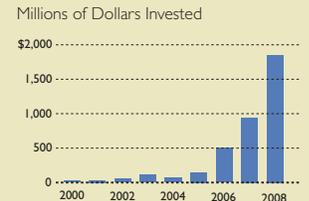
Green Growth 95-07 05-07
Jobs **88%** **23%**
Establishments **29%** **8%**

Venture Capital Investment



2007-2008
Silicon Valley **-7.7%** ↓
U.S. **-11.4%** ↓

VC Investment in Clean Technology



2007-2008
Silicon Valley **+94%** ↑
Rest of CA **+63%** ↑
U.S. **+52%** ↑

SOCIETY

Challenges persist in the region especially in the areas of education and health where disparities by race/ethnicity continue.

Drop-out rate in Silicon Valley was **12%** for the school year 2006-2007

Preschool Enrollment

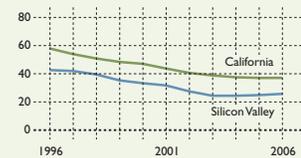


2006-2007

Enrollment **-14%** ↓

Teen Birth Rate

Per 1,000 Females Age 15-19



2005-2006

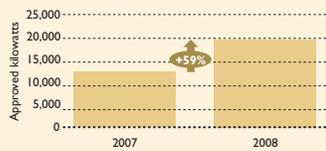
Silicon Valley **+5%** ↑
California **+2%** ↑

PLACE

As a result of the choices residents and local policymakers are making in the region, progress is being made on many fronts in reducing negative environmental impacts.

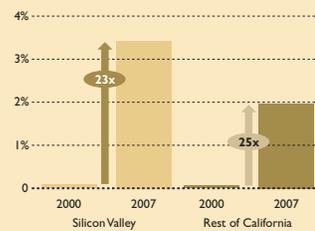
Solar Installations

Capacity (kw) added through the California Solar Initiative - Silicon Valley



Alternative Fuel Vehicles

as a Percentage of Total Newly Registered Vehicles



Newly Approved Residential Development

1998: **7** Units per Acre
2008: **20** Units per Acre

GOVERNANCE

While Silicon Valley's residents are engaging in the political process at record levels, our cities are facing mounting fiscal challenges.

Record Voter Turn-Out 2004-2008:

Silicon Valley **+10%** ↑
California **+7%** ↑

Change in City Revenue

Fiscal Year 04-05 to 05-06:

Property Taxes **+8%** ↑
Sales Taxes **+2%** ↑

2004-2008

Pension Obligations **+166%** ↑
City Revenue **+21%** ↑

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices | 56 | 60
Acknowledgments | 61

Talent Flows and Diversity

Driven primarily by immigration, Silicon Valley's population continues to grow at a faster rate than California's.

WHY IS THIS IMPORTANT?

Silicon Valley's most important asset is its people. They drive the economy and shape the quality of life of the region. The educational attainment of a region and the continued attraction of young talent are vital to a region's economic success.

The region has benefited significantly from the entrepreneurial spirit of people drawn to Silicon Valley from around the country and around the world. In particular, immigrant entrepreneurs have contributed considerably to innovation and job creation in the region.¹ A region that can draw talent from other parts of the country and other regions of the world vastly improves its potential for closer integration with other innovative regions and thereby bolsters its global competitiveness.

The distribution of population across the region, as measured by average household size, can reveal how the demand for public services varies among Silicon Valley's cities.

HOW ARE WE DOING?

With a net increase of 41,166 people, Silicon Valley's population grew 1.6% in 2008, and continued to surpass the state's growth rate of 1.2%. Net migration increased by 17% between 2007 and 2008, an increase of 17,768 people. The region's population growth is being driven by foreign immigration, which witnessed a net increase of 27% in 2008.

Silicon Valley's population has proportionally more people of working age without children. Compared to California and the U.S., Silicon Valley's population consists of fewer children and more people between 25 and 64 years of age. Almost double the rate for the U.S., 18% of Silicon Valley's population has a graduate or professional degree, and 44% have at least a bachelor's degree.

Producing top science and engineering talent is critical for an innovative region. The total number of degrees in science and engineering (S&E) conferred in the area dropped by five percent; however, contributing to the region's global connections, 17.6% of S&E degrees were conferred to foreign students in 2006. This continues an upward trend and remains higher than in the rest of California and the nation.

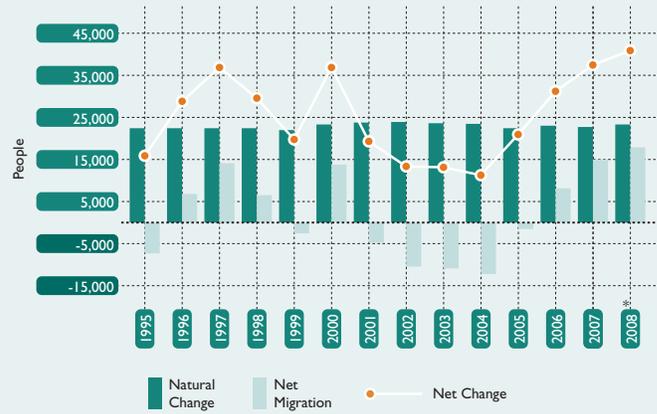
Household size varies considerably across the region, and this means that some cities are faced with higher demand for public services than others. As of 2008, the largest households are concentrated in East Palo Alto with 4.3 people per household, and Union City with 3.6. With an average of 2.2 people per household, Brisbane has the smallest households. Silicon Valley's typical household consists of 2.5 to 3 people.

¹ Anna Lee Saxenian. 2002. Local and Global Networks of Immigrant Professionals in Silicon Valley. San Francisco: Public Policy Institute of California. See also, S. Anderson & M. Platzer. 2006. "American Made: The Impact of Immigrant Entrepreneurs and Professionals on U.S. Competitiveness." National Venture Capital Association.

PEOPLE

Population Change

Components of Population Change
Santa Clara and San Mateo Counties



* Provisional population estimates for 2008
Data Source: California Department of Finance

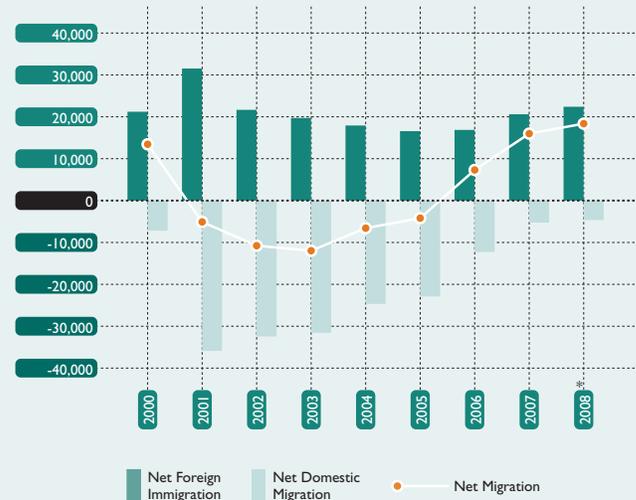
Analysis: Collaborative Economics

Population Growth

	2007	2008	% Change
Silicon Valley	2,547,842	2,589,008	+1.6%
California	37,712,588	38,148,493	+1.2%

Net Migration Flows

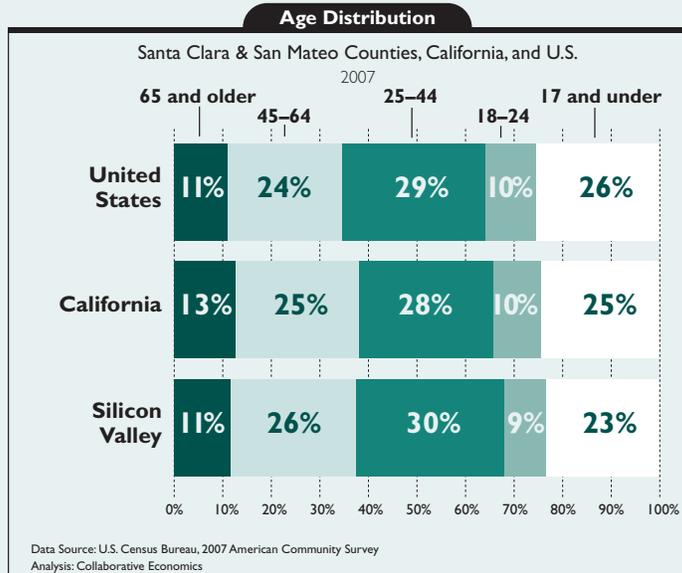
Foreign and Domestic Migration
Santa Clara and San Mateo Counties



* Provisional population estimates for 2008
Data Source: California Department of Finance
Analysis: Collaborative Economics

Net Migration Silicon Valley 2007-2008

Domestic	- 4,745
Foreign	+ 22,513



- About the 2009 Index | 01
- Map of Silicon Valley | 02
- Table of Contents | 03
- 2009 Index Highlights | 04 | 05
- Index at a Glance | 06 | 07

Talent Flows and Diversity
8 - 11

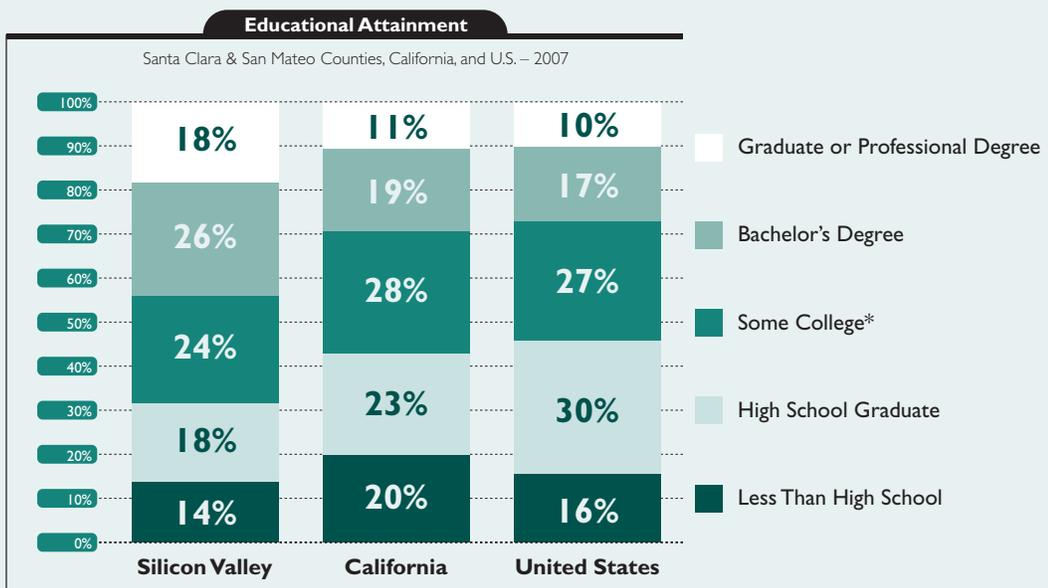
ECONOMY 12 | 25

SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

- Appendices | 56 | 60
- Acknowledgments | 61



* Some College includes: Less than 1 year of college; Some college, 1 or more years, no degree; Associates degree; Professional certification
Data Source: U.S. Census Bureau, 2007 American Community Survey
Analysis: Collaborative Economics

	Silicon Valley	California	U.S.
Some college or more	68%	57%	54%
Bachelor's Degree or higher	44%	30%	27%

Total Science & Engineering Degrees Conferred

Universities in and near Silicon Valley



Note: Data for 1999 and 2002 not available
 Data Source: National Center for Educational Statistics, IPEDS
 Analysis: Collaborative Economics

Foreign Students

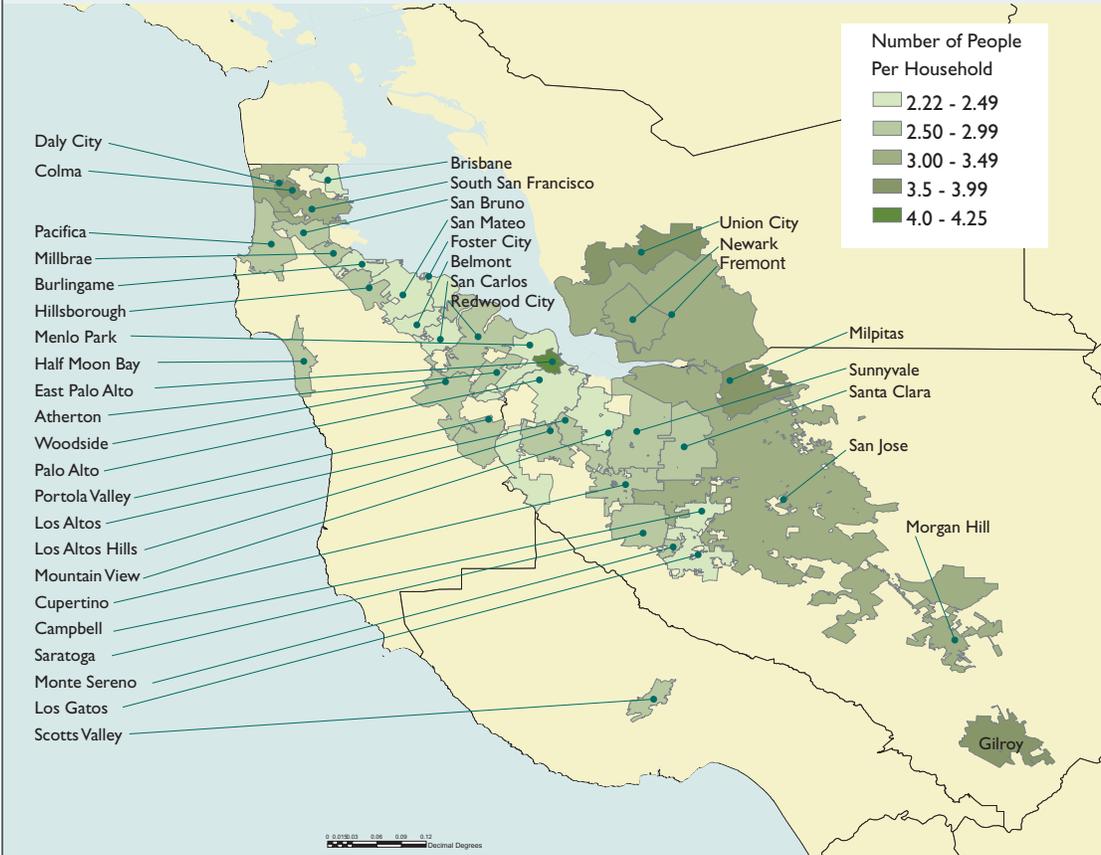
Percentage of Degrees in Engineering and Sciences
 Conferred to Temporary Nonpermanent Residents
 Silicon Valley, California, U.S.



Note: Data for 1999 and 2002 not available
 Data Source: National Center for Education Statistics, IPEDS
 Analysis: Collaborative Economics

Household Size: Number of People per Household

Silicon Valley Cities
2008



Data Source: California Department of Finance
Analysis: Collaborative Economics

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

Talent Flows and Diversity
8 - 11

PEOPLE

ECONOMY 12 | 25

SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
 Acknowledgments | 61

Employment

Although job losses in the region took off in the last two months of 2008, Silicon Valley had been witnessing employment growth in recent years in green industries such as renewable energy generation and energy efficiency.

WHY IS THIS IMPORTANT?

Tracking job gains and losses is a basic measure of economic health. Shifts in employment across industries suggest structural changes in Silicon Valley's economic composition. Over the course of the business cycle, employment growth and decline across industries can be cyclical but the permanent changes reflect how the region's industrial mix is changing. Recent attention has been focused on the growing activities in the "green economy." While business establishment-based employment provides the broader picture of the region's economy, observing the employment and unemployment rates of the population residing in the Valley reveals the status of the immediate Silicon Valley-base workforce.

HOW ARE WE DOING?

In the recent downturn, job losses among Silicon Valley residents have been slower in coming than nationally. After holding steady until October, employment of residents in the region began to drop in November. The San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area posted a 1.3% drop in December 2008 over December of the previous year.² Over the same period, monthly employment dropped by 1.7% statewide and 2% nationally. In view of total regional employment for which there is a longer reporting lag, the region had added 18,895 jobs between the second quarter 2007 and 2008 for an increase of 1.4%.³

Silicon Valley has six major areas of economic activity: Information Products & Services, Life Sciences, Community Infrastructure, Innovation & Specialized Services, Other Manufacturing, and Business Infrastructure. Making up 57% of the region's employment, Community Infrastructure provides the foundation for the region's economy and includes health services, education, retail, transportation, government administration and other local serving industries. (See Special Analysis for detailed explanation and Appendix B.) Compared to 2007, the first half of 2008 saw employment growth in three major areas of economic activity: Information Products & Services (4%), Life Sciences (3%), and Community Infrastructure (1%).

Silicon Valley is a hot-bed for clean technology. Businesses providing products and services that improve resource conservation and reduce environmental impacts have increased in number by 29% since 1995. These businesses include producers of state-of-the-art technology for renewable energy generation and energy management as well as lower-tech recycling services. In terms of jobs, the region has seen 88% growth since 1995 and 23% just since 2005. Jobs in Energy Generation account for the largest percentage of all green jobs, and these are primarily in solar system installation.⁴ Job growth since 2005 has been strongest in Green Building (424%), Transportation (140%) and Advanced Materials (54%).

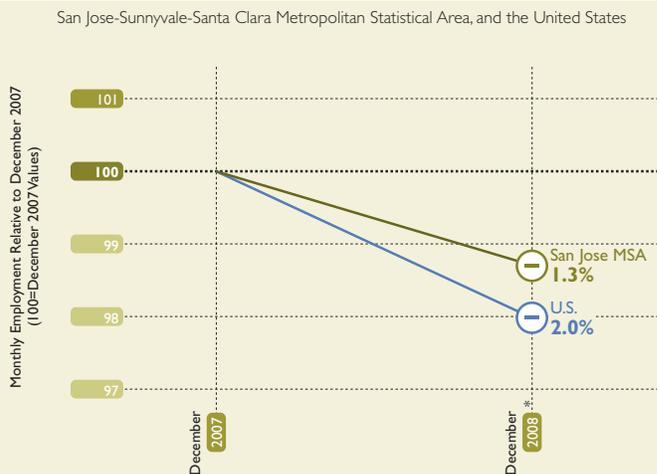
ECONO

Monthly Jobs



*Data for December 2008 is preliminary
Note: Data includes total nonfarm employment, and is not seasonally adjusted.
Data Source: U.S. Bureau of Labor Statistics, Current Employment Statistics Survey (CES)
Analysis: Collaborative Economics

Change in Total Nonfarm Jobs



*Data for December 2008 is preliminary
Note: Data includes total nonfarm employment, and is not seasonally adjusted.
Data Source: U.S. Bureau of Labor Statistics, Current Employment Statistics Survey (CES)
Analysis: Collaborative Economics

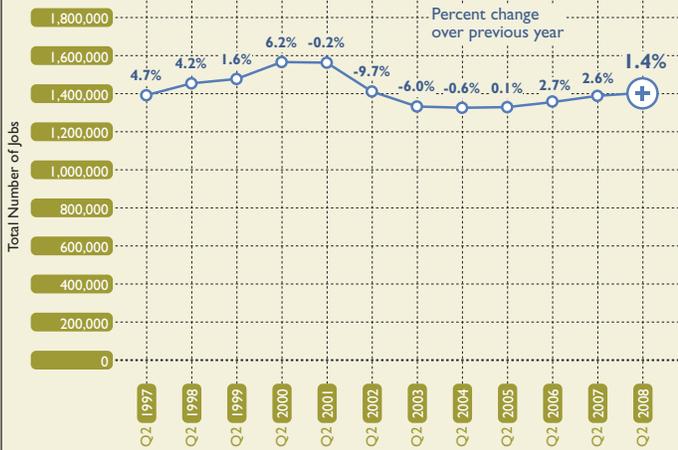
² Monthly employment figures are based on the Current Employment Statistics (CES) program survey of the U.S. Bureau of Labor Statistics.

³ Total nonfarm employment reflects employment reported by all business establishments located in the region and is based on Quarterly Census of Employment and Wages (QCEW) statistics produced by the U.S. Bureau of Labor Statistics.

⁴ It is important to note that the data on green jobs refers to positions at a business establishment and is not directly comparable to employment data that counts people who are employed (e.g. QCEW or CES).

Quarterly Job Growth

Number of Silicon Valley Jobs in Second Quarter with Percent Change over Prior Year



Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
 Analysis: Collaborative Economics

+ 24,578 jobs

between Q1 2007 and Q1 2008

+ 18,895 jobs

between Q2 2007 and Q2 2008

Percent Change in Jobs Q1 2007 – Q1 2008

Silicon Valley: +1.8%

Rest of CA: +0.2%

United States: +0.7%

- About the 2009 Index | 01
- Map of Silicon Valley | 02
- Table of Contents | 03
- 2009 Index Highlights | 04 | 05
- Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment
12 – 15

Income
16-17

Innovation
18-25

ECONOMY

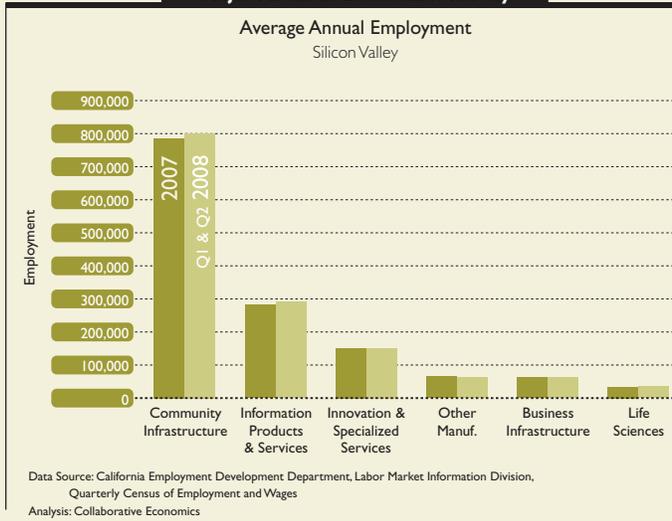
SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices | 56 | 60
 Acknowledgments | 61

Major Areas of Economic Activity



Silicon Valley Employment Growth by Major Areas of Economic Activity Percent Change Q2 2007–Q2 2008

Information Products & Services	+4.1%
Life Sciences	+3.0%
Community Infrastructure	+1.1%
Innovation & Specialized Services	-0.1%
Other Manufacturing	-1.7%
Business Infrastructure	-2.0%
TOTAL EMPLOYMENT	+1.4%

Note: Community Infrastructure includes health services, education, retail, transportation, government administration and other population-serving industries. See Appendix B for details.

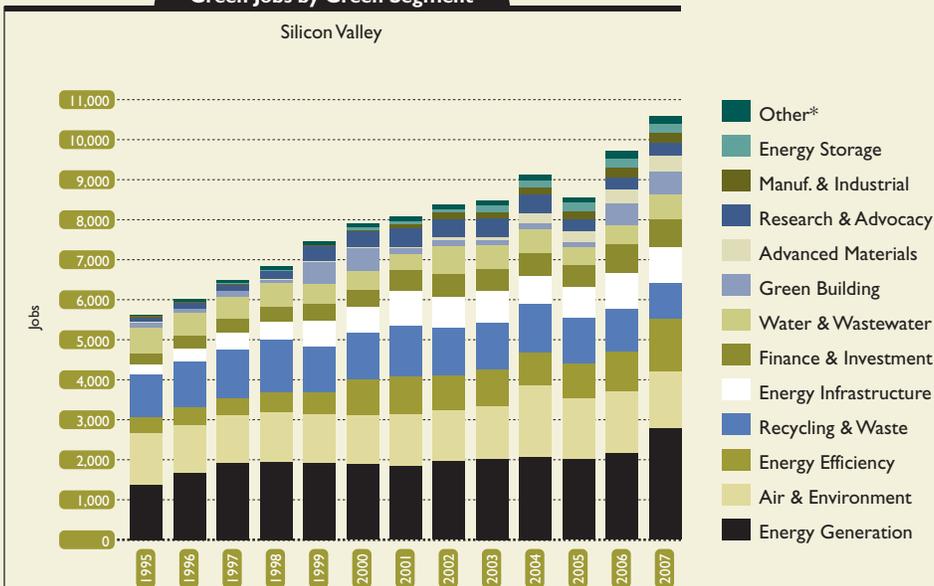
Green Business Establishments & Jobs



Green Growth 1995-2007 2005-2007

	1995-2007	2005-2007
Jobs	88%	23%
Establishments	29%	8%

Green Jobs by Green Segment



*Other includes Transportation, Agriculture and Business Services
Data Source: Green Establishment Database
Analysis: Collaborative Economics

- About the 2009 Index | 01
- Map of Silicon Valley | 02
- Table of Contents | 03
- 2009 Index Highlights | 04 | 05
- Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment 12-15

- Income 16-17
- Innovation 18-25

ECONOMY

SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

- Appendices 56 | 60
- Acknowledgments | 61

Income

Since 2003, incomes in the region have been rising at a faster rate than in the state or nation; however, for all three, income growth stalled in 2008.

WHY IS THIS IMPORTANT?

Earnings growth is as important a measure of Silicon Valley's economic vitality as job growth. A variety of income measures presented together provides an indication of regional prosperity and the distribution of prosperity.

Real per capita income rises when a region generates wealth faster than its population increases. Household income distribution tells us more about concentrations of income, and if economic gains are reaching all members of the region. The median household income is the income value at the middle of all income values.

HOW ARE WE DOING?

For the first time since 2003, Silicon Valley's per capita income slipped slightly declining 0.8%, while the national average increased very slightly (0.2%). Put in perspective, this one-year shift is overshadowed by the fact that Silicon Valley's per capita income has grown much faster (14%) than the national average (9%) over the past five years. Nonetheless, in 2008, Silicon Valley and California began to move in a different direction than the nation.

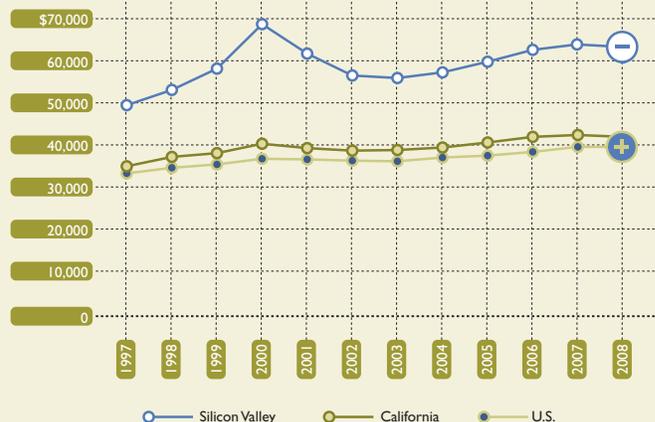
Other income figures are from 2007 and show continuing progress for Silicon Valley. Median household income rose 2% in 2007—less than California as a whole, but on par with the rest of the nation. The percentage of households earning more than \$100,000 per year continued to grow—now accounting for 42% of all households in Silicon Valley, up from 35% in 2002. Meanwhile, the proportion of households earning less than \$35,000 reached 20% - one point higher than in 2002 but continuing the decline since 2003. The proportion of households with middle incomes (\$35,000-\$99,000) contracted by two percentage points from the previous year. Since 2002 middle income households in Silicon Valley have shrunk four percent in state, while statewide and nationally, they have remained relatively stable at 44% to 46%.

Other considerations are important when assessing income gains. For example, what is the cost of living relative to income levels? Silicon Valley's cost of living is 47% higher than the nation, while its median household income is 65% higher than the median income nationally. Adding to their income, workers also earn financial benefits beyond their wages. In Silicon Valley, these contributions average about 12% of income, compared to the national average of 10%. The average employer contribution to pensions and insurance funds per employee in Silicon Valley was \$11,577 compared to \$7,149 nationally.

ECONO

Real Per Capita Income

2008 Dollars — Santa Clara & San Mateo Counties and U.S.



Note: Personal income is defined as the sum of wage and salary disbursements (including stock options), supplements to wages and salaries, proprietors' income, dividends, interest, and rent, and personal current transfer receipts, less contributions for government social insurance
Data Source: Moody's Economy.com
Analysis: Collaborative Economics

Percent Change of per Capita Income

	2003–2008	2007–2008	
Silicon Valley	13.6%	-0.8%	⊖
California	9.0%	-0.9%	⊖
United States	8.9%	0.2%	⊕

Median Household Income

Santa Clara & San Mateo Counties, California and U.S.

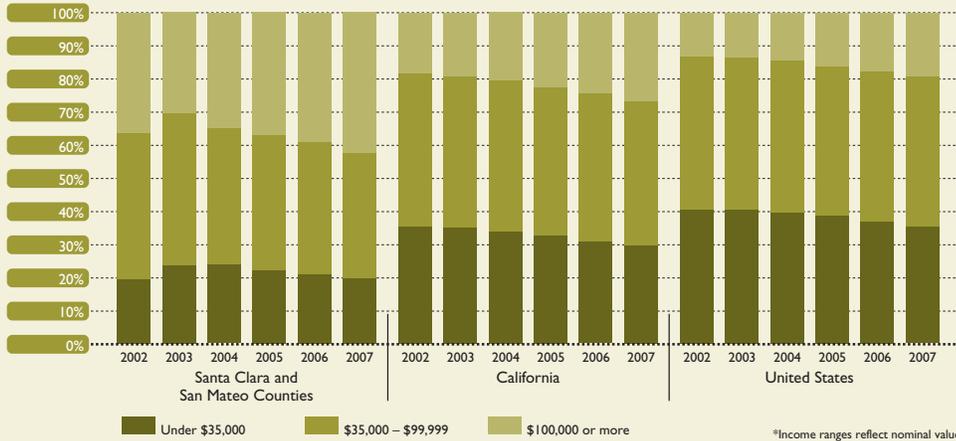


Note: Personal income is defined as the sum of wage and salary disbursements (including stock options), supplements to wages and salaries, proprietors' income, dividends, interest, and rent, and personal current transfer receipts, less contributions for government social insurance
Data Source: U.S. Census Bureau, American Community Survey
Analysis: Collaborative Economics

Change 2006-2007	
⊕ Silicon Valley 2.6%	
⊕ California 2.9%	
⊕ United States 1.8%	

Income Distribution

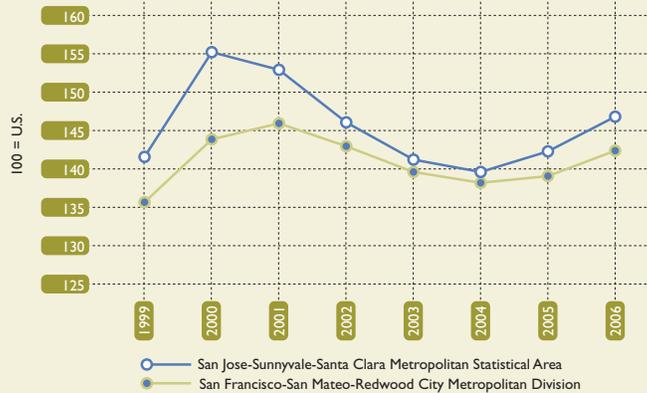
Distribution of Households by Income Ranges



Note: Household income includes wage and salary income, net self-employment income; interest dividends, or net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income; excluding stock options
 Data Source: U.S. Census Bureau, American Community Survey
 Analysis: Collaborative Economics

Relative Cost of Living

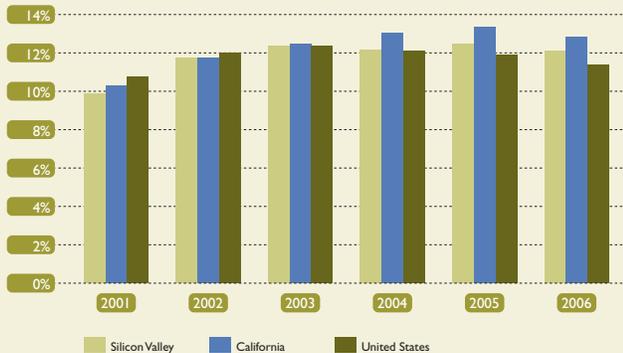
Relative to the U.S.
 San Jose and San Francisco Metropolitan Areas



Data Source: Moody's Economy.com
 Analysis: Collaborative Economics

Employee Contributions

Employee Contributions to Employee Pensions and Insurance Funds as a Percentage of Total Employee Compensation
 Santa Clara and San Mateo Counties, California and U.S.



Data Source: U.S. Department of Commerce, Bureau of Economic Analysis
 Analysis: Collaborative Economics

Average Employer Contributions to Employee Pensions and Insurance Funds per Employee in 2006

Silicon Valley	\$ 11,577
California	\$ 8,145
United States	\$ 7,149

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

PEOPLE | 08 | 11

Employment | 12 - 15

Income | 16-17

Innovation | 18-25

ECONOMY

SOCIETY | 26 | 37

PLACE | 38 | 51

GOVERNANCE | 52 | 55

Appendices | 56 | 60
 Acknowledgments | 61

Reinventing itself again through innovation, investment in cleantech in Silicon Valley almost doubled in 2008 even while total venture capital investment dropped.

WHY IS THIS IMPORTANT?

Innovation drives the economic success of Silicon Valley. More than just in technology products, innovation includes advances in business processes and business models. The ability to generate new ideas, products and processes is an important source of regional competitive advantage. To measure innovation, we examine the investment in innovation, the generation of new ideas, and the value-added across the economy. Additionally, tracking the areas of venture capital investment over time provides valuable insight into the region's longer-term direction of development. The activity of mergers and acquisitions and initial public offerings indicate that a region is cultivating innovative and potentially high-value companies.

Global connectivity is a measure of a region's innovative capacity and global competitiveness. The early adoption of technology is critical for achieving and maintaining a competitive edge, and broadband internet allows better access to newer technologies and quickly developing web-based services.

HOW ARE WE DOING?

Since 1990, value added per employee in Silicon Valley has exceeded that for California and the U.S.; however, 2008 marks the first year that California productivity was as high as the region's. After slowing since 2005, Silicon Valley's value added slipped a half percentage point while California value added increased 3.2%. Value added is measured as regional output, or gross domestic product (GDP), per employee. From 2007 to 2008, California's GDP increased 3% while employment fell less than one percent, and in Silicon Valley, both values increased by less than one percent.⁵

Although regional patent activity dropped slightly in 2007, the number of patents registered continues to be strong. Silicon Valley's percentages of total California and U.S. patent registrations continued to grow though at a slower rate than in the 1990s. In 2007, patents registered by primary inventors located in Silicon Valley represented 50% of all patents registered in California and 12% of all registrations with the U.S. Patent and Trade Office. Silicon Valley cities make up half of the top ten cities in the U.S. for patent registrations. Additionally, the region accounts for a growing percentage of U.S. green technology patent registrations. Increasing in share, 9% of all U.S. solar energy patents registered between 2005 and 2007 were registered in Silicon Valley.

Silicon Valley continues to collaborate with the world as our inventors work across borders and the region attracts foreign companies. While the total number of patents with Silicon Valley and foreign co-inventors dropped slightly from 2006, the percentage of all patents from the region with a foreign co-inventor increased to 11%. Japan and the United Kingdom have the largest representation

of foreign companies in Silicon Valley across all industries with 273 of 670 total foreign affiliates. By industry, Information Products & Services (290) accounts for the largest number of affiliates, followed by Other Manufacturing (134) and Community Infrastructure (128).

After rising steadily since 2005, total venture capital (VC) investment in Silicon Valley dropped 7.7% from 2007 to 2008. However, up to the third quarter of 2008, investment was on par with the same point the previous year. Nationwide, investment dropped 11.4%. While investment is slowing, Silicon Valley continues to account for 29% of total U.S. VC investment and continues to be considered an attractive location for investment.

VC investment growth in Biotechnology placed the industry second only to Software in terms of total VC investment. The top five industries with the greatest growth in 2008 are IT Services (64%), Media and Entertainment (55%), Biotechnology (36%), Industrial/Energy (21%), and Consumer Products and Services (15%). The highlighted industries in the chart represent the industries growing over the longer term.

In contrast to total VC, investment in cleantech in Silicon Valley increased 94% from 2007 – valuing almost \$1.9 billion in 2008. In 2007, Silicon Valley alone accounted for 55% of California and 31% of U.S. investment. The bulk of this investment was in energy generation followed by energy infrastructure.

Holding steady from 2006, 291 mergers and acquisitions (M&As) took place in Silicon Valley in 2007, making up roughly 22% of total California M&As and 3% of U.S. deals. Since 2003, the value of total M&A deals in the region increased 35% valuing \$35 billion in 2007. Again, cleantech in Silicon Valley poses the exception to overall U.S. trends. While M&A activity in cleantech dropped nationally, it rose 25% in Silicon Valley and 7% in California.

Initial public offerings (IPOs) have slowed dramatically globally. In 2007, there were 272 IPO pricings in the U.S. market, and in 2008 there were only 43 total. Silicon Valley represented 8% (23) of the IPO pricings in 2007 and 5% (2) in 2008. Accounting for 22% in 2007 and 28% a year later, international companies are representing a larger percentage of the world's IPOs.

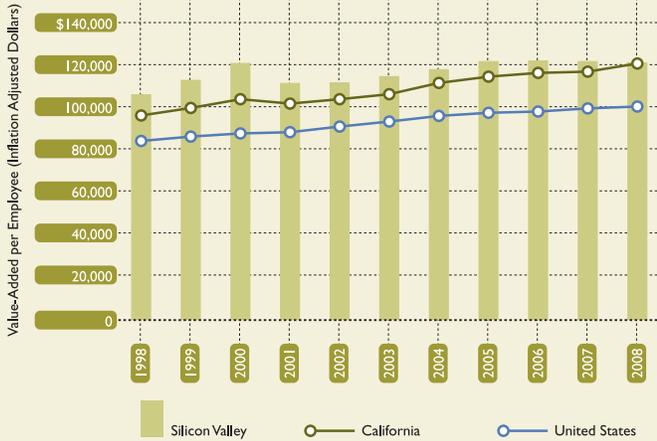
Household access to broadband in the San Francisco Bay Area has reached 99%; however, the region lags much of the state in availability of very high speed internet access.⁶ Although 93% of Bay Area households have access to fast broadband at speeds of 5-10 Mbps, only six percent of households have access to services exceeding 10 Mbps compared to 56% statewide. All other California metro areas have far greater access to very high-speed household service: Los Angeles (95%), San Diego (91%), Inland Empire (78%), and Sacramento (52%).

⁵ The components of value added for the last quarter of 2008 are based on projections from Moody's Economy.com
⁶ As of October 2007.

Value Added

Value Added per Employee

Santa Clara & San Mateo Counties, California and U.S.



Data Source: Moody's Economy.com
Analysis: Collaborative Economics

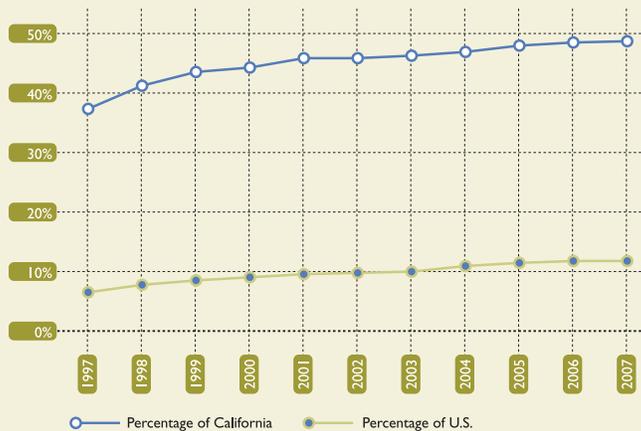
Value Added per Employee

2007-2008

Silicon Valley	-0.5%
California	+3.2%
U.S.	+1.5%

Patent Registrations

Silicon Valley's Percentage of U.S. and California Patents



Data Source: U.S. Patent and Trademark Office
Analysis: Collaborative Economics

Number of Patents—2007

Silicon Valley	9,538
California	19,638
United States	79,556

Top Cities for Patents Registered Patents—2007

San Jose	2,140
Austin	1,330
San Diego	1,051
Sunnyvale	964
Boise	927
Palo Alto	836
San Francisco	769
Fremont	718
Houston	701
Cupertino	627

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment
12 – 15

Income
16-17

Innovation
18-25

ECONOMY

SOCIETY 26 | 37

PLACE 38 | 51

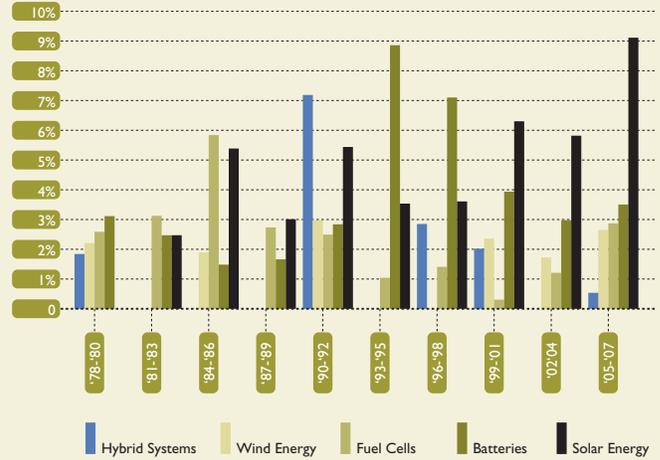
GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

In 2007, Silicon Valley accounted for **20%** of all green technology patents in California

Patents Registered by Green Technology

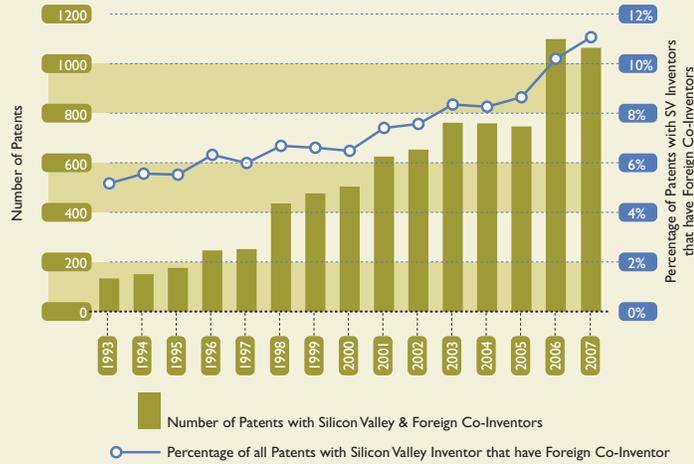
Silicon Valley Percentage of U.S. Green Technology Patents



Data Source: I790 Analytics, Patents by Technology; USPTO Patent and Trade Office
Analysis: Collaborative Economics

Global Patent Collaboration

Patents with Silicon Valley & Foreign Co-Inventors



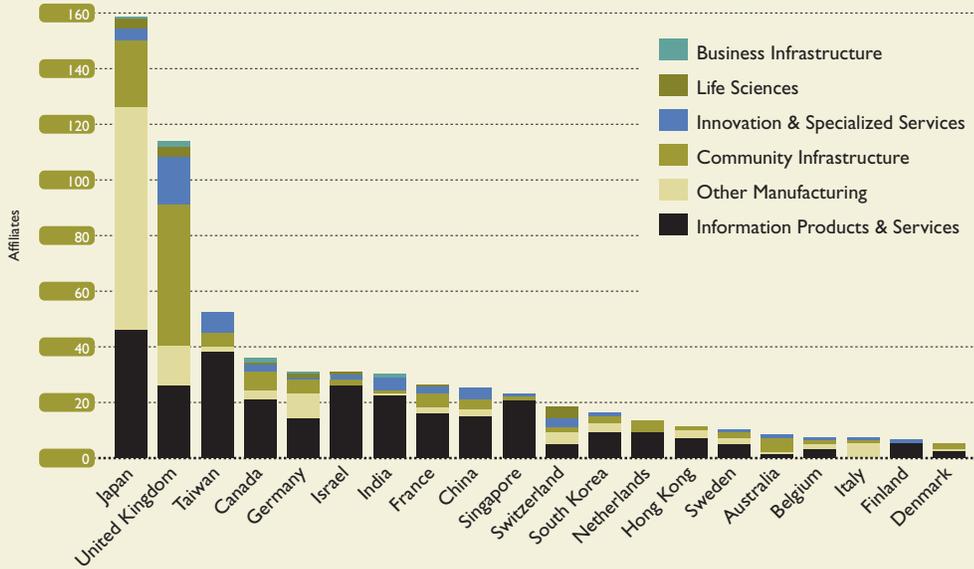
Patent counts reported here refer to all patents with an inventor from Silicon Valley, regardless of sequence number of inventor
Data Source: U.S. Patent & Trade Office
Analysis: Collaborative Economics

Percentage of patents with Silicon Valley and foreign co-inventors:

10% 2006 **11% 2007**

Foreign Companies in Silicon Valley

By Industry Group
2008



Note: Other Manufacturing includes industries such as other primary and fabricated metal manufacturing, diversified agriculture and food manufacturing, space & defense manufacturing, as well as other miscellaneous manufacturing.
Data Source: Uniworld Business Publications, Inc.
Analysis: Collaborative Economics

Venture Capital Dollars

Total Venture Capital Financing in Silicon Valley Firms



Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report based on data:Thompson Reuters
Analysis: Collaborative Economics

Fourth Quarter VC Investment

Silicon Valley



VC Investment 2007-2008

Silicon Valley **-7.7%**
United States **-11.4%**

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment
12 - 15

Income
16-17

Innovation
18-25

ECONOMY

SOCIETY 26 | 37

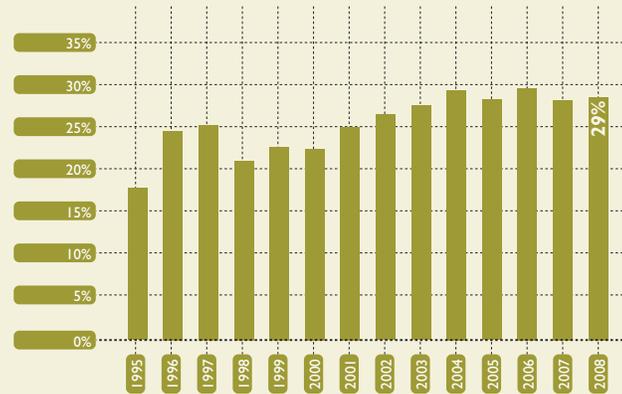
PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Percentage of Total U.S. Venture Capital

Silicon Valley Percentage of Total U.S. Venture Capital Investments



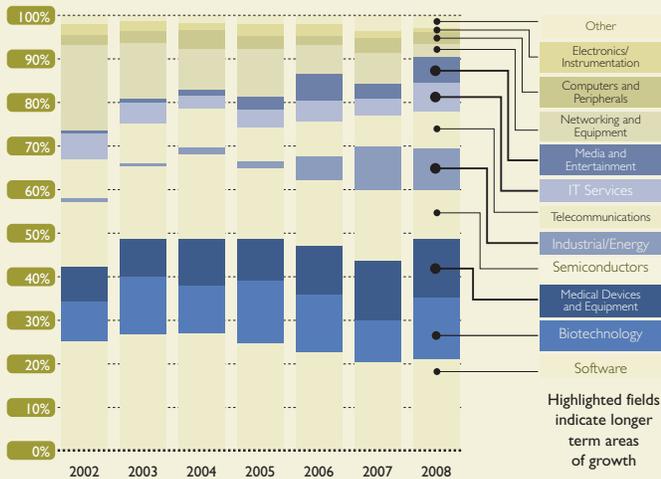
U.S. VC in Silicon Valley

2000:	22%
2007:	28%
2008:	29%

Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters
Analysis: Collaborative Economics

Venture Capital by Industry

Venture Capital Investment in Silicon Valley by Industry



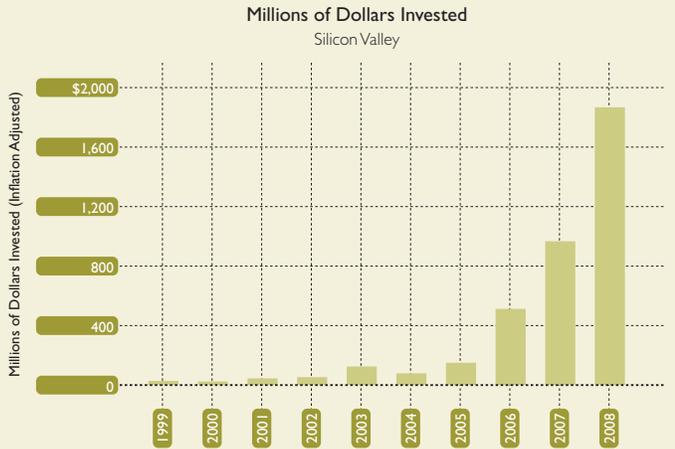
Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: Thomson Reuters
Analysis: Collaborative Economics

Top Growers in 2008

- IT Services
- Media & Entertainment
- Biotechnology

Highlighted fields indicate longer term areas of growth

Venture Capital Investment in Clean Technology



Note: Includes data for San Mateo & Santa Clara Counties, and the cities of Fremont, Newark, Union City, and Scotts Valley
 Data Source: Cleantech Group™, LLC (www.cleantech.com)
 Analysis: Collaborative Economics

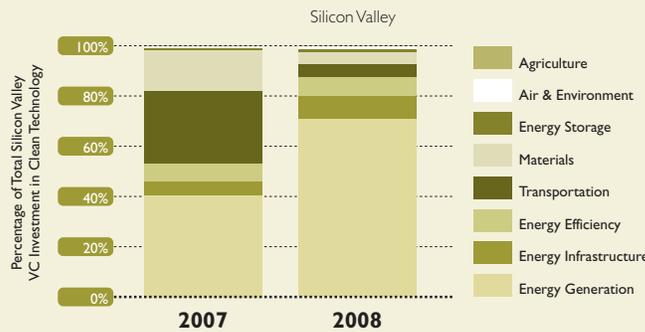
Cleantech Investment Growth, 2007–2008

Silicon Valley **94%**
 Rest of CA **63%**

Silicon Valley Cleantech VC, 2008

53% of CA
31% of U.S.

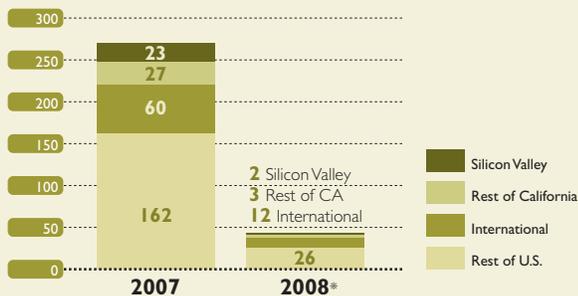
VC Investment in Clean Technology by Segment



Note: Includes data for San Mateo & Santa Clara Counties, and the cities of Fremont, Newark, Union City, and Scotts Valley
 Data Source: Cleantech Group™, LLC (www.cleantech.com)
 Analysis: Collaborative Economics

Initial Public Offerings

Total Number of IPO Pricings
 Silicon Valley, California, U.S., and International Companies



Note: Location based on corporate address provided by IPOHome.com
 Data Source: Renaissance Capital's IPOHome.com
 Analysis: Collaborative Economics

*As of December 22, 2008

2007–2008 IPOs

Silicon Valley **-4%**
 Rest of CA **-3%**
 International **+6%**
 Rest of U.S. **+1%**

IPO Pricings in Clean Technology

	2005	2006	2007	2008
Silicon Valley	1	1	1	1
Rest of CA	0	1	2	2
Rest of U.S.	1	10	9	4
International	1	4	5	1

Data Source: Cleantech Group™, LLC (www.cleantech.com)
 Analysis: Collaborative Economics

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment
 12 – 15

Income
 16-17

Innovation
 18-25

ECONOMY

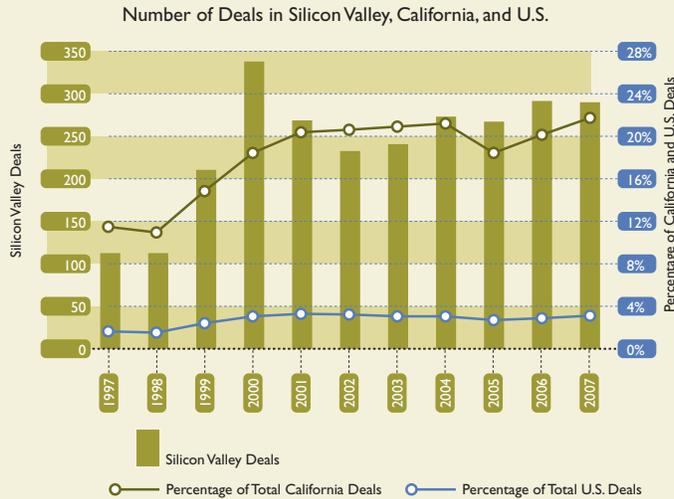
SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
 Acknowledgments | 61

Mergers & Acquisitions



Data Source: Factset Mergerstat LLC
Analysis: Collaborative Economics

Mergers & Acquisitions in 2007

Number of Deals Total Value in Millions
(2008 dollars)

Silicon Valley	291	\$ 34,666
California	1,341	\$ 105,172
United States	9,194	\$ 999,438

Note: All merger and acquisition deals do not disclose value. Total value is based on all deals with values disclosed.

Data Source: Cleantech Group™, LLC (www.cleantech.com)
Analysis: Collaborative Economics

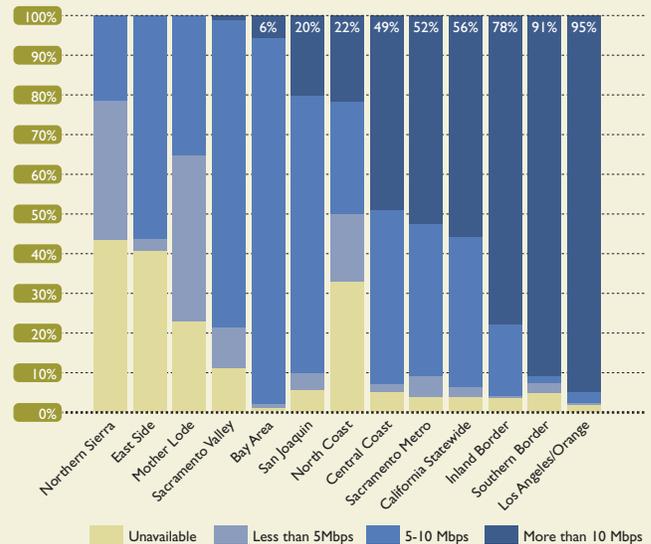
FDA Approved Therapeutics Developed by Silicon Valley Companies

There are currently more than 200 life science companies in California devoted to research and development (R&D) for treatments for cures of HIV, diabetes and: cancers, among other disease indications. More than 30% of these companies are located in Silicon Valley. In 2008, 89 products and treatments from these Silicon Valley companies received Federal Drug Administration (FDA) approval. Additionally, companies in the region have developed more than 200 products that are in phases I & II of clinical trials.

Source: Information is based on MedTrack data for Silicon Valley and California, provided by BayBio

Broadband Availability by Region

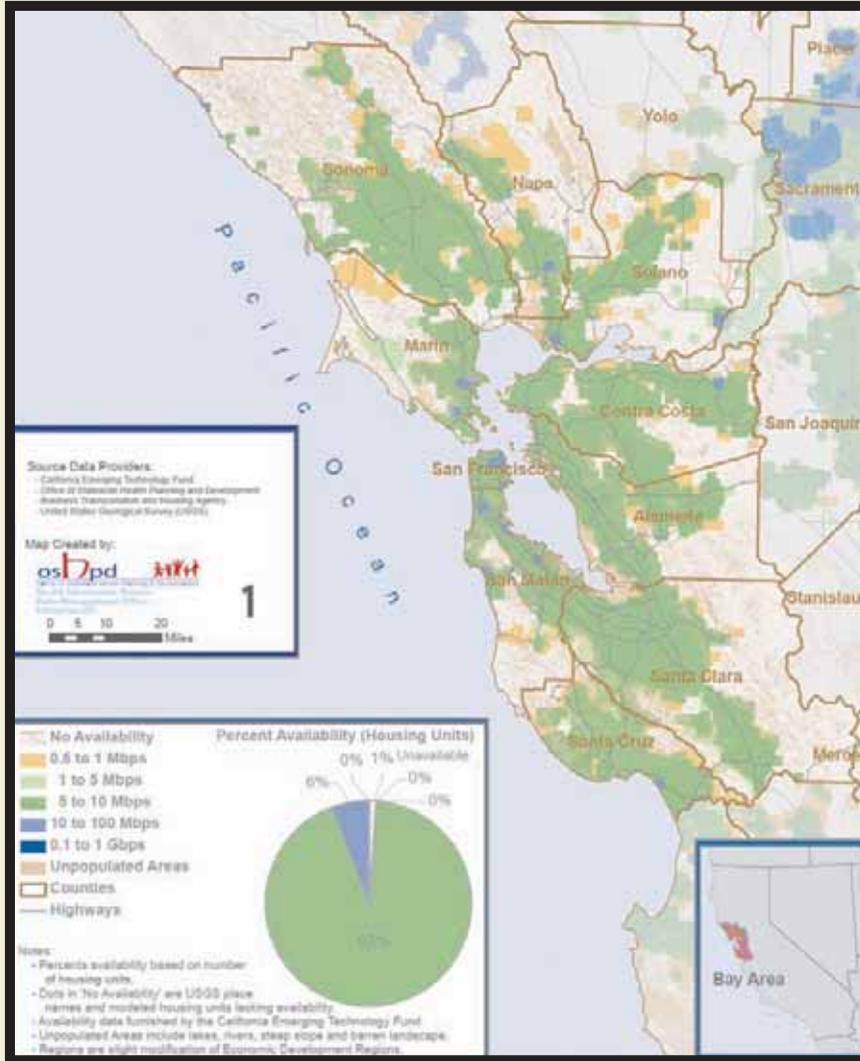
Percent of Housing Units, 2007



Note: The Bay Area includes the counties of Alameda, Contra Costa, Marin, Napa, San Benito, San Luis Obispo, Santa Clara, San Francisco, San Mateo, Solano, and Sonoma

Data Source: California Broadband Taskforce Initiative "The State of Connectivity Report," 2008, Page 33
Analysis: Collaborative Economics

Wireline Broadband Availability



Note: Wireline broadband includes cable, DSL, and fiber-to-the-home (FTTH)
Source: California Broadband Taskforce Initiative "The State of Connectivity Report," 2008, Page 38

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

PEOPLE 08 | 11

Employment | 12 - 15
 Income | 16-17

Innovation | 18-25

ECONOMY

SOCIETY 26 | 37

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices | 56 | 60
 Acknowledgments | 61

Preparing for Economic Success

While over half of the region's high school graduates met entrance requirements for the State's universities, graduation rates vary significantly by race/ethnicity.

WHY IS THIS IMPORTANT?

The future success of the region's young people in a knowledge-based economy will be determined largely by how well elementary and secondary education in Silicon Valley prepares its students for higher levels of education. In 2004, school funding in Santa Clara County was 88% of the national average. Although higher for California (93%), Santa Clara County has been bridging the gap with the nation at a faster pace than the state.

How well the region is preparing its youth for postsecondary education can be observed in graduation rates and the percentage of graduates completing courses required for entrance to the University of California (UC) or California State University (CSU). Likewise, high school drop-outs are significantly more likely to be unemployed and earn less when employed than high school graduates.

HOW ARE WE DOING?

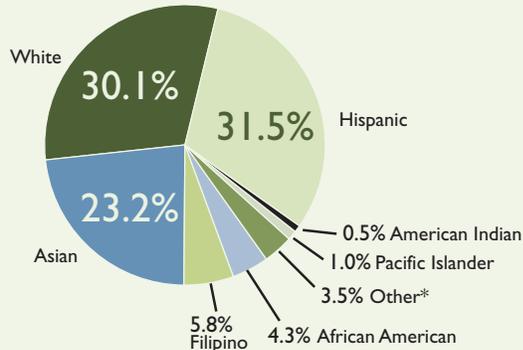
Silicon Valley high schools reported a graduation rate of 85%, and 52% of students achieved University of California requirements.⁷

However, educational success in the region varies by racial/ethnic group. Hispanics represent 31.5% of students and have the lowest graduation rates (and highest drop-out rates). The region has a drop-out rate of 12%. Hispanics are four-times more likely to drop out of high school than Asians; and Pacific Islanders, African Americans, and American Indians are three-times more likely.

Up 9% over the previous year, 78% of Silicon Valley's eighth graders enrolled in algebra scored in the advanced level and only 8% scored basic or below (2% increase over previous year). Statewide, students scoring at the advanced level represented 41%, a decline of 3% from the previous year, and 32% scored at basic level or below, an increase of 7% over the previous year. When enrollment is analyzed by ethnicity in Silicon Valley and statewide, Asians and Asian-related ethnicities have the highest participation rates followed by White and Hispanic. The percent of eighth graders enrolled in algebra has stayed relatively constant over the last six years. In Silicon Valley, 0.2% of all eighth graders were enrolled, slightly higher than statewide enrollment of 0.14% of eighth graders.

SOCIETY

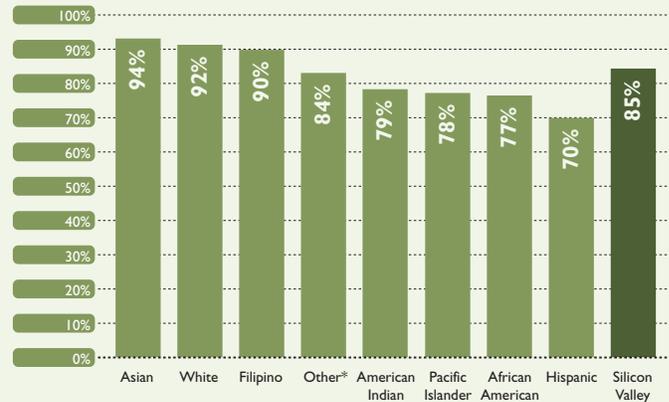
High School Student Population By Ethnicity
Silicon Valley High Schools, 2006-2007



*Other includes students who selected multiple or did not respond
Data Source: California Department of Education
Analysis: Collaborative Economics

High School Graduation Rates

By Ethnicity
Silicon Valley High Schools, 2006-2007



Notes: 2006/07 marks the first year in which the CDE derived graduate and drop out counts based up student level data
*Other includes students who selected multiple or did not respond
Data Source: California Department of Education
Analysis: Collaborative Economics

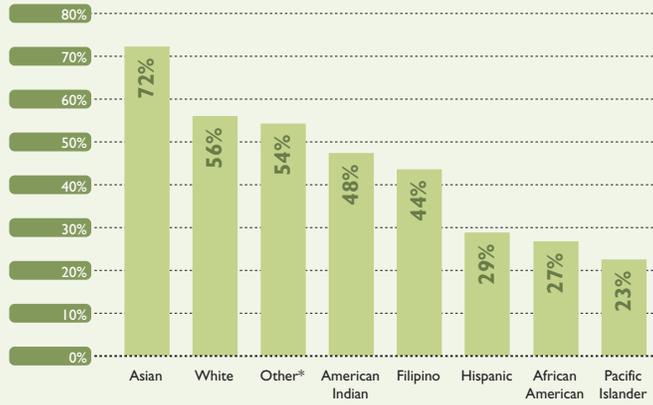
⁷ The California Department of Education has improved the accuracy of their record-keeping through the implementation of a student-based database. Instead of calculating estimates for graduation and dropout rates, the Department now tracks each individual student through the system. Because this new series is not comparable to historical data, graduation and dropout rates are presented for the academic year 2007-2008 only.

2006–2007

52% of graduates met UC/CSU requirements

Graduates with UC/CSU Required Courses

Percentage of Graduates Who Meet UC/CSU Requirements by Ethnicity
Silicon Valley High Schools, 2006-2007

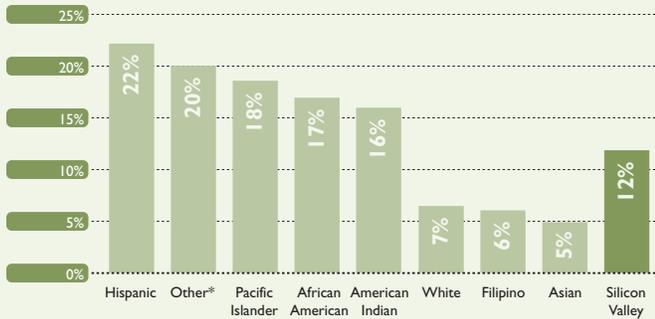


Notes: 2006/07 marks the first year in which the CDE derived graduate and drop out counts based up student level data
*Other includes students who selected multiple or did not respond
Data Source: California Department of Education
Analysis: Collaborative Economics

High School Graduation Rates

Dropout Rate by Ethnicity

Silicon Valley High Schools, 2006-2007

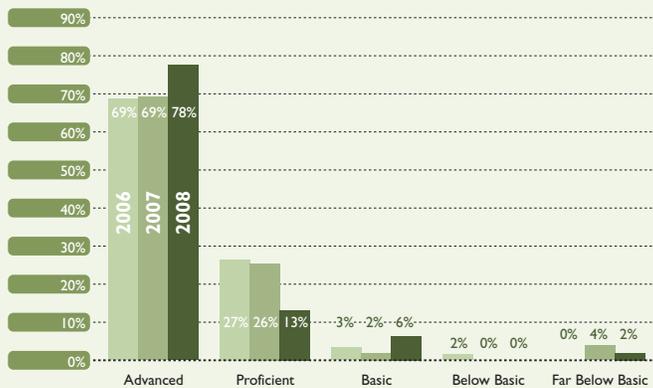


Notes: 2006/07 marks the first year in which the CDE derived graduate and drop out counts based up student level data
*Other includes students who selected multiple or did not respond
Data Source: California Department of Education
Analysis: Collaborative Economics

12% of high school students dropped out in 2007

Algebra II Scores

Percentage of Eighth Graders Tested Who Scored at Benchmarks on CST Algebra II Test
Silicon Valley Public Schools



Data Source: California Department of Education
Analysis: Collaborative Economics

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

Economic Success
26 – 27

- Early Education 28-29
- Arts and Culture 30-31
- Quality of Health 32-35
- Safety 36-37

SOCIETY

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Early Education

Measures for early education are making slow progress.

WHY IS THIS IMPORTANT?

When children are subject to positive early childhood experiences that enhance their physical, social, emotional and academic wellbeing and skills, they enter school ready to learn and are more likely to perform better in later school years. Preschool attendance in high quality preschool programs is linked to higher kindergarten readiness. How prepared children are when they enter kindergarten relative to teacher expectations is an indication of children's readiness for school and future school success.

Children's school success is in part a function of increasing literacy. Research shows that children who read well in the early grades are far more successful in later years; those who fall behind often stay behind when it comes to academic achievement.⁸ Success and confidence in reading are critical to long-term success in school.

HOW ARE WE DOING?

There was some slippage in the early education indicators over 2007 to 2008. Pre-school enrollment was down in 2007 for the first time in three years: 24% of children 3 to 5 years of age were enrolled in pre-school, a drop from 27% in 2006. There appears to be more fluctuation in pre-school enrollment year-to-year in the region than statewide or nationally.⁹

In terms of kindergarten readiness, the percentage of children significantly below teachers' desired levels of proficiency has continued to improve in Santa Clara County, but remained relatively unchanged in San Mateo County since 2005. Kindergarten Academics reflects a child's ability to engage with books and recognize letters among other skills. Modest improvement was reported in San Mateo and strong progress in Santa Clara County since 2005 (although there was little change over 2006). Following up on San Mateo County kindergarten students assessed in 2001, 2002 and 2003, Applied Survey Research recently examined the children's achievement test scores at third, fourth and fifth grades. They found that children's proficiency on Kindergarten Academics was strongly associated with their performance in both English and math at third grade.¹⁰

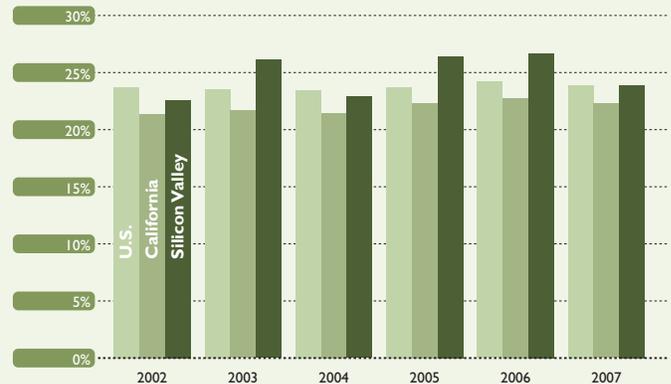
Third grade reading proficiency rates fell back to those of 2005. In 2008, 53% of third graders in Silicon Valley public schools scored below the national median in reading—meaning that the region's performance lags behind that of the nation. The percentage of the region's third graders in public schools who scored at the top quartile has remained about the same several years, ranging from 21-23%.

Substantial disparities persist among ethnic groups in third-grade reading proficiency. Thirty percent or more of third graders in five ethnic groups scored in the top quartile: Chinese, White (non-Hispanic), Asian Indian, Korean, and Japanese. In contrast, 40% or more third graders in African American, Pacific Islander, and Hispanic/Latino ethnic groups scored in the bottom quartile.

SOCIETY

Preschool Enrollment

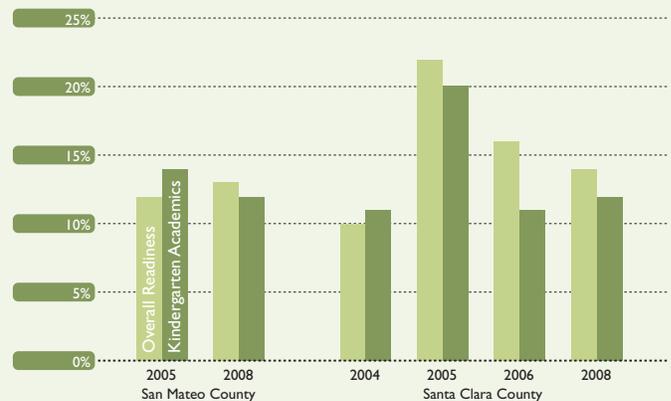
Percentage of Population 3 to 5 Years of Age Enrolled in Preschool
Santa Clara and San Mateo Counties



Note: Data includes enrollment in preschool and nursery school
Data Source: U.S. Census Bureau, American Community Survey
Analysis: Collaborative Economics

Kindergarten Readiness/Teacher Expectations

Children Significantly Below Teachers' Desired Levels of Proficiency
Santa Clara and San Mateo Counties



Data Source: Peninsula Community Foundation, Santa Clara County Partnership for School Readiness, United Way Silicon Valley, Applied Survey Research

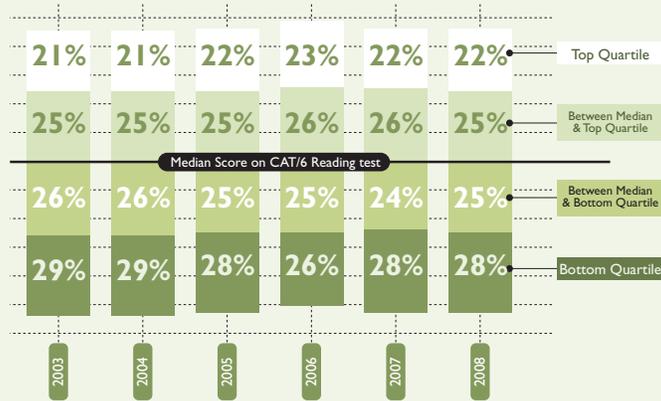
⁸ Snow, C., M.S. Burns & P. Griffin. 1998. *Preventing Reading Difficulties in Young Children*. Washington, D.C.: National Academy Press.

⁹ Research by the National Association of Child Care Research & Referrals Agencies indicates that working families struggle with the cost of child care and that as jobs and hours are cut, children are often taken out of a quality child care setting. <http://www.naccrra.org/policy/economy/>

¹⁰ Applied Survey Research. 2008. "Does Readiness Matter? How Kindergarten Readiness Translates into Academic Success." (April).

Third Grade Reading Ability

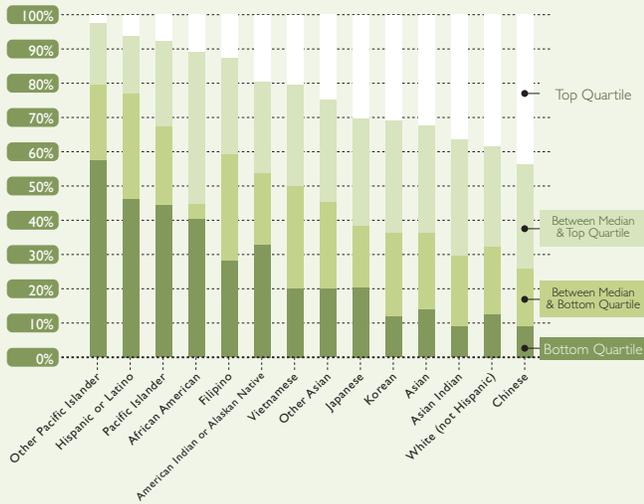
Percentage of Third Graders Scoring at National Benchmarks on CAT/6 Reading Test
Silicon Valley Public Schools



Data Source: California Department of Education
Analysis: Collaborative Economics

Third Grade Reading Proficiency by Race/Ethnicity

Santa Clara County, 2008



*Cambodian, Samoan, Native Hawaiian and Laotian not included due to small data set
Data Source: California Department of Education
Analysis: Collaborative Economics

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE | 08 | 11

ECONOMY | 12 | 25

Economic Success | 26 - 27
Early Education | 28-29
Arts and Culture | 30-31
Quality of Health | 32-35
Safety | 36-37

SOCIETY

PLACE | 38 | 51

GOVERNANCE | 52 | 55

Appendices | 56 | 60
Acknowledgments | 61

Arts and Culture

Silicon Valley's contributions to the arts relative to income trail other metro area regions.

SOCIETY

WHY IS THIS IMPORTANT?

Art and culture are integral to Silicon Valley's economic and civic future.

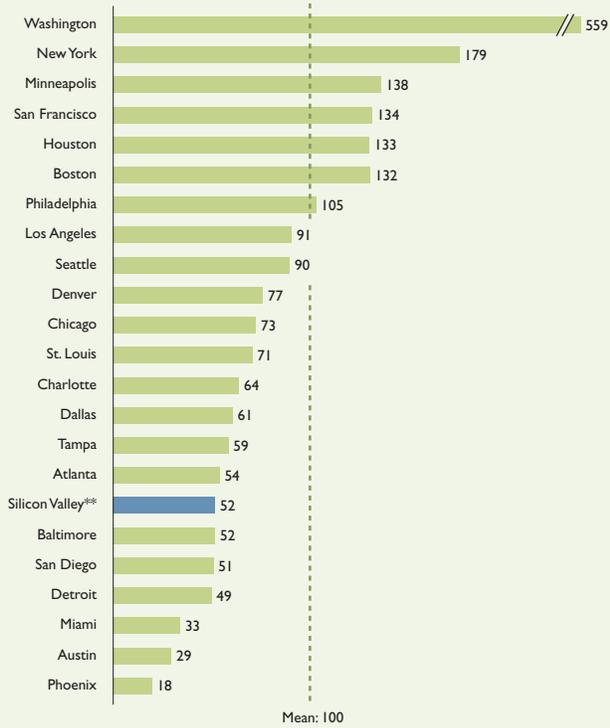
Participation in arts and cultural activities spurs creativity and increases exposure to diverse people, ideas and perspectives. Creative expression is essential for an economy based on innovation. How well the region supports its arts and cultural organizations—especially in relation to household income—gives some indication of the levels of participation and community support for the arts.

HOW ARE WE DOING?

Silicon Valley's contributions to art and cultural organizations as a proportion of the region's income ranks far below that of leading U.S. metropolitan areas—and only about half the average of the top twenty metropolitan areas by population. Silicon Valley is on par with Detroit, Baltimore, and San Diego in terms of its relative contributions to arts and culture.

Contributions to the Arts

Top 20 MSAs by population* Contributions to art/culture organizations over total residents' income (index average = 100)***



* Plus metro areas of Charlotte, Denver and Austin; excluding Riverside/San Bernardino
 ** San Jose-Sunnyvale-Santa Clara, California MSA & San Mateo county
 *** Measured as contributions to art/culture related organizations divided by total income of the region's residents
 Data Source: Sourcebook, BLS, NCCS; McKinsey analysis

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

Economic Success 26 – 27
 Early Education 28-29
Arts and Culture 30-31
 Quality of Health 32-35
 Safety 36-37

SOCIETY

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
 Acknowledgments | 61

Quality of Health

Progress is being made in child immunization, but obesity and access to health care still pose challenges.

SOCIETY

WHY IS THIS IMPORTANT?

Poor health outcomes generally correlate with poverty, poor access to preventative health care, lifestyle choices, and education. Early and continued access to quality, affordable health care is important to ensure that Silicon Valley's residents are healthy and prosperous. For instance, timely childhood immunizations promote long-term health, save lives, prevent significant disability and reduce medical costs. Health care is expensive, and individuals with health insurance are more likely to seek routine medical care and to take advantage of preventative health-screening services.

Over the past two decades, obesity has risen dramatically in the United States and its occurrence is not just limited to adults – the percentage of overweight young people has more than tripled since 1980. Being overweight or obese increases the risk of many diseases and health conditions, including Type 2 diabetes, hypertension, coronary heart disease, stroke and some types of cancers. These conditions have a significant economic impact on the nation's health care system as well as the overall economy due to declines in productivity.

HOW ARE WE DOING?

Santa Clara County has surged ahead of California in child immunization closing in on the Healthy People 2010 Objective of attaining immunization rates of 90%.¹¹ Up eight points from 2006, Santa Clara County reported in 2008 that 84% of kindergartners had been immunized by the age of 24 months. In contrast, statewide rates dropped 1% to 76% in 2008. By ethnic group, in Santa Clara County, all groups reported increased rates of immunization, and African Americans gained the most, improving rates by 16%. Comparatively, statewide, every ethnic group witnessed declines in immunizations from 2006 to 2008 with rates among Asians dropping 7%.

Obesity continues to be a growing problem in the region as well as the state as a whole. The percentage of overweight or obese adolescents and adults in Silicon Valley expanded from 45% in 2001 to 49% in 2007. This four-point increase represents twice the growth statewide. In contrast, three-quarters of youth in grades 5, 7, and 9 are scoring in the Health Fitness Zone which suggests there is continued improvement in youth health. Related to obesity, in 2007, 6% of the region's residents had been diagnosed with diabetes at some point. While this represents a drop of 1.2% over 2005, it is still 1% higher than in 2001.

The percentage of residents with health insurance through their employers dropped 2.5% between 2001 and 2007. While 72% of Silicon Valley residents under the age of 65 had employer-based health insurance, 10% of residents were uninsured. Between 2001 and 2007, there was moderate growth in the number of uninsured residents, residents enrolled in public health services such as the Child Health Insurance Program (CHIP) and Medicaid, as well as in the number of residents with privately purchased insurance.

After significant declines since 1996, Silicon Valley and California have seen increases in teen birth rates. Between 1996 and 2005, teen births declined 35% in California and 39% in the Silicon Valley. Reversing this long-term trend, teenage birth rates increased by nearly 5% in Silicon Valley from 2005 to 2006, double the statewide rate of nearly 2%.

Immunization by Ethnicity

Rate of Immunization of Children at 24 Months of Age



Data Source: Santa Clara County Public Health Department - Kindergarten Retrospective Survey, California Department of Health Services
Analysis: Collaborative Economics

Rate of Immunization of Children at 24 Months of Age, 2008

Silicon Valley	83.7%
California	76.7%

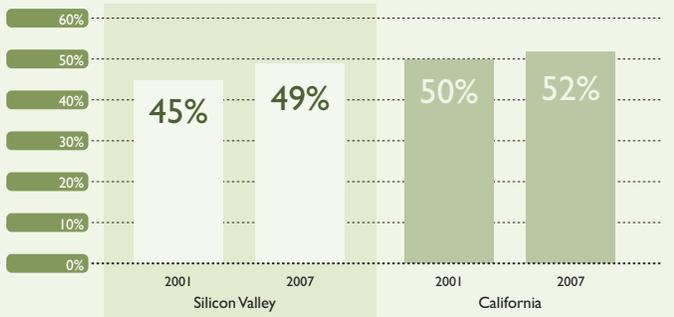
Healthy People 2010 Objective:

90% of children immunized by 24 months of age

¹¹ Healthy People 2010 provides a framework for prevention for the Nation. It is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats.

Obesity

Overweight or Obese* Adolescents and Adults
Silicon Valley and California



Adolescents and Adults that are Overweight/Obese 2007

Silicon Valley	49%
California	52%

*For adults, "Overweight or obese" includes the respondents who have a BMI of 25 or greater. For adolescents, "Overweight or obese" includes the respondents who have a BMI in the highest 95th percentile with respect to their age and gender.
Data Source: UCLA Center for Health Policy Research, California Health Interview Survey
Analysis: Collaborative Economics

Diabetes

Percentage of Population Ever Diagnosed with Diabetes
Santa Clara and San Mateo Counties



Data Source: UCLA Center for Health Policy Research, California Health Interview Survey
Analysis: Collaborative Economics

6% of population
has been diagnosed
with diabetes

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

Economic Success 26 – 27
Early Education 28-29
Arts and Culture 30-31
Quality of Health 32-35
Safety 36-37

SOCIETY

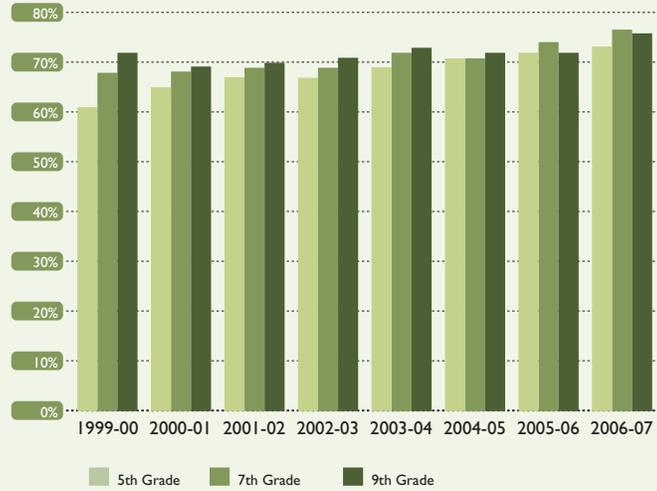
PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Youth Health

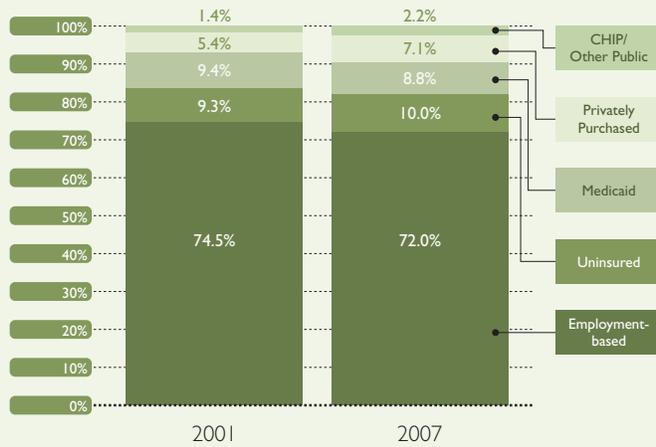
Percentage of Youth in Health Fitness Zone by Grade
Santa Clara and San Mateo Counties



Data Source: California Department of Education
Analysis: Collaborative Economics

Source of Health Insurance Coverage*

Residents under 65 years old
Santa Clara and San Mateo Counties

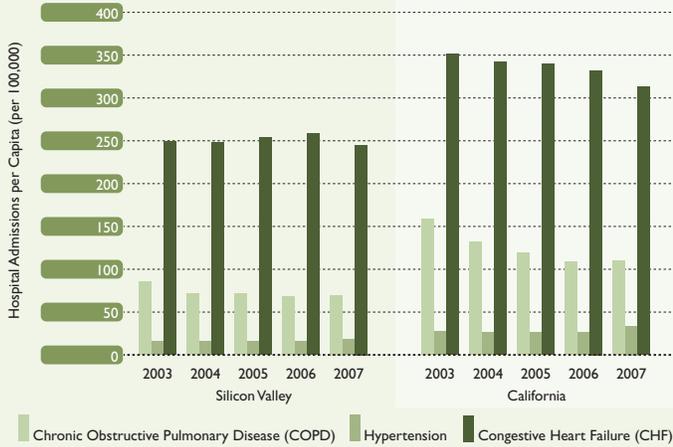


Data Source: UCLA Center for Health Policy Research, California Health Interview Survey
Analysis: Collaborative Economics

72% of Silicon Valley residents have employment-based health insurance

Hospital Admissions by Preventable Conditions

Santa Clara & San Mateo Counties and California



Data Source: State of California, Office of Statewide Health Planning and Development
Analysis: Collaborative Economics

Emergency Room Visits for Hypertension: 2006-2007

Silicon Valley	+7%
California	+25%

Teen Birth Rate

per 1,000 Females Age 15-19

San Mateo & Santa Clara Counties, and California



Data Source: California Department of Public Health
Analysis: Collaborative Economics

Teenage Birth Rate 2005-2006

Silicon Valley	+5%
California	+2%

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE | 08 | 11

ECONOMY | 12 | 25

Economic Success | 26 - 27
Early Education | 28-29
Arts and Culture | 30-31
Quality of Health | 32-35
Safety | 36-37

SOCIETY

PLACE | 38 | 51

GOVERNANCE | 52 | 55

Appendices | 56 | 60
Acknowledgments | 61

Safety

Juvenile and adult felony offenses are down and student expulsions dropped.

SOCIETY

WHY IS THIS IMPORTANT?

The level of crime is a significant factor affecting the quality of life in a community. Incidence of crime not only poses an economic burden, but also erodes our sense of community by creating fear, frustration and instability. Occurrence of child abuse/neglect is extremely damaging to the child and increases the likelihood of drug abuse, poor education performance and of criminality later in life. Research has also linked adverse childhood experiences, such as child abuse/neglect, to poor health outcomes including heart disease, depression, and liver and sexually transmitted diseases. Safety for the community starts with safety for children in their homes.

HOW ARE WE DOING?

While the rate in California continues its steady decline, the rate of child abuse in Silicon Valley has increased slightly for the fourth consecutive year. The rate of substantiated child abuse incidents in Silicon Valley increased from 6.9 to 7.1 per 1,000 people from 2006 to 2007. The most common form of substantiated abuse is child neglect.

After rising steadily since 2002, juvenile felony arrests rates have leveled off. Drug offenses dropped 3%, violent offenses dropped 2% and property offenses remained unchanged. The rate of juvenile felony arrests for the State of California is only slightly higher than that for Silicon Valley, and the state has enjoyed the same 47% decline in juvenile arrests over the past decade.

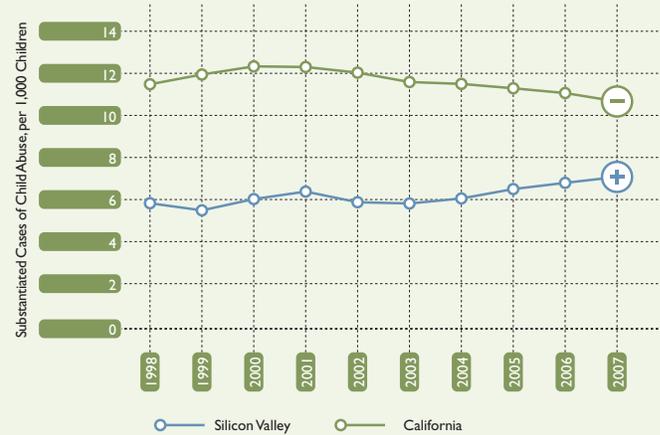
The year 2007 represents the second consecutive year of decline in adult felony arrests in Silicon Valley (-6%). Declines occurred across all three primary felony areas: Violent offenses (-5%), property offenses (-3%) and drug related offenses (-10%). Statewide, the overall adult felony arrest rate declined by 8%, though it is still substantially higher than Silicon Valley (483 more arrests per 100,000).

Silicon Valley's rate of adult felony drug offenses is 34% lower than the state's rate. For the second consecutive year, adult felony drug offenses have declined – a decrease of 10% from 2006 to 2007. California has followed this same trend, exhibiting a decline of 8% over the same period. For the first time in three years, the rate of adults in Silicon Valley receiving county drug and alcohol rehabilitation services decreased – a decline of 1% from 2006 to 2007.

For the first time in three years, juvenile drug offenses in Silicon Valley dropped 3% between 2006 and 2007. At the same time, juveniles receiving county drug and alcohol rehabilitation services decreased by 19%. After rising since 2004, student (K-12) expulsions related to violence and drugs per every 1,000 enrolled students have declined in Silicon Valley 1% and the State 3%.

Child Abuse

Substantiated Cases of Child Abuse per 1,000 Children
Santa Clara & San Mateo Counties and California



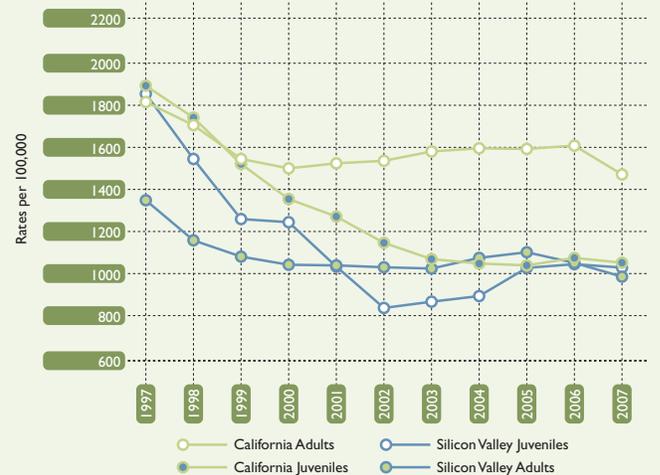
Data Source: California Department of Social Services, UC Berkeley Center for Social Services Research
Analysis: Collaborative Economics

Substantiated Cases

2005	2006	Percent Change
4,231	4,172	-1%

Felony Offenses

Felony Offenses per 100,000
Santa Clara & San Mateo Counties and California



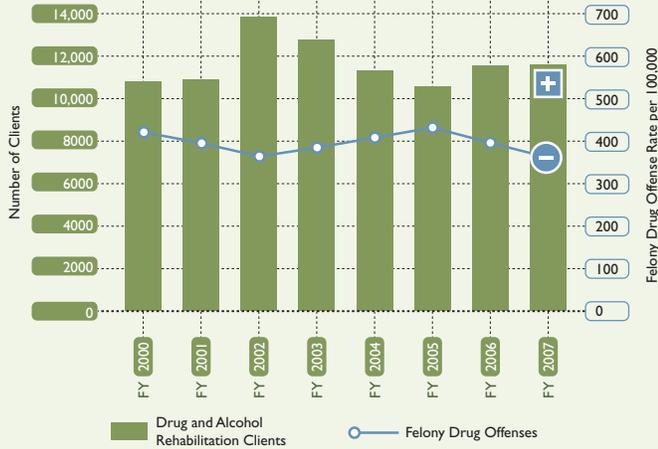
Note: Felony offenses include violent, property, and drug offenses
Data Source: California Department of Justice
Analysis: Collaborative Economics

Felony Offenses 2006-2007

Adults	-6%
Juveniles	-1%

Drug Offenses & Services – Adult

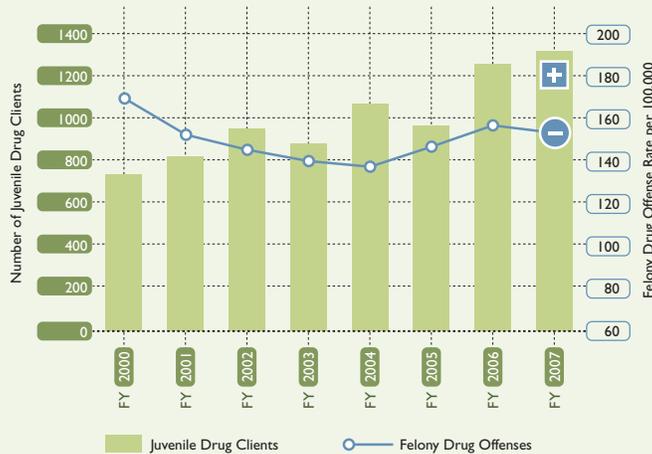
Drug & Alcohol Rehabilitation Clients & Felony Drug Offenses
Santa Clara and San Mateo Counties



Note: Felony drug offenses data are based on calendar years 1999 through 2007
Data Source: California Department of Justice; Santa Clara County Department of Alcohol & Drug Services; Alcohol & Drug Services Research Institute; San Mateo County Human Services Agency, Planning & Evaluation
Analysis: Collaborative Economics

Drug Offenses & Services – Juvenile

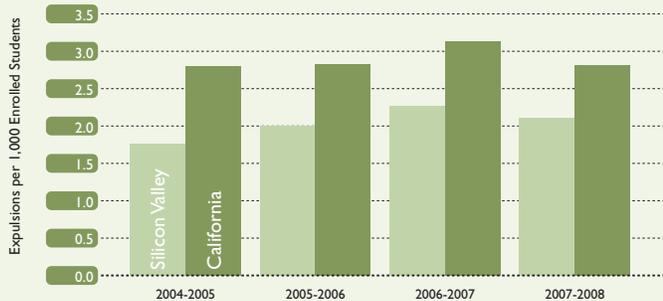
Drug & Alcohol Rehabilitation Clients & Felony Drug Offenses
Santa Clara and San Mateo Counties



Note: Felony drug offenses data are based on calendar years 1999 through 2007
Data Source: California Department of Justice; Santa Clara County Department of Alcohol & Drug Services; Alcohol & Drug Services Research Institute; San Mateo County Human Services Agency, Planning & Evaluation
Analysis: Collaborative Economics

School Expulsions Due to Violence/Drugs

Expulsions Per Enrollment
Silicon Valley Public Schools K-12



Data Source: California Department of Education
Analysis: Collaborative Economics

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

Economic Success 26 – 27
Early Education 28-29
Arts and Culture 30-31
Quality of Health 32-35
Safety 36-37

SOCIETY

PLACE 38 | 51

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Environment

Silicon Valley's residents and policymakers are making decisions that reduce negative environmental impacts and conserve energy and natural resources.

PLACE

WHY IS THIS IMPORTANT?

Environmental quality directly affects the health of all residents and the ecosystem in the region, which is in turn affected by the choices residents make about how to live—how we chose to access work, other people, goods and services, where we build our homes, how we use our natural resources, and how we enforce environmental guidelines.

Preserving open space protects natural habitats, provides recreational opportunities, focuses development, and maintains the visual appeal of our region. Protected lands include habitat and wildlife preserves, waterways, agricultural lands, flood control properties, and parks.

Shifting from carbon-based energy to renewable sources and reducing consumption together have the potential for wide-reaching impact on our environmental quality in terms of local air quality and global climate change.

Water is one of the region's most precious resources, serving a multitude of needs, including drinking, recreation, supporting aquatic life and habitat, and agricultural and industrial uses. Water is also a limited resource because water supply is subject to changes in climate and state and federal regulations. Sustainability in the long run requires that households, workplaces and agricultural operations efficiently use and reuse water.

HOW ARE WE DOING?

Protected open space now makes up 30% of Silicon Valley's total acreage. Between 2002 and 2008, the total protected lands acreage in the region grew by 41%. The amount of protected land accessible to the public has been growing in tandem, with a 37% increase in acreage from 2002 to 2008. In 2008, total protected land acreage was approximately 17% higher than in 2007, due in part to such major additions the San Felipe Ranch (28,000 acres) and the South Valley Ranch (3,000 acres). How much of a region's land can be potentially protected depends on the population density and ruggedness of the landscape as well as other factors. For example, 49% of San Diego County's total acreage is protected open space.

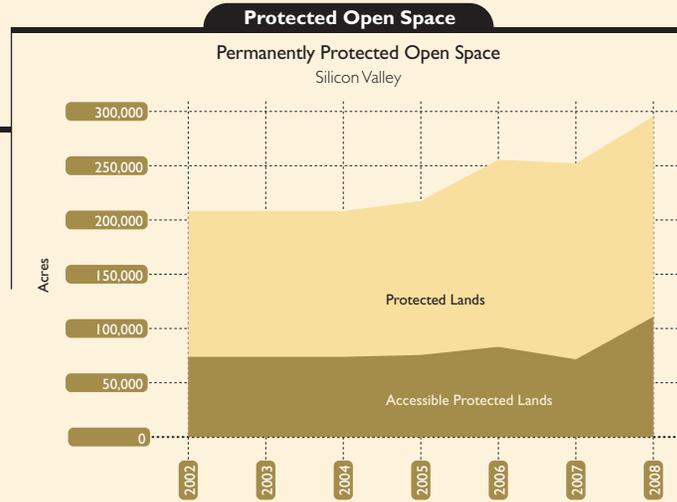
Related to protecting open space, Silicon Valley has improved its waste diversion rate from 51% to 55% since 1999. Although at 54% in 2006, statewide diversion rates are improving at a faster rate.

Silicon Valley has become a hot spot for solar in California. In 2008, Silicon Valley accounted for 13% of all new solar capacity in the state approved through the California Solar Initiative. Measured in kilowatts, solar capacity in the region increased 59% and in the state 41% over 2007. This new growth has primarily been in commercial, government and nonprofit installations.

While gross per capita water consumption grew by 4% from 2006 to 2007, Silicon Valley residents have slightly reduced their water consumption over the long term. From 2000 to 2007, gross per capita consumption dropped by 3%. In 2007, 3.55% of the total water consumed in Silicon Valley was from recycled sources, up from 1.28% in 2000.

The South Bay average mercury concentration in sport fish was 0.35 parts per million in 2006. The mercury concentration increased from 1997 to 2003 and then declined by approximately 40% from 2003 to 2006. Mercury levels in the San Francisco Bay are primarily a result of mining activity since the Gold Rush. In the South Bay, the New Almaden Mine, which closed in 1976, is a major source of mercury leakage and the Guadalupe Reservoir is very close to this. As a result, the Guadalupe River is a major source of transport of mercury and other pollutants into the Bay. Mercury loads from the Guadalupe River vary from year to year depending on rainfall intensity, water flow, as well as other factors. The mercury load from the Guadalupe River in 2007 was 2.3 kg, the lowest load since monitoring began in 2003.

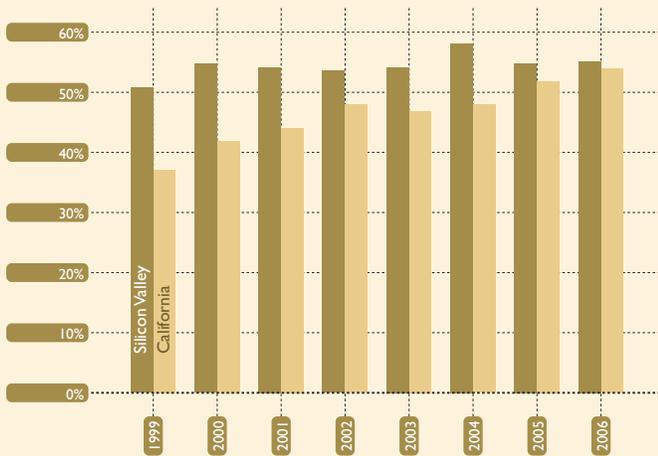
30% of total land
is protected
in Silicon Valley



Includes data for the cities of Atherton, Belmont, East Palo Alto, Foster City, Menlo Park, Portola Valley, Redwood City, San Carlos, San Mateo, Woodside, Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale, Scotts Valley, Union City, Newark, Fremont
Data Source: GreenInfo Network
Analysis: Collaborative Economics

Waste Diversion Rates

Silicon Valley and California



Note: Due to the unavailability of data, 1999 data does not include the cities of Gilroy, Brisbane, South San Francisco;
2001 data does not include the city of Los Altos; 2003 data does not include the cities of Campbell and Mountain View
Data Source: California Integrated Waste Management Board
Analysis: Collaborative Economics

Waste Diversion Rates

1999 2006

Silicon Valley	51%	55%
California	37%	54%

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE | 08 | 11

ECONOMY | 12 | 25

SOCIETY | 26 | 37

Environment
38 – 41

Transportation
42-43

Land Use
44-45

Housing
46-49

Commercial Space
50-51

PLACE

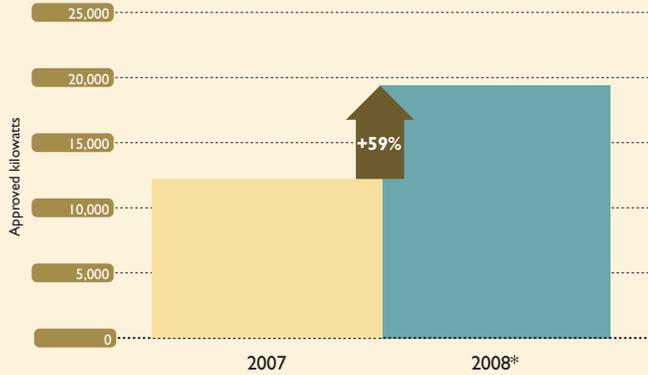
GOVERNANCE | 52 | 55

Appendices | 56 | 60
Acknowledgments | 61

13% of California's solar capacity added in 2008 was in Silicon Valley

Solar Installations

Capacity (kw) added through the California Solar Initiative
Silicon Valley



*As of December 17, 2008
Data Source: California Public Utilities Commission, California Solar Initiative
Analysis: Collaborative Economics

Growth in Solar Capacity (kw) added through the California Solar Initiative 2007-2008

Silicon Valley	+59%
Rest of California	+41%

Solar Installations by Sector

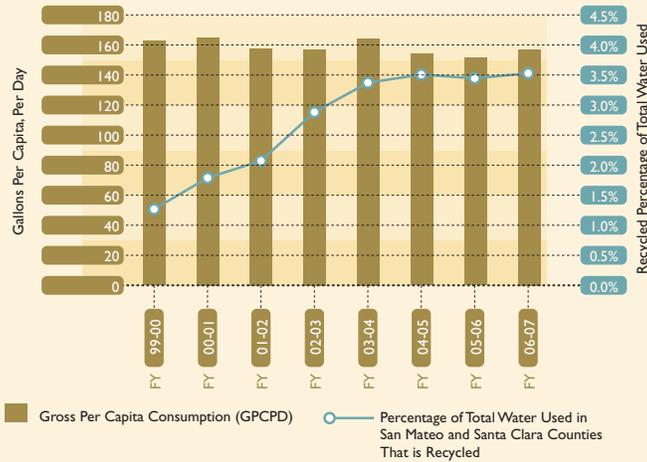
Capacity (kw) added through the California Solar Initiative
Silicon Valley



*As of December 17, 2008
Data Source: California Public Utilities Commission, California Solar Initiative
Analysis: Collaborative Economics

Water Resources

Gross Per Capita Consumption & Percentage of Consumption from Recycled Water
Silicon Valley BAWSCA Members



Data Source: Bay Area Water Supply & Conservation Agency Annual Survey
Analysis: Collaborative Economics

Per Capita Water Consumption
2006–2007
+4%

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

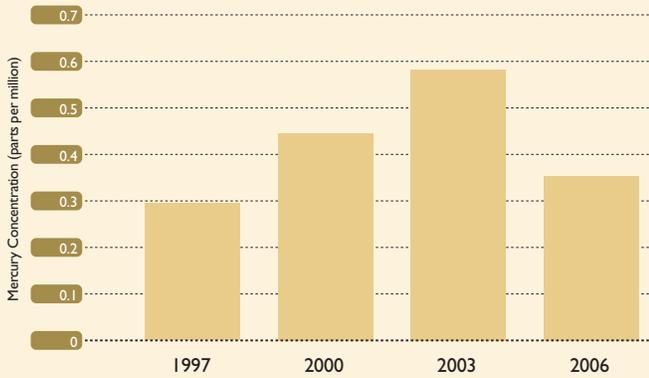
PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

Mercury Concentration

South Bay Mercury Concentration in Sport Fish

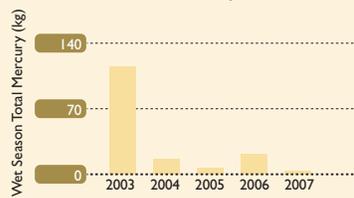


Note: Data are for white sturgeon
Data Source: San Francisco Estuary Institute. *Containment Concentrations in Sport Fish from San Francisco Bay, 2006*

Mercury Concentration in Sport Fish (ug/g ww)

2003	0.58
2006	0.35

Mercury Loads
Annual Loads of Mercury from the Guadalupe River



Note: Total loads for each water year (Oct 1–Sept 30). Additional matching funds for this RMP study were provided by the CER, USACT, SCVWD, and SCVURPPP.
Data Source: San Francisco Estuary Institute. *The Pulse of the Estuary, 2008*

Environment
38 – 41

Transportation
42-43
Land Use
44-45
Housing
46-49
Commercial Space
50-51

PLACE

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Transportation

The region's total fossil fuel consumption is dropping, and residents are choosing alternatives such as public transit and alternative fuel vehicles.

WHY IS THIS IMPORTANT?

The modes of transportation we use to access work, other people, goods and services, including the type of cars we drive, impacts the quality of our air and the region's transportation infrastructure. Motor vehicles are the major source of air pollution for the Bay Area. By utilizing alternative modes of transportation, such as public transit and walking, as well as choosing vehicles that are more fuel-efficient or use alternative sources of fuel, residents can reduce their ecological footprint.

HOW ARE WE DOING?

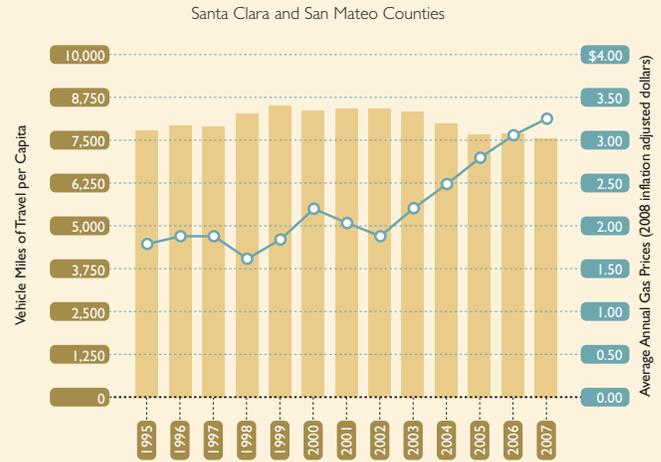
Silicon Valley is making tangible progress in changing its travel patterns. As a whole, Silicon Valley residents have been driving fewer miles since 2002, and vehicle miles of travel per capita dropped 2% between 2006 and 2007. Total fossil fuel consumption per capita has dropped 10% since 2000, compared to just 1% for California. The number of new registrations for gasoline-powered cars in Silicon Valley has dropped by a quarter since the beginning of the decade.

Silicon Valley commuters are using more alternatives to driving alone. In 2007, 75% of commuters drove alone, down from 78% four years before. In 2008, transit ridership in Silicon Valley reached a five-year high of 27 rides per person over a twelve-month period.

Silicon Valley is on the forefront of alternative fuel vehicles—particularly hybrids. The region now accounts for 15% of newly registered hybrids, 10% of electric, and 5% of natural gas vehicles in California. Alternative fuel vehicles now comprise 3.4% of all newly registered vehicles in Silicon

PLACE

Vehicle Miles of Travel and Gas Prices



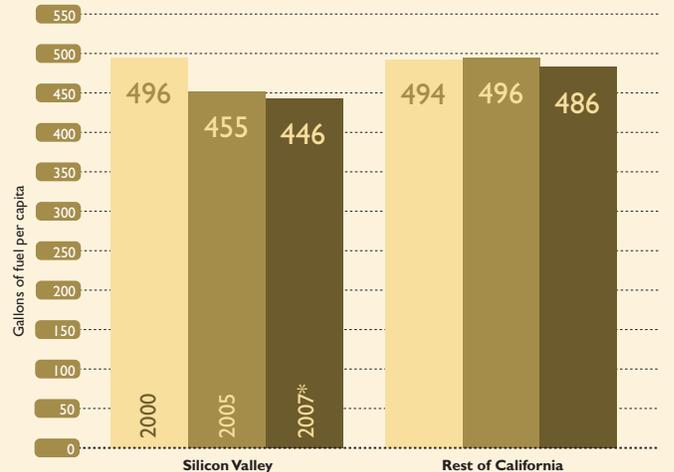
Note: Gas prices are average annual retail gas prices for California
 Data Source: California Department of Transportation; Energy Information Administration, U.S. Department of Energy; California Department of Finance
 Analysis: Collaborative Economics

Percent Change 2006–2007

VMT per Capita	-2%
Gas Prices	+6%

Fuel Consumption

Per Capita Fuel Consumption Silicon Valley and the Rest of California



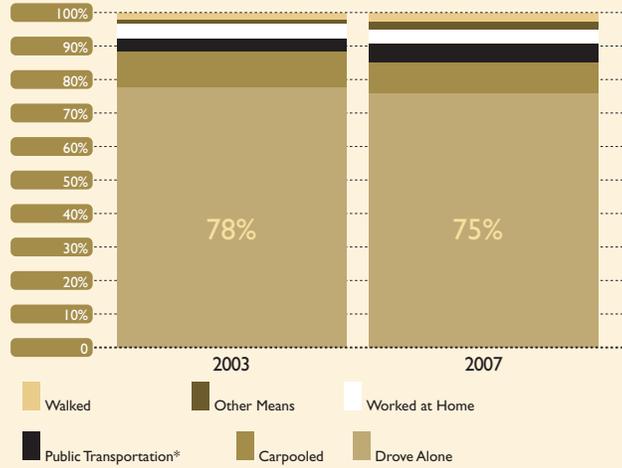
*2007 figures are projections
 Note: Fuel Consumption consists of gasoline and diesel fuel usage on all public roads
 Data Source: California Department of Transportation, California Department of Finance
 Analysis: Collaborative Economics

Per Capita Fuel Consumption 2000–2007

Silicon Valley	-10%
Rest of California	+1%

Means of Commute

Santa Clara and San Mateo Counties

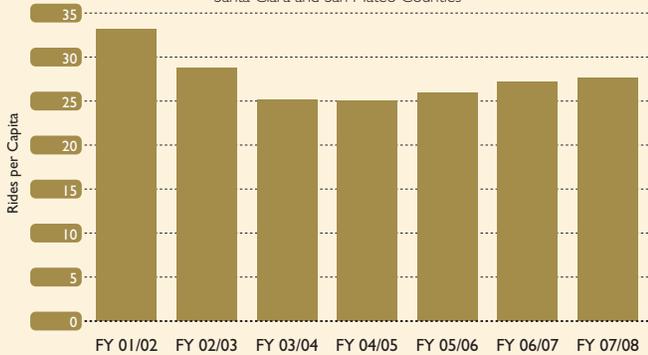


Note: Means of transportation refers to the principal mode of travel or type of conveyance that the worker usually used to get from home to work during the reference week. Other means includes taxicab, motorcycle, bicycle and other means not identified separately within the data distribution
 *2003 public transportation data includes taxicabs
 Data Source: U.S. Census Bureau, American Community Survey
 Analysis: Collaborative Economics

Transit Use

Number of Rides per Capita on Regional Transportation System

Santa Clara and San Mateo Counties

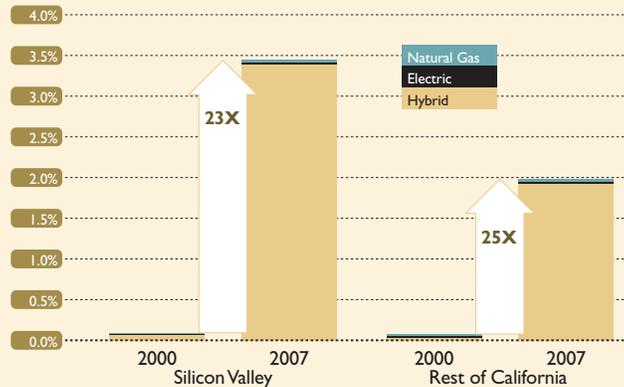


Transit Use
+3%

Data Source: Altamont Commuter Express, Caltrain, Sam Trans, Valley Transportation Authority, California Department of Finance
 Analysis: Collaborative Economics

Alternative Fuel Vehicles

Alternative Fuel Vehicles as a Percentage of Newly (New & Used) Registered Vehicles by Fuel Type
 Silicon Valley and the Rest of California



Data Source: R.L. Polk & Co.
 Analysis: Collaborative Economics

2000-2007

-25% new registrations
for gasoline vehicles

Silicon Valley % of California Newly Registered Alternative Fuel Vehicles (New and Used) - 2007

Natural Gas	5%
Electric	10%
Hybrid	15%

About the 2009 Index | 01
 Map of Silicon Valley | 02
 Table of Contents | 03
 2009 Index Highlights | 04 | 05
 Index at a Glance | 06 | 07

PEOPLE | 08 | 11

ECONOMY | 12 | 25

SOCIETY | 26 | 37

Environment
38 - 41

Transportation
42-43

Land Use
44-45

Housing
46-49

Commercial Space
50-51

PLACE

GOVERNANCE | 52 | 55

Appendices | 56 | 60
 Acknowledgments | 61

Land Use

New housing developments make more efficient use of land and are also increasingly located near transit.

PLACE

WHY IS THIS IMPORTANT?

By directing growth to already developed areas, local jurisdictions can reinvest in existing neighborhoods, use transportation systems more efficiently, and preserve the character of adjacent rural communities. Focusing new commercial and residential developments 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. By creating mixed-use communities, Silicon Valley gives workers alternatives to driving alone and increases access to jobs.

HOW ARE WE DOING?

For the first time, the Joint Venture: Silicon Valley Land Use Survey results in 2008 reflect an expanded geographic definition of Silicon Valley that includes cities northward along the U.S. 101 corridor. Silicon Valley continues to grow more efficiently in terms of residential development. The region has sustained a density of about 20 units per acre for newly-approved housing since 2005—a level twice that of 2003. Even more important, the density of newly approved housing is three times that of a decade ago.

Not only do new housing developments make more efficient use of land, they are also increasingly sited close to transit. After a period of volatility, Silicon Valley has now recorded five straight years of increasing shares of approved housing close to transit—rising from 36% in 2004 to 69% in 2008—the highest level measured during the ten years of Joint Venture's Land Use Survey.

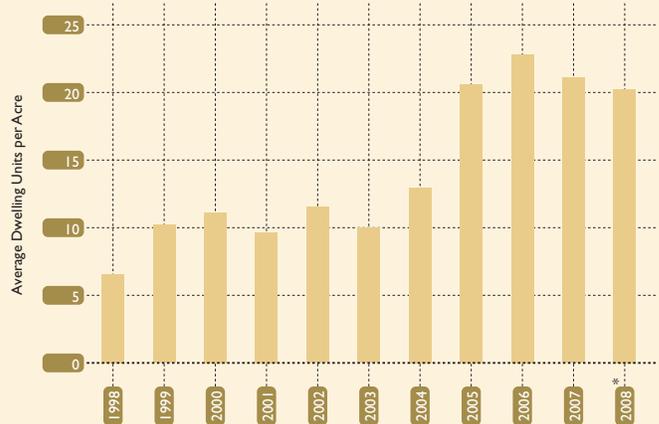
At the same time, the percentage of newly-approved non-residential development sited close to transit dropped substantially. This finding for 2008 continues a pattern of volatility that has included years of more non-residential approvals sited close to transit (e.g., 2001, 2003, 2004, 2005, and 2007) and years of fewer approvals close to transit (e.g., 2000, 2002, 2006).

Adoption of Green Building Policies

As of 2008, 19 cities in the region (of the 30 cities that participated in Joint Venture's 2008 Land Use Survey) reported having adopted green building codes. In nine of the cities, the green building codes are mandatory, and incentives and sanctions are in place for enforcing the codes.

Residential Density

Average Units Per Acre of Newly Approved Residential Development
Silicon Valley



*2008 data includes responses from three new cities: Burlingame, Millbrae, and San Bruno
Data Source: City Planning and Housing Departments of Silicon Valley
Analysis: Collaborative Economics

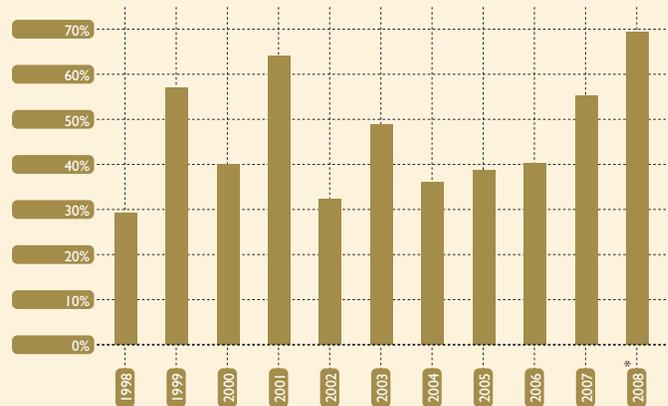
1998–2008

Residential Development

3x more dense

Housing Near Transit

Percentage of New Housing Units Approved That Will Be Within 1/4 Mile of Rail Stations or Major Bus Corridors
Silicon Valley



*2008 data includes responses from three new cities: Burlingame, Millbrae, and San Bruno
Data Source: City Planning and Housing Departments of Silicon Valley
Analysis: Collaborative Economics

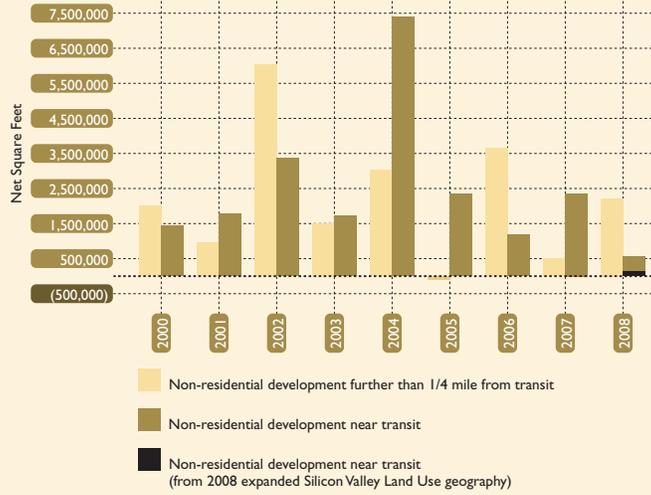
+14%

Housing built near transit

76% of all non-residential development is not near transit

Development Near Transit

Change in Non-Residential Development Near Transit
Silicon Valley



*2008 data includes responses from three new cities: Burlingame, Millbrae, and San Bruno
Data Source: City Planning and Housing Departments of Silicon Valley
Analysis: Collaborative Economics

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

Environment 38 – 41
Transportation 42-43
Land Use 44-45
Housing 46-49
Commercial Space 50-51

PLACE

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Housing

The national mortgage crisis has hit the region particularly hard, but rental rates increased at a slower rate.

PLACE

WHY IS THIS IMPORTANT?

The affordability of housing affects 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. The current mortgage crisis is greatly adding to housing pressures across the country, and statistics that emerge in the coming years will likely reveal rising rates of homelessness.

HOW ARE WE DOING?

The national mortgage crisis has hit the Valley particularly hard. Home foreclosure sales went up faster in Silicon Valley (184%) than California as a whole (126%) in 2008. The number of foreclosure sales rose from 2,429 in 2007 to 6,900 in 2008. The correction in the housing market has meant dropping sale prices. While home prices in Silicon Valley have dropped less than other major regions of California, declining home values have reduced the net worth of many households. Recent reports indicate that falling values are fueling sales growth. In December 2008, 41.2% of sales in Santa Clara County and 27.3% in San Mateo County were of homes previously foreclosed upon.¹²

Housing affordability improved somewhat for first-time homebuyers in 2008—the first time affordability improved since 2003. However, affordability actually improved more in other California regions because of sharper price decreases. As a result, Silicon Valley has now become the least affordable region for housing in California—with less than 30% of first-time homebuyers able to afford a median-priced home.

At the same time, the region approved far more housing units in 2008 than in any year over the past decade. Over 25,000 new housing units were approved for construction. In addition, more affordable housing units were approved in 2008 than in any year since 2003.

However, only 5% of all housing units approved (1,404) were classified as affordable.

The situation with rental housing appears to be somewhat better. After a large increase in apartment rental rates of 7.8% between 2006 and 2007, rates rose only 2% between 2007 and 2008. This rate of increase is closer to keeping pace with increases in median income (which grew 2.6% between 2006 and 2007). Early reports for the fourth quarter of 2008 suggest that Bay Area rents are beginning to dip, sliding 2% from the previous quarter in the San Jose-Sunnyvale-Santa Clara MSA.¹³

The number of homeless people in Santa Clara County decreased from 7,491 in 2005 to 7,202 in 2007. In 2007, the largest age group was people 41-50 years old (29%). The homeless population is primarily Caucasian (36%) and Hispanic (27%). The vast majority (77%) of the region's homeless have no more than a high school diploma. A convening of 30 safety net providers by the Silicon Valley Community Foundation in August 2008 revealed that the region's providers of urgent needs are serving double and sometimes triple the number of clients they did just one year before. While 70% of organizations reported an increase in need, only 20% reported increased revenues.¹⁴

¹² Said, C. 2008. "Foreclosures fuel home sales surge." San Francisco Chronicle, January 22, 2008. A1.

¹³ Temple, J. 2008. "Bay Area rental rates dip – finally." San Francisco Chronicle, January 22, 2008. C1.

¹⁴ "The New Face of Need." (December 2008). Silicon Valley Community Foundation.



Percentage of new housing that is affordable

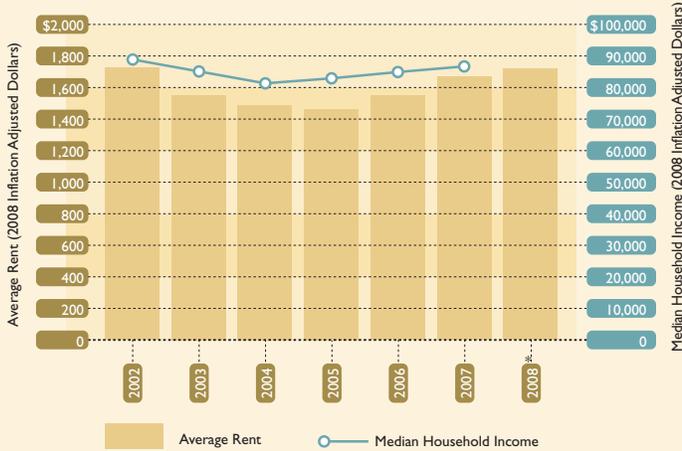
2007 **10%**

2008 **5%**

*2008 data includes responses from three new cities: Burlingame, Millbrae, and San Bruno
 Data Source: City Planning and Housing Departments of Silicon Valley
 Analysis: Collaborative Economics

Rental Affordability

Apartment Rental Rates at Turnover Compared to Median Household Income
Santa Clara and San Mateo Counties



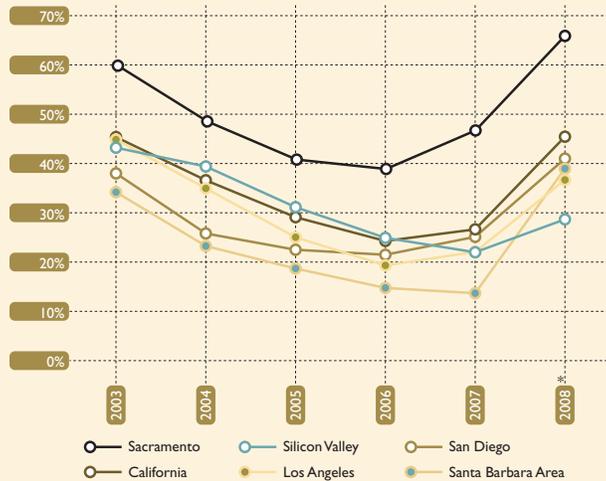
* Estimate based on Quarters 1-3, 2008
Data Source: Real Facts, United States Census Bureau, American Community Survey
Analysis: Collaborative Economics

2005-2008

Average Rent **+17%**

Home Affordability

Percentage of Potential First-Time Homebuyers That Can Afford to Purchase a Median-Priced Home
Silicon Valley & Other California Regions



* Estimate based on Quarters 1-2, 2008
Data Source: California Association of Realtors, Home Affordability Index; DataQuick Information Systems
Analysis: Collaborative Economics

Percentage of first-time homebuyers that can afford the median priced home in 2008

29% Silicon Valley

45% California

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

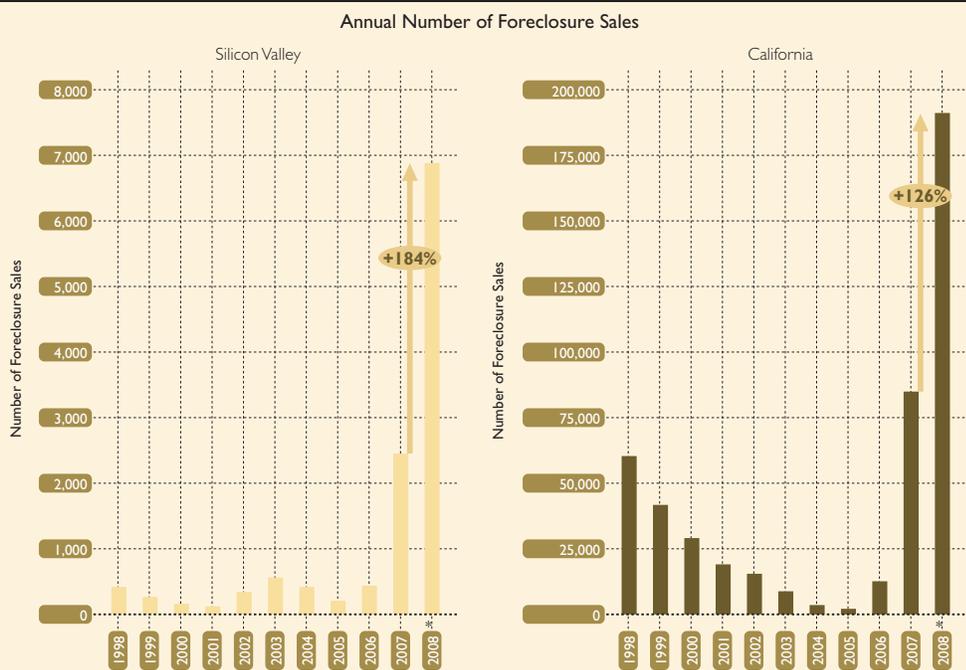
Environment 38 - 41
Transportation 42-43
Land Use 44-45
Housing 46-49
Commercial Space 50-51

PLACE

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

Residential Foreclosure Activity

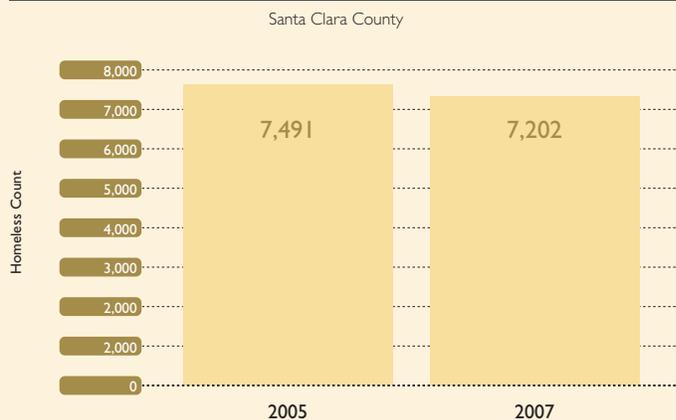


* Estimate based on Quarters 1-3, 2008
 Data Source: DataQuick Information Systems
 Analysis: Collaborative Economics

Number of Foreclosure Sales

	2007	2008	Percent Change
Silicon Valley	2,429	6,900	+184%
California	84,652	191,005	+126%

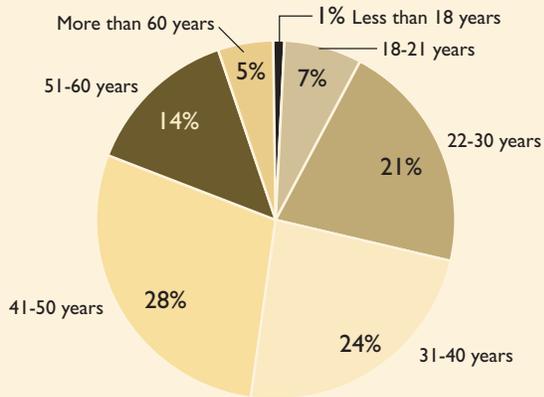
Trends in Homelessness



Data Source: 2007 Santa Clara County Homeless Census and Survey, Applied Survey Research
 Analysis: Collaborative Economics

Trends in Homelessness by Age

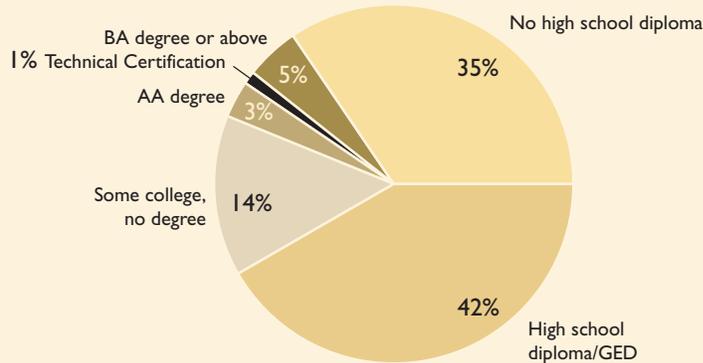
Santa Clara County – 2007



Data Source: 2007 Santa Clara County Homeless Census and Survey, Applied Survey Research
Analysis: Collaborative Economics

Trends in Homelessness by Education Attainment

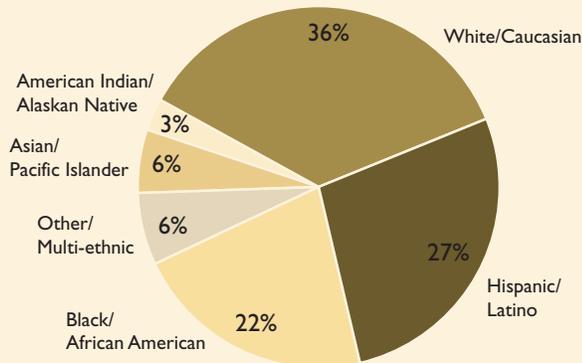
Santa Clara County – 2007



Data Source: 2007 Santa Clara County Homeless Census and Survey, Applied Survey Research
Analysis: Collaborative Economics

Trends in Homelessness by Ethnicity

Santa Clara County – 2007



Data Source: 2007 Santa Clara County Homeless Census and Survey, Applied Survey Research
Analysis: Collaborative Economics

- About the 2009 Index | 01
- Map of Silicon Valley | 02
- Table of Contents | 03
- 2009 Index Highlights | 04 | 05
- Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

- Environment 38 – 41
- Transportation 42-43
- Land Use 44-45
- Housing 46-49**
- Commercial Space 50-51

PLACE

GOVERNANCE 52 | 55

- Appendices 56 | 60
- Acknowledgments | 61

Commercial Space

After slowing since the end of 2007, demand for commercial space dropped precipitously in the last quarter of 2008, and vacancies shot up across all property types.

WHY IS THIS IMPORTANT?

This indicator tracks the supply of commercial space, rates of commercial vacancy and cost, which are leading indicators of regional economic activity. In addition to office space, commercial space includes R&D, industrial, and warehouse space. The change in the supply of commercial space, expressed as the absorption rate, reflects the amount of space rented, becoming available, and added through new construction. Gross absorption is a measure for total activity over a period while net absorption is the outcome. A negative change in the supply of commercial space shows a tightening in the commercial real estate market. The vacancy rate measures the amount of space that is unoccupied. Increases in vacancy, as well as declines in rents, reflect slowing demand relative to supply.

HOW ARE WE DOING?

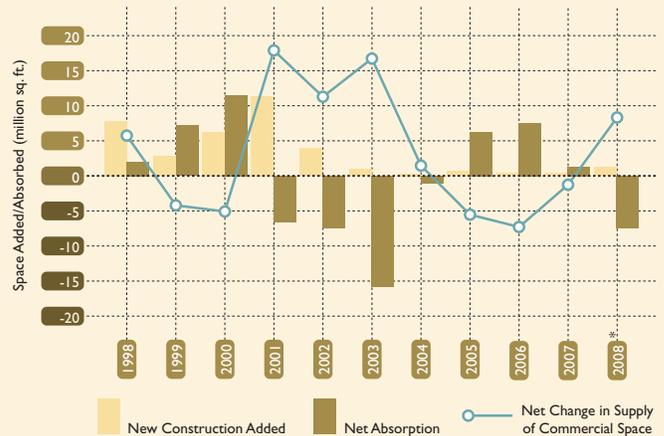
Silicon Valley's demand for commercial real estate slowed following the end of 2007 and dropped precipitously in the last quarter of 2008. As a result of falling demand and an addition of one million square feet of new commercial space, the net change in occupied space (absorption rate) entered negative territory for the first time in four years with a net loss of 7.6 million occupied square feet. After falling four years, vacancy rates increased across all commercial space categories, rising 8% overall. Climbing 105% from 2007, vacancies in Industrial Space increased by the largest margin of all commercial product categories. Compared to 2007, inflation-adjusted rents rose for Industrial (5%), Office (3%) and Warehouse (1%) Space but dropped 9% for R&D Space.

Reaching its peak in 2001 with 12.9 million square feet of space, the pace of commercial development drastically decreased over the years that followed. Office space has represented the lion's share of development throughout the past eight years and has recently been picking up following 2002. Development of R&D space dropped off after 2002 but accounted for over 90% of all new commercial space. Currently there are 922,000 square feet under construction and another 281,000 planned for development. There has been little development in industrial space since 2002; however, as of 2008 (Q1), 25,000 square feet is currently under development with another 40,000 planned. There has been no activity in warehouse development since 2002.

PLACE

Commercial Space

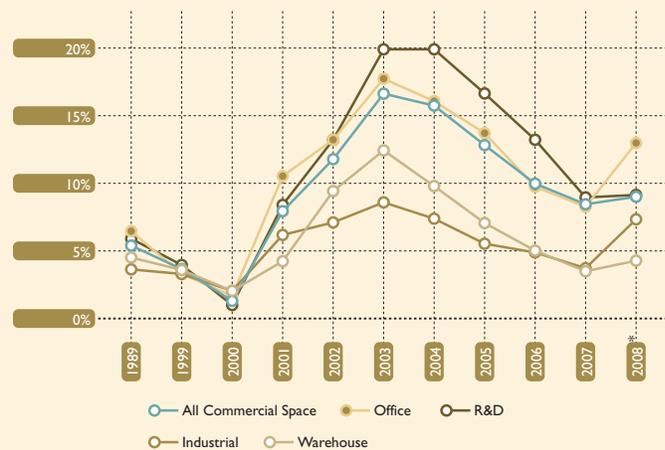
Change in Supply of Commercial Space
Santa Clara County



* As of November 2008
Data Source: Colliers International
Analysis: Collaborative Economics

Commercial Vacancy

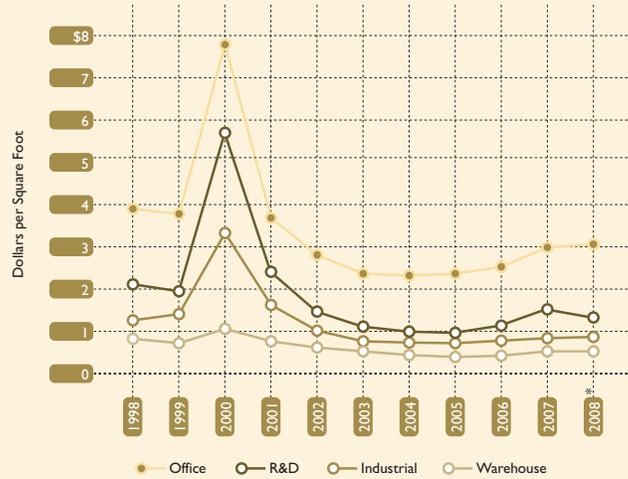
Annual Rate of Commercial Vacancy
Santa Clara County



* As of November 2008
Data Source: Colliers International
Analysis: Collaborative Economics

Commercial Rents

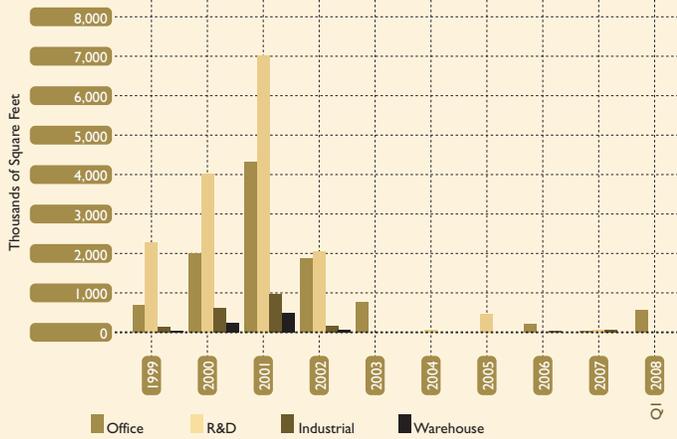
Annual Average Asking Rents
Santa Clara County



*As of November 2008
Data Source: Colliers International
Analysis: Collaborative Economics

New Commercial Development

By Sector
Silicon Valley



Data Source: Colliers International
Analysis: Collaborative Economics

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

Environment 38 - 41
Transportation 42-43
Land Use 44-45
Housing 46-49

Commercial Space
50-51

GOVERNANCE 52 | 55

Appendices 56 | 60
Acknowledgments | 61

PLACE

Civic Engagement

At higher rates than the nation, Silicon Valley residents are engaging in the political process and our foreign-born are seeking U.S. citizenship.

WHY IS THIS IMPORTANT?

An engaged citizenry shares in the responsibility to advance the common good, is committed to place and has a level of trust in community institutions. 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.

Throughout its history, the U.S. has attracted immigrants from around the world. Through naturalization, immigrants attain citizenship and full political participation in U.S. society. High rates of naturalization suggest a place is more open and accepting of people from diverse backgrounds. Also, higher levels of English proficiency and education correlate with higher naturalization rates among eligible immigrants.¹⁵

HOW ARE WE DOING?

The November 4, 2008 Presidential Election marked record voter turnout across the country. Up 10% from the last general election in 2004, 83% of Silicon Valley's registered voters came to the polls; while statewide 79% of eligible voters casted ballots, 7% more than in 2004. Absentee voting continues to grow – more than half of Silicon Valley voters (55%) and 42% statewide cast absentee ballots. This represents a considerable increase for both from 34% in 2004.

Since 2000, Silicon Valley voters have approved 81% of all local bond measures, including county, city and school district measures. Similar to statewide trends,¹⁶ school districts are responsible for the vast majority of these bond measures. In Silicon Valley, schools accounted for 77%, and cities 20%, of all proposed bond measures. In 2008, voters approved all ten bonds proposed in the region

Per capita, foreign-born residents in Silicon Valley (San-Jose,-Sunnyvale-Santa Clara MSA) are three- times more likely to seek either permanent residency or citizenship than nationally. While immigrants obtaining naturalized citizenship declined 13% from 2006 to 2007, those seeking legal permanent residency increased 6%. By comparison, the U.S. the rate of naturalization declined by 7% and the rate of legal permanent residency declined by 17% over the same period.

GOVERN

Voter Participation

Percentage of Eligible Voters Who Casted Ballots and Absentee Ballots in General Elections
Silicon Valley and California



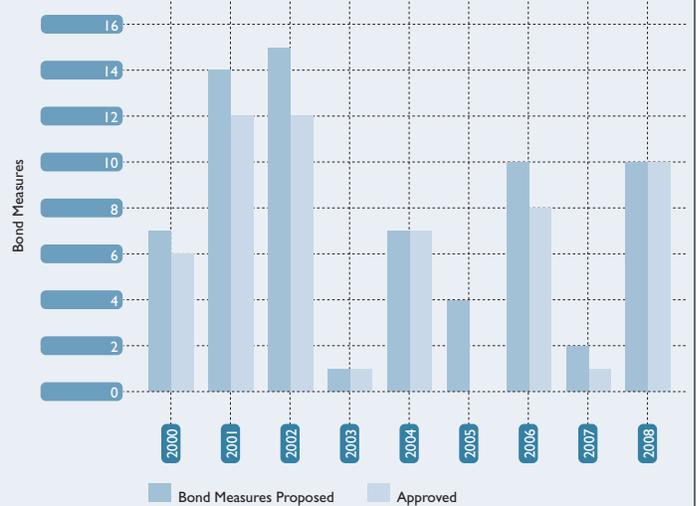
Data Source: California Secretary of State, Elections Division
Analysis: Collaborative Economics

Record Voter Turn-out 2004-2008

Silicon Valley **+10%**
California **+7%**

Local Bond Measures

On Ballot and Approved
Santa Clara and San Mateo Counties



Data Source: California Secretary of State Elections Division, Santa Clara County Registrar of Voters, and San Mateo County board of Elections
Analysis: Collaborative Economics

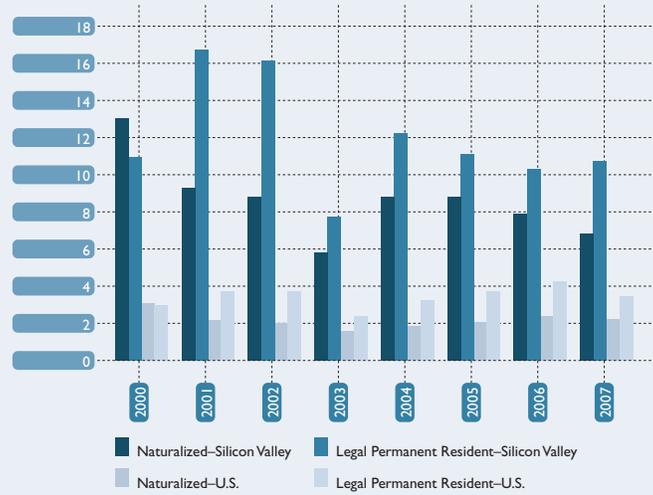
Since 2000, Silicon Valley voters have approved **81%** of all local bond measures

¹⁵ M. Fix, J. Passel, K. Suher. 2003. "Trends in Naturalization," Brief No. 3 in Series "Immigrant Families and Workers: Facts and Perspectives" Urban Institute.

¹⁶ According to the California Elections Data Archive, statewide, school districts are responsible for nearly 92% of bonds on ballots from 1995 to 2007.

Immigrants Obtaining Legal Status

Naturalized or Legal Permanent Resident



Data Source: U.S. Department of Homeland Security
Analysis: Collaborative Economics

Immigrants in Silicon Valley are **3 times** more likely to become citizens or permanent residents than in the U.S. as a whole

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

PLACE 38 | 51

Civic Engagement
52 – 53

Revenue
54-55

GOV.

Appendices | 56 | 60
Acknowledgments | 61

Revenue

The region's local governments are facing mounting fiscal challenges.

GOVERN

WHY IS THIS IMPORTANT?

Governance is defined as the process of decision-making and the process by which decisions are implemented. Many factors influence ability of local government to govern effectively, including the availability and management of resources. To maintain service levels and respond to a changing environment, local government revenue must be reliable. Economic fluctuations and state appropriation of locally generated revenue affect local revenues.

Property tax revenue is the most stable source of city government revenue, fluctuating much less over time than do other sources of revenue, such as sales, hotel occupancy and other taxes. Since property tax revenue represents less than a quarter of all revenue, other revenue streams are critical in determining the overall volatility of local government funding.

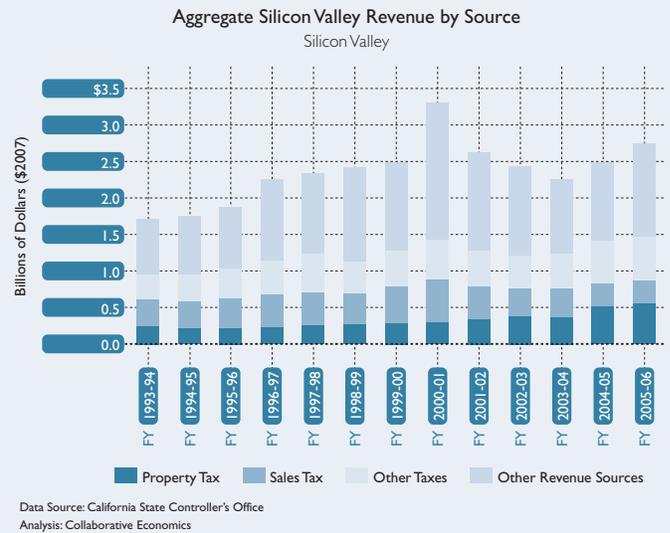
HOW ARE WE DOING?

Between fiscal years 2004-05 and 2005-06, Silicon Valley's city revenue increased by 10%. Most of this growth is in Other Revenue which includes intergovernmental transfers, special benefit assessments, fines, as well as permits and investments. Relative to 1990, revenue from sales tax is 15% lower while revenue from property tax grew 100%, other tax by 85% and revenue from other sources increased 55% over 1990 levels. According to the California State Controller, the current housing market downturn will result in slowing growth in property tax revenue beginning in the 2007-08 fiscal year that will likely continue the next three years as property values are reassessed.¹⁷

Although total revenues have grown, the demand for public services has also grown. In fiscal year 2006-07, county expenditures rose three times faster than revenues relative to 1998, and total general county expenditures exceeded total general county revenues by \$229,494,158 for the two-county region.

A looming issue for cities and counties alike is meeting pension obligations that are growing at a far faster rate than revenues. For one city in Silicon Valley, for example, just since fiscal year 2003-04, expenses related to meeting pension obligations for current and future retirees have expanded 166% while total revenues have only increased 21%. In fiscal year 2003-04, 2.4% of total revenue was dedicated to expenses related to pensions. This more than doubled in the year that followed, and in fiscal year 2007-08, 5.2% of revenue was allocated to meeting pension obligations. These reported expenses do not include costs related to healthcare insurance for retirees.

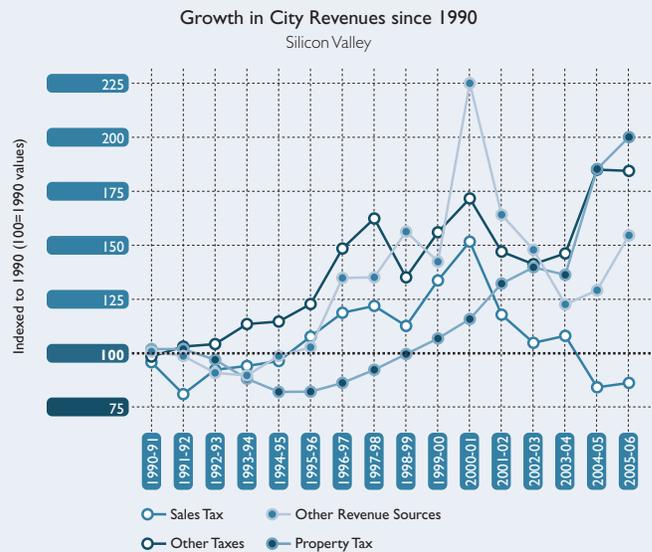
City Revenue



Change in revenues from previous year:

Property Taxes **+8%**
Sales Taxes **+2%**

City Revenue Trends



¹⁷ A provision under Proposition 8 allows for a temporary reduction in assessed value of real property that experiences a decline in market value. "Assessed Valuation Annual Report - Fiscal Year Ending June 30, 2008." Office of the Controller, State of California.

County Financials

Growth in Expenditures and Revenues
Silicon Valley



Data Source: California State Controller's Office
Analysis: Collaborative Economics

County Financials

Fiscal Year 2006-2007

Revenue	\$3,458,493,699
Expenditures	\$3,687,987,857

About the 2009 Index | 01
Map of Silicon Valley | 02
Table of Contents | 03
2009 Index Highlights | 04 | 05
Index at a Glance | 06 | 07

PEOPLE 08 | 11

ECONOMY 12 | 25

SOCIETY 26 | 37

PLACE 38 | 51

2004-2008

Pension Expenses **+166%**
City Revenue **+21%**

Pension Expenses as Percentage of Total Revenue

Citywide Revenues
A Silicon Valley City



Data Source: City in Silicon Valley
Analysis: Collaborative Economics

Civic Engagement
52 – 53

Revenue
54-55

GOV.

Appendices | 56 | 60
Acknowledgments | 61

Front Page Statistics

Area

Data are for Santa Clara and San Mateo Counties, Fremont, Newark, Union City, and Scotts Valley. Land Area data (except for Scotts Valley) is from the U.S. Census Bureau. State and County QuickFacts. Data is derived from Population Estimates, 2000 Census of Population and Housing, 1990 Census of Population and Housing, Small Area Income and Poverty Estimates, County Business Patterns, 1997 Economic Census, Minority- and Women-Owned Business, Building Permits, Consolidated Federal Funds Report, Census of Governments. Scotts Valley data is from the Scotts Valley Chamber of Commerce.

Population

Data for the Silicon Valley population come from the E-1: City/County Population Estimates with Annual Percent Change report by the California Department of Finance and are for Silicon Valley cities. Population estimates are for 2008.

Jobs

Jobs data for the front page statistic is based on Quarter 2 2008 employment estimates. Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than once. Data for Quarter 2 2008 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City.

Average Annual Earnings

Figures were derived from the EDD/Joint Venture: Silicon Valley Network data set and are reported for Fiscal Year 2008 (Q3 & Q4 2007, Q1 & Q2 2008). Wages were adjusted for inflation and are reported in first half of 2008 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics. Data for Quarter 2 2008 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City. Appendix B provides NAICS-based definitions for each of Silicon Valley's major areas of economic activity.

Age Distribution, Adult Educational Attainment, and Foreign Born

Data for age distribution, adult educational attainment, and foreign born (front page statistics) are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2007 American Community Survey. For education attainment, Some College includes Less than 1 year of college; Some college, 1 or more years, no degree; Associates degree; Professional certification.

Foreign Immigration and Domestic Migration

Data come from the E-6: County Population Estimates and Components of Change by county – July 1, 2000-2008 report by the California Department of Finance and are for Santa Clara and San Mateo counties. Estimates are for 2008 and are provisional.

Ethnic Composition

Data for ethnic composition (front page statistics) are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2007 American Community Survey.

People

Population Change and Net Migration Flows

Statistics are from the E-6: County Population Estimates and Components of Change by county – July 1, 2000-2008 report by the California Department of Finance and are for Santa Clara and San Mateo Counties. Estimates for 2008 are provisional. Net migration includes all legal and unauthorized foreign immigrants, residents who left the State to live abroad, and the balance of hundreds of thousands of people moving to and from California from within the United States.

Age Distribution

Data for age are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2007 American Community Survey.

Household Size

Statistics are from E-5: City/County Population and Housing Estimates - January 1, 2000 - 2008 report by the California Department of Finance. Data are based on Joint Venture's ZIP-Code-defined region of Silicon Valley.

Educational Attainment

Data for educational attainment are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2007 American Community Survey. For education attainment, some College includes: Less than 1 year of college; Some college, 1 or more years, no degree; Associates degree; Professional certification.

Total Science & Engineering Degrees Conferred and Foreign Students

Regional, California and U.S. data are from the National Center for Education Statistics. Regional data for the Silicon Valley includes the following post secondary institutions: Menlo College, Cogswell Polytechnic College, University of San Francisco, University of California (Berkeley, Davis, Santa Cruz, San Francisco), Santa Clara University, San Jose State University, San Francisco State University, Stanford University, Golden Gate University. For comparison purposes, data for post secondary institutions was also collected for the San Diego region: Art Institute of California San Diego, California College San Diego, Coleman College, ITT Technical Institute San Diego, National University (La Jolla, CA), Point Loma Nazarene University, Remington College San Diego Campus, San Diego Christian College, San Diego State University, San Diego State University Imperial Valley Campus, University of California San Diego, University of Phoenix San Diego Campus, and University of San Diego. The academic disciplines include: computer and information sciences, engineering, engineering-related technologies, biological sciences/life sciences, mathematics, physical sciences and science technologies. Data were analyzed based on citizenship and level of degree (bachelors, masters or doctorate).

Economy

Employment

Monthly Jobs and Change in Total Nonfarm

Monthly jobs data are from the Bureau of Labor Statistics, Current Employment Statistics Survey (CES). Data is not seasonally adjusted, and includes total nonfarm in the region. Data is for the San Jose-Sunnyvale-Santa Clara MSA. December data is preliminary.

Quarterly Job Growth

Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than once. Data for Quarter 2 2008 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City.

Major Areas of Economic Activity

Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than once. All industries are included in the major areas of economic activity, Quarter 2 2008 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City.

Green Business Establishments & Jobs

The accounting of green business establishments and jobs is based on the methodology originally developed on behalf of Next 10 for the California Green Innovation Index. This database has been built through the use of multiple data sources for the identification and classification of green businesses (such as New Energy Finance, Cleantech GroupTM, LLC and others) and leveraged a sophisticated internet search process. The National Establishments Time-Series (NETS) database based on Dun & Bradstreet establishment data was sourced to extract business information such as jobs. The operational definition of green is based primarily on the definition of "cleantech" established by the Cleantech GroupTM, LLC. This sample offers a conservative estimate of the green industry in California.

Income

Real per Capita Income

Total personal income and population data are from Moody's Economy.com. Income values are inflation-adjusted and reported in 2008 dollars, using the CPI for the U.S. City Average from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo Counties.

Income Distribution

Data for Distribution of Income are from the American Community Survey from the U.S. Census Bureau. Income ranges are in nominal values. Silicon Valley data includes Santa Clara and San Mateo Counties. Income is the sum of the amounts reported separately for the following eight types of income: wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income.

Median Household Income

Data for Median Household Income are from the American Community Survey from the U.S. Census Bureau. All income values are adjusted into 2008 U.S. dollars, using CPI for the U.S. City Average from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo Counties. Income is the sum of the amounts reported separately for the following eight types of income: wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income.

Relative Cost of Living

The Regional Cost of Living index was provided by Moody's Economy.com. San Francisco data is based on the San Francisco-San Mateo-Redwood City, Metropolitan Division. San Jose data is based on San Jose-Santa Clara-Sunnyvale Metropolitan Statistical Area.

Employer Contribution to Employee Pensions and Insurance Funds

Data are from the Bureau of Economic Analysis. Employer contributions to employee pensions and insurance funds are the following components of personal income: employer payments to private and government employee retirement plans, private group health and life insurance plans, privately administered workers' compensation plans, and supplemental unemployment benefit plans. Employment numbers are based on the wage and salary employment provided by the Bureau of Economic Analysis. In addition, compensation is the total average compensation of employees received divided by the total full-time and part-time wage and salary employment.

Innovation

Value Added per Employee

Value added per employee is calculated as regional Gross Domestic Product (GDP) divided by the total employment. GDP estimates the market value of all final goods and services. GDP and employment data are from Moody's Economy.com. Silicon Valley data is for Santa Clara and San Mateo Counties.

Global Patent Collaboration and Silicon Valley Percentage of California & U.S. Patents

Patent data is provided by the U.S. Patent and Trademark Office and consists of utility patents granted by inventor. 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 residents of Silicon Valley cities. Data are based on Joint Venture's city defined region of Silicon Valley.

Green Technology Patents

Data comes from 1790 Analytics, Patent Search by Technology (solar & wind energy generation, energy storage, fuel cells, hybrid systems) using data from the U.S. Patents & Trade Office. Data are based on Joint Venture's ZIP-Code-defined region of Silicon Valley.

Establishments from Foreign Companies in Silicon Valley

Information on foreign firms with affiliates in Silicon Valley came from Uniworld Business Publications. The industry groups are based on the North American Industry Classification system (NAICS).

Venture Capital

Data are provided by The MoneyTree™ Report from PricewaterhouseCoopers and the National Venture Capital Association based on data from Thomson Reuters. 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. Values are inflation-adjusted and reported in 2008 dollars, using the CPI for the U.S. City Average from the Bureau of Labor Statistics.

Venture Capital Investment in Clean Technology & Cleantech Venture Capital Investment by Segment

Data provided by Cleantech Group™, LLC. For this analysis, venture capital is defined as disclosed clean tech investment deal totals. Data are based on Joint Venture's ZIP-code-defined region of Silicon Valley. The Cleantech Group describes cleantech as new technology and processes, spanning a range of industries that enhance efficiency, reduce or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. See box for cleantech industry segments.

Data provided by Renaissance Capital's IPOhome.com and based on companies that filed and priced their Initial Price Offerings (IPOs). Company location is determined by corporate address on IPOhome.com. Data are based on Joint Venture's city defined region of Silicon Valley.

IPO Pricings in Clean Technology

Data provided by Cleantech Group™, LLC. Data are based on Joint Venture's city defined region of Silicon Valley. The Cleantech Group describes cleantech as new technology and processes, spanning ranges of industries that enhance efficiency, reduce, or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. Company location based on corporate address provided by Cleantech. Count based on IPO pricings each year.

Mergers and Acquisitions

Data provided by FactSet Mergerstat LLC. Data are based on Joint Venture's ZIP-code-defined region of Silicon Valley. All merger and acquisition deals do not disclose value. Total values are based on all of the deals with values disclosed. All forms of mergers and acquisitions are included in count except for joint ventures.

Mergers and Acquisitions in Clean Technology

Data provided by Cleantech Group™, LLC. Data are based on Joint Venture's city defined region of Silicon Valley. The Cleantech Group describes cleantech as new technology and processes, spanning ranges of industries that enhance efficiency, reduce, or eliminate negative ecological impact, and improve the productive and responsible use of natural resources. The following are the types of mergers and acquisitions included in the count: mergers, acquisitions, divestitures, and minority stake transactions.

FDA Approved Therapeutics Developed by Silicon Valley Companies

Data is from MedTrack and was provided by BayBio. Silicon Valley data is based on Joint Venture's ZIP-Code-defined region of Silicon Valley.

Broadband Penetration

Map is from California Broadband Taskforce's The State of Connectivity Report published in January 2008. In the report, Silicon Valley is part of a larger regional definition of the San Francisco Bay Area, but the map shows a close up view of the Silicon Valley.

Society

Preparing for Economic Success

High School Graduation Rates and Meeting UC/CSU Entrance Requirements

Department of Education. This is the first year statistics have been derived from student level records. California Legislature enacted SB1453, which establishes two key components necessary for a long-term assessment and accountability system:

- Assignment of a unique, student identifier to each K-12 pupil enrolled in a public school program or in a charter school that will remain with the student throughout his or her academic 'career' in the California public school system; and
- Establishment of a longitudinal database of disaggregated student information that will enable state policy-makers to determine the success of its program of educational reform.

Historical data are final and are from the California Department of Education. The methodology used calculates an approximate probability that one will graduate on time by looking at the number of 12th grade graduates and number of 12th, 11th, 10th and 9th grade dropouts over a four year period.

High School Dropout rates

Data for the 2006/2007 academic year are provided by the California Department of Education. This is the first year statistics have been derived from student level records. California Legislature enacted SB1453, which establishes two key components necessary for a long-term assessment and accountability system:

- Assignment of a unique, student identifier to each K-12 pupil enrolled in a public school program or in a charter school that will remain with the student throughout his or her academic 'career' in the California public school system; and
- Establishment of a longitudinal database of disaggregated student information that will enable state policy-makers to determine the success of its program of educational reform.

Historical data are final and are from the California Department of Education. The methodology uses a 4-year derived dropout rate that is an estimate of the percent of students who would drop out in a four year period based on data collected for a single year. Beginning in 2002-03, the California Department of Education adopted the National Center for Educational Statistics (NCEES) Dropout definition. Following the new guidelines, the California Department of Education now defines a dropout as a person who: 1) Was enrolled in grades 7, 8, 9, 10, 11 or 12 at some time during the previous school year AND left school prior to completing the school year AND has not returned to school as of Information Day, OR 2) Did not begin attending the next grade (7, 8, 9, 10, 11 or 12) in the school to which they were assigned or in which they had pre-registered or were expected to attend by Information Day.

Share of Students who have taken Algebra II

Data are from the California Department of Education, California Standards Tests (CST) Research Files for San Mateo and Santa Counties. In 2003, the California Standards Tests (CST) replaced the Stanford Achievement Test, ninth edition (SAT/9). The CSTs in English-language arts, mathematics, science, and history-social science are administered only to students in California public schools. Except for a writing component that is administered as part of the grade four and grade seven English-language arts tests, all questions are multiple-choice. These tests were developed specifically to assess students' knowledge of the California content standards. The State Board of Education adopted these standards, which specify what all children in California are expected to know and be able to do in each grade or course. The 2008 Algebra II CSTs were required for students who were enrolled in the grade/course at the time of testing or who had completed a course during the 2007-08 school year, including 2007 summer school. The following types of scores are reported by grade level and content area for each school, district, county, and the state: % Advanced, % Proficient, % Basic, % Below Basic and % Far Below Basic is the percentage of students in the group whose scores were at this performance standard. The state target is for every student to score at the Proficient or Advanced Performance Standard.

Early Education

Preschool Enrollment

Data for preschool enrollment are for Santa Clara and San Mateo Counties and are derived from the United States Census Bureau, 2007 American Community Survey.

Kindergarten Readiness and Teacher Expectations

Cleantech Industry Segments

Energy Generation

Wind
Solar
Hydro/Marine
Biofuels
Geothermal
Other

Energy Storage

Fuel Cells
Advanced Batteries
Hybrid Systems

Energy Infrastructure

Management
Transmission

Energy Efficiency

Lighting
Buildings
Glass
Other

Transportation

Vehicles
Logistics
Structures
Fuels

Water & Wastewater

Water Treatment
Water Conservation
Wastewater Treatment

Air & Environment

Cleanup/Safety
Emissions Control
Monitoring/Compliance
Trading & Offsets

Materials

Nano
Bio
Chemical
Other

Manufacturing/Industrial

Advanced Packaging
Monitoring & Control
Smart Production

Agriculture

Natural Pesticides
Land Management
Aquaculture

Recycling & Waste

Recycling
Waste Treatment

Source: Cleantech Group™, LLC

APPENDIX A

The results are based on a study conducted by Applied Survey Research and commission by Santa Clara Partnership for School Readiness and the Silicon Valley Community Foundation. In 2008, the study focused on both Santa Clara County and San Mateo County, and looks at kindergarten readiness and teacher expectation data. The Kindergarten readiness data is obtained via the Kindergarten Observation Form. Kindergarten readiness scores are based on a 1-4 scale (1 = not yet, 2 = beginning, 3 = in progress, 4 = proficient). Don't know / Not observed responses are not included. Means in Santa Clara County are based on the following sample sizes: 682 for 2004 data, 768-796 for 2005 data, 713 for 2006 data, and 710-718 for 2008 data (weighted n's). 2004-2006 data are weighted for EL status; 2008 data are weighted for ethnicity. Means in San Mateo County are based on the following sample sizes: 669-670 for 2005 data and 646-654 for 2008 data (weighted n's). 2005 and 2008 data are weighted for EL status. The teacher expectation data is based upon a Kindergarten Observation Form I and Teacher Survey on Importance of Readiness Skills. In Santa Clara County, means are based on sample sizes that range from 697-699 for 2004 data, 768-796 for 2005 data, and 713 for 2006 data, and 710-718 for 2008 data (weighted n's). 2004-2006 data are weighted for EL status; 2008 data are weighted for ethnicity. In San Mateo County, means are based on sample sizes that range from 669-670 for 2005 data, and 646-654 for 2008 data (weighted n's). 2005 and 2008 data are weighted for EL status.

Third Grade Reading Ability and Reading Proficiency by Race/Ethnicity

Data are from the California Department of Education, CAT/6 Research Files for San Mateo and Santa Clara Counties. 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; student's scores are compared to national norms and do not reflect absolute achievement. This indicator tracks third grade reading scores on the California Achievement Test, sixth edition (CAT/6), which measures performance relative to a national distribution.

Arts & Culture

Contributions to the Arts

Reported contributions to art/culture organizations come from "1st ACT Value Proposition: The Opportunity of a Creative Culture" by McKinsey & Company and 1st ACT Silicon Valley (December 2006). Silicon Valley includes the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA) and San Mateo County.

Quality of Health

Child Immunizations

The Santa Clara County Public Health Department's annual Kindergarten Retrospective Survey (KRS) is a primary source of information about childhood immunization coverage in California. This survey provides estimates of immunization coverage among kindergarten students at various age checkpoints. This survey is conducted every two years. The 2008 sample consists of 2,574 kindergarten students (3% of kindergarteners in the state). Children in this sample were born between 2001 and 2003. Since this is a retrospective survey, estimates of immunization coverage represent levels among toddlers approximately 3-4 years ago. 4:3:1 refers to four or more doses of DTaP, three or more doses of Polio, and one or more doses of MMR. California data is from the California Department of Health Services.

Overweight Youth and Adults

Data on adult and adolescent obesity are based on results from the California Health Information Survey, UCLA Center for Health Policy Research. For adults, "Overweight or Obese" include the respondents who have a Body Mass Index (BMI) of 25 or greater. For Adolescents, "Overweight or Obese" includes the respondents who have a BMI in the highest 95 percentile with respect to their age and gender. Data are for Santa Clara and San Mateo Counties.

Share of Youth in Health Fitness Zone by Age

The indicator measures the share of students who met the criterion-referenced standard for the body composition component of the California Fitness Test. Data is for Santa Clara and San Mateo Counties. The California Department of Education administers the Physical Fitness Test in grades five, seven, and nine in California public schools. The test used for physical fitness testing is the FITNESSGRAM®, designed for this purpose by the State Board of Education.

Share of Population ever Diagnosed with Diabetes

Data of population ever diagnosed with diabetes are based on results from the California Health Information Survey, UCLA Center for Health Policy Research.

Access to Health Insurance

All data on insurance coverage are drawn from the California Health Interview Survey, carried out by the UCLA Center for Health Policy Research. For health insurance coverage, the indicator measures the share of people who answered "yes" when asked by the interviewer whether or not they are covered by health insurance. Data are for Santa Clara and San Mateo Counties. The indicator gives no indication of the quality or comprehensiveness of insurance coverage.

Preventable Hospitalizations

Data is provided by the Office of Statewide Health Planning and Development Healthcare Information Resource Center (OSHPC). Data prior to 2003 was based on a different software program and is not comparable to the 2003 and more recent data. Three prevention quality indicators were established based on hospital discharges for the following conditions: chronic obstructive pulmonary disease, congestive heart failure, hypertension. Data is presented for Silicon Valley (combined numbers for San Mateo and Santa Clara Counties) and California from 2003-most recent year. Data was supplied with observed numerator based upon hospital discharges, denominator based on population as defined by U.S. Census. A rate was calculated per 100,000 people.

Teen Birth Rate

Data is from the California Department of Public Health, Vital Statistics Query System. Data is defined as rate of live births per 1,000 female population aged 15 to 19 across all ethnicities. Other variables include: Years (1994-2006), and geography (Santa Clara County, San Mateo County and California).

Safety

Child Abuse

Child maltreatment data are from the California Children's Services Archive, CWS/CMS 2007 Quarter 4 Extract. Data are downloaded from the Center for Social Services Research at the University of California at Berkeley. Population data comes from the California Department of Finance. The statewide Referral Rate for a given year is computed by dividing the unduplicated state count of children with an abuse or neglect allegation by the state child population and then multiplying by 1,000 (for a referral rate per 1,000 children in the population). Similarly, each county's referral rate for a given year is calculated by dividing the unduplicated county count of children with an abuse or neglect allegation by the county child population and then multiplying by 1,000. The Substantiation Rate (both state and county) for a given year is computed by dividing the unduplicated count of children with a substantiated allegation by the child population and multiplying by 1,000. Children with missing county assignment are included in the statewide calculation. Given the methods outlined above, county values may not sum to statewide total. Data are for Santa Clara and San Mateo Counties.

Adult & Juvenile Felony Offenses/Drug & Alcohol Rehabilitation Services

Crime data are from the FBI's Uniform Crime Reports, as reported by the California Department of Justice in their annual "Criminal Justice Profiles" (<http://caag.state.ca.us/cjsc/pubs.html>). Felony offenses include violent, property and drug offenses. Drug rehabilitation data include the number of clients utilizing residential and outpatient drug and alcohol rehabilitation services provided by Santa Clara and San Mateo counties. Data are an unduplicated count of residents served.

School Safety

Suspension data was obtained from the California's Department of Education, Dataquest site. The school year 2004-2005 represents the first school year for which this suspension data is available. Numbers reflect suspensions across all grades (K-12) and are presented as a percentage of enrollment. Data was collected for Santa Clara County, and San Mateo County and California.

Place

Environment

Protected Open Space

Data are from GreenInfo Network's Bay Area Protected Lands Database, and are for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City. Data include lands owned by public agencies and non-profit organizations that are protected primarily for open space uses and that are accessible to the general public without any special permission. Previously, parks less than 10 acres were excluded from the dataset, but in the 2006 update, there was no acreage cut-off. The database was updated in 2007; slight discrepancies in the data come from areas of SF Watershed lands were corrected to not include areas where 280 passed through. Corrections were also made to Don Edwards Wildlife Area.

Renewable Energy

Data is from the California Solar Initiative, December 17, 2008 extract. Data covers approved rebates, and rebates that were cancelled or withdrawn are not included.

Water Resources

Data for this indicator were provided by the Bay Area Water Supply and Conservation Agency (BAWSCA). Data is compiled annually among BAWSCA agencies to update key information and assist in projecting suburban demand and population. Gross per capita consumption includes residential, non-residential, recycled and unaccounted for water use among the Santa Clara and San Mateo County BAWSCA agencies.

South Bay Water Quality

Data for Mercury concentration in fish are from the San Francisco Estuary Institute, Containment Concentrations in Sport Fish from San Francisco Bay, 2006. Data is for white sturgeon. Annual loads of mercury from the Guadalupe River are from the San Francisco Estuary Institute, The Pulse of the Estuary, 2008.

Trends in Waste Diversion

Data is from the California Integrated Waste Management Board. San Mateo and Santa Clara jurisdictional data for waste diversion rates and tons of waste disposed were used to calculate Silicon Valley waste diversion rates.

Transportation

Means of Commute

Data on the means of commute to work are from the United States Census Bureau, American Community Survey. Data are for workers 16 years old and over residing in Santa Clara and San Mateo Counties commuting to the geographic location at which workers carried out their occupational activities during the reference week whether or not the location was inside or outside the county limits. The data on employment status and journey to work

relate to the reference week; that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed. This week is not the same for all respondents since the interviewing was conducted over a 12-month period. The occurrence of holidays during the relative reference week could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status. People who used different means of transportation on different days of the week were asked to specify the one they used most often, that is, the greatest number of days. People who used more than one means of transportation to get to work each day were asked to report the one used for the longest distance during the work trip. The category, "Car, truck, or van," includes workers using a car (including company cars but excluding taxicabs), a truck of one-ton capacity or less, or a van. The category, "Public transportation," includes workers who used a bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, or ferryboat, even if each mode is not shown separately in the tabulation. The category "Other Means" includes taxicab, motorcycle, bicycle and other means that are not identified separately within the data distribution.

Alternative Fuel Vehicles Registered

Alternative fuel vehicle data are provided by R.L. Polk & Co. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City. Data includes newly registered vehicles for new and used vehicles.

Vehicle Miles of Travel per Capita & Gas Prices

Vehicle Miles Traveled (VMT) is defined as total distance traveled by all vehicles during selected time period in geographic segment. VMT estimates are from the California Department of Transportation's "2007 California Motor Vehicle Stock, Travel, and Fuel Forecast." Data includes annual total VMT on State highways and non-state highways. In order to calculate VMT, Caltrans multiplies the road section length (length in miles along the centerline of the roadway) by Average Annual Daily Traffic (AADT). AADT are actual traffic counts that the city, county, or state have taken and reported to the California Department of Transportation. To compute per-capita values, Revised County Population Estimates, 1970-2007, December 2007 from the California Department of Finance were used. Gas prices are average annual retail gas prices for California, and come from the Weekly Retail Gasoline and Diesel Prices (Cents per Gallon, Including Taxes) dataserries reported by the U.S. Department of Energy, Energy Information Administration. Gas prices are All Grades All Formulations Retail Gasoline Prices (including taxes) and have been adjusted into first half of 2008 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics.

Fuel Consumption

Fuel consumption data are from the Caltrans, 2007 "California Motor Vehicle Stock, Travel, and Fuel Forecast" and include estimates for diesel and gasoline. Figures for 2007 are projections. Silicon Valley data is for Santa Clara and San Mateo Counties. To compute per-capita values, Revised County Population Estimates, 1970-2007, December 2007 from the California Department of Finance were used.

Transit Use

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. To compute per-capita values, Revised County Population Estimates, 1970-2007, December 2007 from the California Department of Finance were used.

Land Use

Residential Density

Joint Venture: Silicon Valley Network conducted a land-use survey of all cities within Silicon Valley. Collaborative Economics completed survey compilation and analysis. Until this year, participating cities included: Atherton, Belmont, Cupertino, Foster City, Fremont, Gilroy, Hillsborough, Los Altos Hills, Los Gatos, Monte Sereno, Morgan Hill, Mountain View, Newark, Palo Alto, Redwood City, San Carlos, San Jose, San Mateo, Santa Clara, Saratoga, Sunnyvale, and Union City. Santa Clara and San Mateo Counties are also included. This year, the survey was expanded to include more cities along the 101 corridor: Brisbane, Burlingame, Millbrae, San Bruno, and South San Francisco. Most recent data are for fiscal year 2008 (July '07-June '08). The average units per acre of newly approved residential development are reported directly for each of the cities and counties participating in the survey.

Housing and Development Near Transit

Data are from Joint Venture: Silicon Valley Network Survey of Cities. The number of new housing units and the square feet of commercial development within one-quarter mile of transit are reported directly for each of the cities and counties 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).

Adoption of Green Building Policies

Data are from Joint Venture: Silicon Valley Network Survey of Cities. In recent years, cities have adopted green building codes, and in July of this year California approved statewide codes. In order to begin tracking achievements in this area, this year's survey included questions related to green building codes.

Housing

Building Affordable Housing

Data are from the Joint Venture: Silicon Valley Network of Survey Cities. 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) estimates of median income to calculate the number of units affordable to low-income households in their jurisdiction.

Rental Affordability

Data on average rental rates are from RealFacts survey of all apartment complexes in Santa Clara and San Mateo Counties of 40 or more units. Rates are the prices charged to new residents when apartments turn over and have been adjusted into 2008 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics.

Home Affordability

Data are from the California Association of Realtors' (CAR) Housing Affordability Index. CAR stopped producing the Housing Affordability Index for all homebuyers since the end of 2005 and now produces a Housing Affordability Index for first-time buyers that have been updated historically to 2003. The data for Silicon Valley includes Santa Clara and San Mateo County, and based on the median price of existing single-family homes sold from CAR's monthly existing home sales survey, the national average effective mortgage interest rate as reported by the Federal Housing Finance Board, and the median household income as reported by Caritas/NPDC. Quarterly Sales Volume for Existing Single Family Detached Home Sales data were provided by DataQuick Information Systems.

Residential Foreclosure Activity

Silicon Valley foreclosure data is for all home types and comes from DataQuick Information Systems. Data are based on Joint Venture's ZIP-code-defined region of Silicon Valley.

Trends in Homelessness

Data are provided from the 2005 and 2007 Santa Clara County Homeless Census and Survey by Applied Survey Research. Surveys followed the U.S. Department of Housing and Urban Development, Office of Community Planning and Development's Guide to Counting Unsheltered Homeless People.

Commercial Space

Commercial Space, Vacancy, Rents, and Development

Data are from Colliers International. Commercial space includes office, R&D, industrial and warehouse space. The vacancy rate is the amount of unoccupied space and is calculated by dividing the sum of the direct vacant and sublease vacant space by the building base. The vacancy rate does not include occupied space that is presently being offered on the market for sale or lease. Net absorption is the change in occupied space during a given time period. Data for commercial space, vacancy, and rents cover Santa Clara County. Commercial Development data are for San Mateo and Santa Clara Counties. Average asking rents have been adjusted into 2008 dollars 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.

Governance

Civic Engagement

Voter Participation

Data are from the California Secretary of State, Elections and Voter Information Division and the California State Archives Division. The eligible population is determined by the Secretary of State using Census population data provided by the California Department of Finance. Data are for Santa Clara and San Mateo counties.

Support for Local Bonds

Data for the most current ballot bond initiatives are obtained from the Santa Clara County Registrar of Voters and San Mateo County Board of Elections. Past local bond voting results are obtained from the California Elections Data Archive (CEDA) - a joint project of the Center for California Studies and Institute for Social Research of California State University, Sacramento, and the Secretary of State. Following each local election, CEDA collects and compiles results from city, county, school district, and local ballot measure elections. The reports are completed in July of each year and include local election results from the previous calendar year. Data is presented for years 2000 to 2008.

Immigrants Applying for Citizenship

Data provided by the U.S. Department of Homeland Security for San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA) and the U.S. Data for population in the San Jose MSA and the U.S. are provided by the U.S. Census Bureau. A rate of citizenship for naturalization and legal permanent resident was calculated by dividing numbers of immigrants applying by population (1,000).

Revenue

City Revenue

Data for city revenue are from the State of California Cities Annual Report. 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 sales of bonds), voter-approved indebtedness property tax and sales of bonds and notes. The "other taxes" and "other revenue" include revenue sources such as transportation taxes, transient lodging taxes, business license fees, other non-property taxes and intergovernmental transfers. Data are for Silicon Valley cities.

County Financials

Data for county financials are from the State of California Counties Annual Report. Data include San Mateo and Santa Clara Counties. Data includes all revenue sources to cities and expenditures. The "other taxes" and "other revenue" include revenue sources such as transportation taxes, transient lodging taxes, business license fees, other non-property taxes, and intergovernmental transfers. Data have been adjusted for inflation and are reported in first half of 2008 dollars using the U.S. city average Consumer Price Index (CPI) of all urban consumers, published by the Bureau of Labor Statistics.

Changing Share of City/County Budget for Pensions

Data provided by an undisclosed city in Silicon Valley. In the fiscal year ending 2005, the City increased its pension benefit to the non-public safety employees from 2.0% at age 55 to 2.7% at age 55. Expenses related to pension obligations represented here do not include expenses for healthcare coverage. The Citywide Revenues include all revenues collected by the city and include those revenues collected by the city's utility funds.

Silicon Valley Major Areas of Economic Activity 2007

	Employment	% of Total Silicon Valley Employment	Employment Concentration (relative to U.S.)
Information Products & Services	285,614	20.5%	4.8
Software	86,910	6.2%	5.7
Computer Hardware	39,321	2.8%	20.5
Semiconductor & Semiconductor Equipment Manufacturing	38,926	2.8%	16.1
Electronic Component Manufacturing	29,082	2.1%	5.7
I.T.Wholesale Trade	22,431	1.6%	3.8
Internet & Information Services	22,116	1.6%	4.8
Instrument Manufacturing	21,691	1.6%	5.1
Communications Services & Equipment Manufacturing	19,316	1.4%	1.6
Other Media/Broadcasting	3,904	0.3%	0.6
I.T.Repair Services	1,918	0.1%	2.1
Life Sciences	33,311	2.4%	2.8
Medical Devices	13,093	0.9%	2.2
Pharmaceuticals	10,587	0.8%	4.1
Biotechnology	9,631	0.7%	2.9
Innovation & Specialized Services	152,218	10.9%	1.1
Technical & R&D	50,009	3.6%	2.4
Personnel	32,412	2.3%	0.9
Management Services & Offices	24,655	1.8%	0.9
Specialized Financial Services	22,273	1.6%	0.9
Legal	11,327	0.8%	0.9
Marketing/Ad/PR	6,568	0.5%	0.9
Design	4,974	0.4%	1.2
Business Infrastructure	64,187	4.6%	1.0
Facilities	39,903	2.9%	1.2
Administrative Services	24,284	1.7%	0.8
Community Infrastructure	790,534	56.8%	0.8
Retail	139,422	10.0%	0.9
Health & Social Services	122,207	8.8%	0.7
Accommodation & Food Services	105,749	7.6%	0.9
Education	96,032	6.9%	0.8
Construction	76,582	5.5%	0.9
Consumer Services	43,495	3.1%	0.9
Wholesale Trade	38,017	2.7%	0.7
Transportation	27,878	2.0%	1.7
Federal Government Administration	25,732	1.8%	1.9
Arts, Entertainment, & Recreation	24,939	1.8%	1.0
Consumer Financial Services	24,273	1.7%	0.6
Goods Movement	23,630	1.7%	0.7
Local Government Administration	11,967	0.9%	0.3
Nonprofits	11,727	0.8%	0.9
Other (Private Households & Unclassified Industries)	11,425	0.8%	1.4
Utilities	5,169	0.4%	0.7
Warehousing & Storage	2,213	0.2%	0.3
State Government Administration	80	0.0%	0.0
Other Manufacturing	66,381	4.8%	0.5
Other Primary & Fabricated Metal Manufacturing	16,767	1.2%	0.8
Diversified Ag & Food Manufacturing	15,289	1.1%	0.5
Other Misc. Manuf. & Space & Defense Manufacturing	11,700	0.8%	1.4
Other Machinery & Equipment Manufacturing	11,113	0.8%	0.4
Other Petrochemical Manufacturing	5,198	0.4%	0.3
Textile, Wood, & Furniture Manufacturing	4,078	0.3%	0.2
Paper & Packaging Manufacturing	1,912	0.1%	0.4
Mining	325	0.0%	0.0

Cells highlighted in green indicate that industry is more concentrated in Silicon Valley than the U.S.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
 Analysis: Collaborative Economics

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BayBio
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California Department of Education
California Department of Finance
California Department of Health Care Services
California Department of Justice
California Department of Public Health
California Department of Social Services
California Department of Transportation
California Employment Development Department
California Integrated Waste Management Board
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Caltrain
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San Francisco Estuary Institute
San Mateo County
San Mateo County Board of Elections
San Mateo County Human Services Agency, Planning & Evaluation
Santa Clara County
Santa Clara County Department of Alcohol & Drug Services,
Alcohol & Drug Services Research Institute
Santa Clara County Partnership for School Readiness
Santa Clara County Public Health Department
Santa Clara County Registrar of Voters
Silicon Valley City Managers
Silicon Valley Community Foundation
U.S. Bureau of Labor Statistics
U.S. Census Bureau
U.S. Department of Commerce
U.S. Department of Energy
U.S. Department of Homeland Security
U.S. Patent and Trademark Office
UCLA Center for Health Policy Research
United Way Silicon Valley
Uniworld Business Publications
Valley Transportation Authority
Walls & Associates

JOINT VENTURE: SILICON VALLEY NETWORK

Established in 1993, 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 and emerging leaders—from business, government, academia, labor and the broader community—to spotlight issues, launch projects, and work toward innovative solutions.

SILICON VALLEY COMMUNITY FOUNDATION

Serving all of San Mateo and Santa Clara Counties, Silicon Valley Community Foundation is a partner and resource to organizations improving the quality of life in our region, and to those who want to give back locally, nationally and internationally.

Joint Venture: Silicon Valley Network Investors Council

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SPECIAL ANALYSIS

ECONOMIC RESTRUCTURING AND WORKFORCE TRANSITIONS

HOW IS SILICON VALLEY'S INDUSTRY MIX CHANGING AND WHAT DOES THIS MEAN FOR ECONOMIC OPPORTUNITY IN THE REGION?

INDEX OF SILICON VALLEY

2009

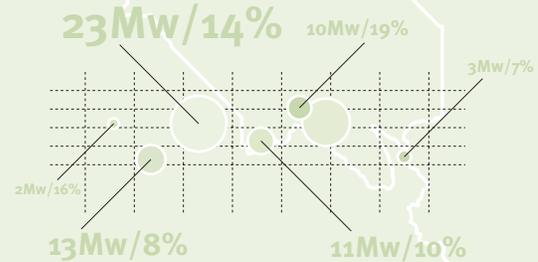
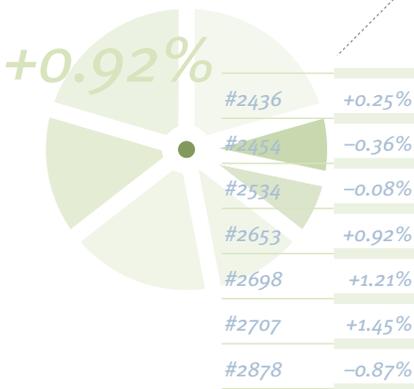
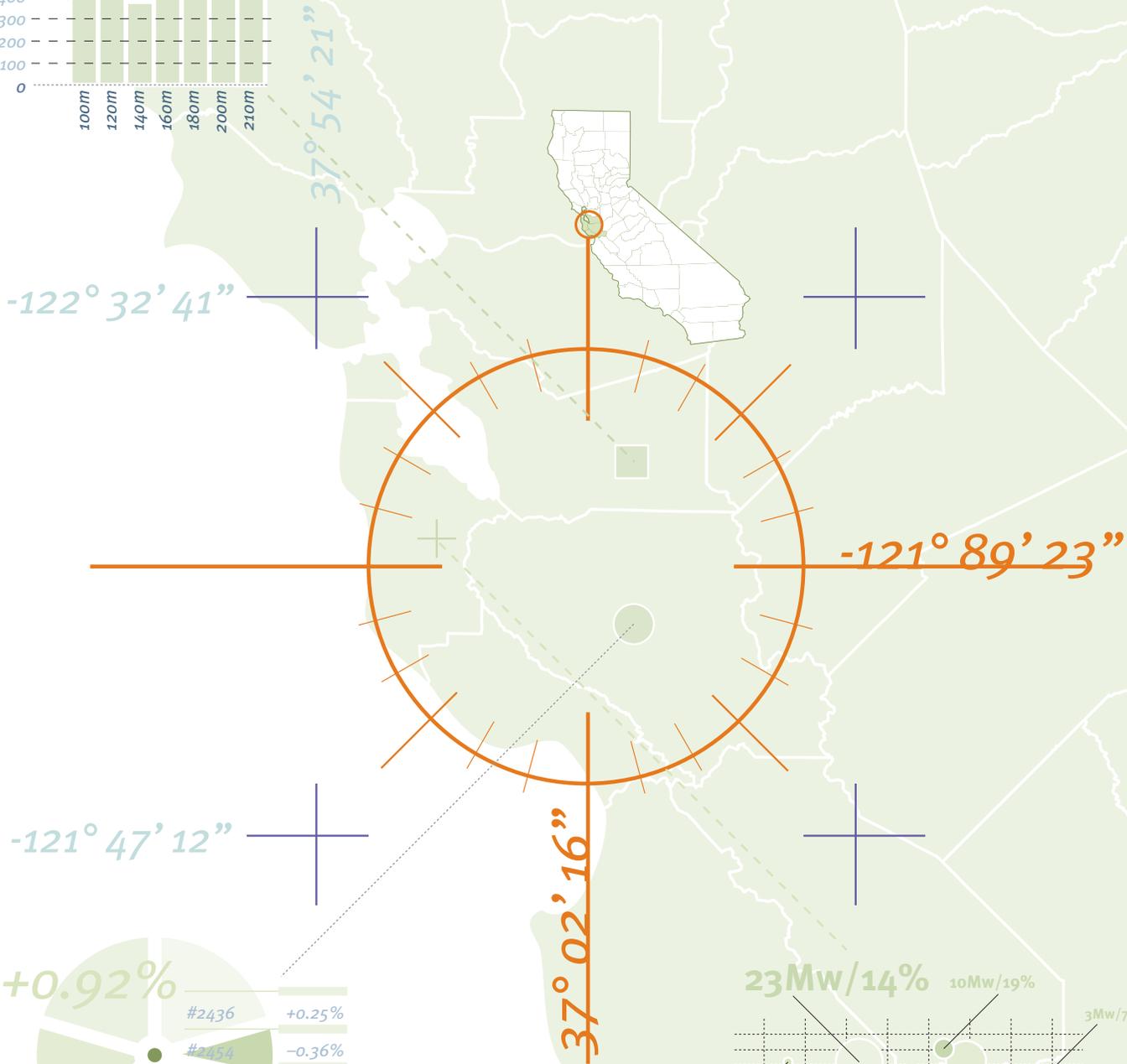
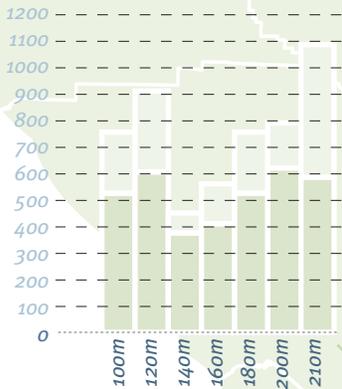
GOVERNANCE

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SOCIETY

ECONOMY

PEOPLE



ABOUT THE 2009 SPECIAL ANALYSIS

The 2009 Special Analysis examines the fundamental economic changes taking place in Silicon Valley and their impact on our community.

As in years past, the Special Analysis is a core piece of the *Index of Silicon Valley*, and this year, it exists also as a stand-alone document. The expectation is that given the enormity of the issues especially in the context of the current economic climate, the findings and questions presented here will provoke serious discussion and action in the community that will continue long after the *State of the Valley* Conference.

Our conclusion: Silicon Valley's "people and place" policies must evolve to help the region's employers and educational institutions learn, adapt, and reorganize to maintain a thriving regional "habitat" for living and working in the global marketplace. The cost of inaction will undermine the region's innovative capacity and overall competitiveness and with it, our regional prosperity and quality of life.

- Silicon Valley's industry mix is changing as some industries grow, others contract, and new industries emerge.

- Sustaining Silicon Valley's innovative economy is not possible without the people who maintain the region's community infrastructure.

- Silicon Valley is not currently prepared to meet its projected workforce needs for 2016. The region is not producing enough talent with the necessary skills to fill the large volume of replacement jobs opening in community infrastructure and in high tech. It will not be able to meet these needs by importing workers from abroad and other states.

- The growing mismatch of jobs and skills will result in income polarization in which the tight supply of highly skilled workers will command premium wages and the surplus of lower-skilled workers will experience wage erosion.

- Silicon Valley needs a robust system of workforce development and safety net programs – one that supports adult worker retraining and transition in addition to improving the education of today's young people.

Silicon Valley's economy is transforming, and the region needs to re-examine how well its "people and place" policies can cultivate a thriving space for living and working in this changing context.

SPECIAL ANALYSIS

Structural Change and Economic Opportunity

As Silicon Valley's industrial mix continues to develop in new ways, the systems that support those who work and live in the region, must also evolve. Currently, the social infrastructure that supports the region's innovation economy is under increasing stress. Without renewed attention to this infrastructure the region risks significant erosion in the quality of life for those who live and work here as well as a growing inability to take full advantage of its innovative capacity. Are the region's structural changes offering a majority of residents new opportunities for economic mobility or are the changes benefiting only a few? More broadly, is the success of the region's globally competitive companies translating into a thriving community at home?

How Silicon Valley addresses these crucial questions bears significance beyond the region. Globally, lasting structural changes are under way in the world's economy. Nationally, questions about economic mobility in the United States are being articulated in the public sphere by the press and by organizations sponsoring policy research, public forums and community action.

Habitually at the forefront of industrial and technological change, Silicon Valley has been the birthplace not only of revolutionizing technology but of similarly transformative business practices. The region now has the opportunity to innovate once again: for better or worse, how Silicon Valley adapts its social landscape to the shifting demands of global economic forces will have a meaningful impact on how the rest of the country chooses to adapt. **As the vanguard of economic innovation, Silicon Valley should take the lead in demonstrating social innovation that works to counteract the growing economic pressures creating a crisis in our communities.**

The ability of a region to adapt and thrive depends on the responsiveness of its constitutive parts. William F. Miller of Stanford University has explained the imperative of cultivating and maintaining “regional habitats” in sustaining innovation-driven economies:

Policies that support the education and training of the workforce, that support research combined with education, that support a modern infrastructure, and support the development of institutions that facilitate collaboration between business, government, and the independent sector will have lasting effects of building capacity that does not diffuse away. Develop the people and places—the habitat for living and working.¹

Education and continued training are key to maintaining an innovative economy and the social fabric of a community. Income inequality in the U.S. is currently the highest of all high-income nations and recent research by Claudia Goldin and Lawrence Katz points to the lagging growth in educational attainment since the 1970s:

As technological change races forward, demands for skills - some new and some old - are altered. If the workforce can rapidly make the adjustment, then economic growth is enhanced without greatly exacerbating inequality of economic outcomes. If, on the other hand, the skills that are currently demanded are produced slowly and if the workforce is less flexible in its skill set, then growth is slowed and inequality widens. Those who can make the adjustments as well as those who gain the new skills are rewarded. Others are left behind.²

Examining trends in California's workforce, Deborah Reed's recent work reveals that the state is not in the position to meet its needs for college-educated workers and that this will be a limiting factor in the state's economic growth.³ Her analysis also points out that because of the extent of the need, the state cannot depend on importing enough talent from other states and countries to offset the demand for college-educated workers.

In 2025, Reed notes, migration would need to increase to almost 160,000 college-educated workers annually and to remain at that level for 20 years. Since 2000, international immigration has brought an annual average of 56,000 college graduates to California.

At the same time, the supply of workers with a high school diploma or less will exceed demand. These countervailing trends will drive up wages for skilled labor and erode wages for unskilled labor, resulting in increased income inequality and with it, increased demand for public services.⁴

This Special Analysis examines the two sides of Silicon Valley's shifting economy and the opportunity for innovative approaches:

THE DEMAND SIDE – The constant change in the region's industrial mix and occupational mix

THE SUPPLY SIDE – The response of the region's working population to changes in the demand side

¹ William F. Miller. 2002 (October). “Regionalism, Globalism, and the New Economic Geography,” Speech, p. 15.

² Claudia Goldin & Lawrence Katz. 2008. *The Race between Education and Technology*. Cambridge, Mass.: Belknap Press of Harvard University Press. Page 352.

³ Deborah Reed. 2008. “California's Future Workforce. Will there be Enough College Graduates?” Public Policy Institute of California.

⁴ Ibid. Pages 12-13.

Part I: Silicon Valley's Changing Industry Mix and Demand for Skills

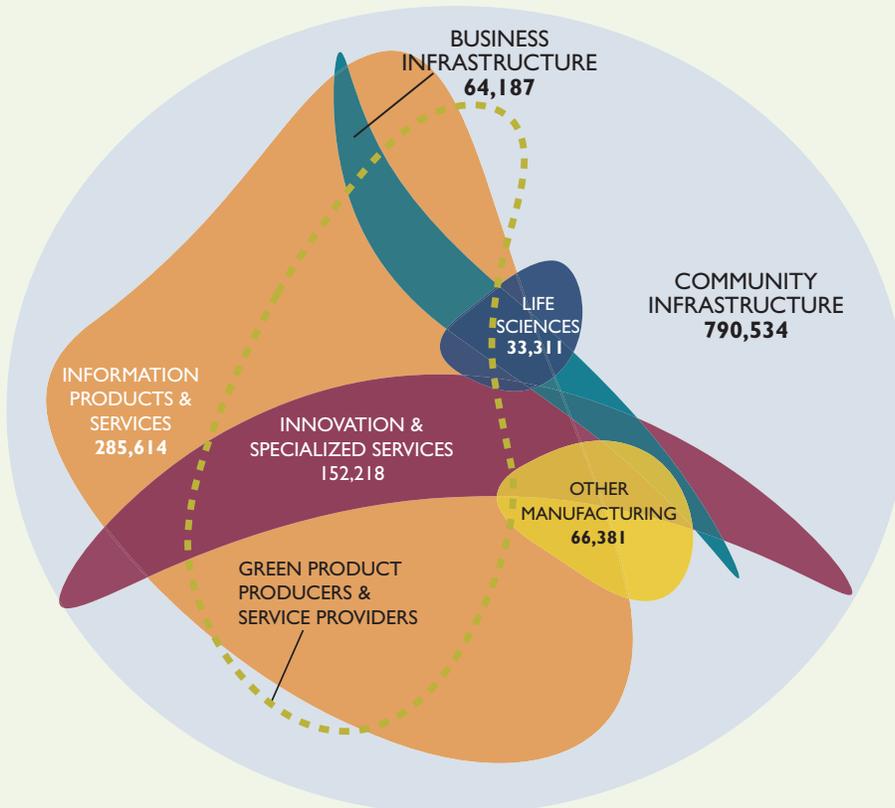
As new technology and new applications develop, Silicon Valley's industry mix continues to evolve as well as the skills demanded by these new industries. Demographic shifts as well as changing patterns in business ownership can impact the labor pool of a region.

The Changing Industry Mix

Silicon Valley's changing industry mix can be demonstrated in the shift in employment shares from hardware industries to software from ten years ago as well as in the evolving patterns of venture capital (VC) investment within the past five years. Just since 2002, VC investment has experienced remarkable growth in areas related to energy and clean technology, and as a share of total investment in the region, biotechnology and medical devices have pushed semiconductors from second-place in terms of VC investment dollars.⁵

Silicon Valley's innovation-driven economy could not thrive without the policies and activities that nurture the region's habitat for living and working. In addition to the region's globally-oriented, high-technology industries, the Valley's economy is characterized by industries that serve the local population and local businesses. It is this mix and overlap of export-oriented industries, cross-cutting support industries, and the surrounding Community Infrastructure that create the complex system of an innovation habitat.

MAJOR AREAS OF ECONOMIC ACTIVITY



Silicon Valley has the following six major areas of economic activity: Information Products & Services, Life Sciences, Innovation & Specialized Services, Business Infrastructure, Community Infrastructure, and Other Manufacturing. Developers of green (or clean) technologies and providers of related products and services are present and growing across these areas of economic activity. Because of their wide distribution across industries, estimating green business and employment counts require a different approach. According to current estimates, the region's green economy accounts for almost 700 businesses and over 10,000 jobs.

Between the second quarters of 2007 and 2008, overall employment expanded by 1.4% with gains reported in Information Products & Services, Life Sciences, and Community Infrastructure. Although employment data by detailed industry was not available for the second half of 2008, overall regional employment dropped 0.5% from November 2007 to November 2008.⁶

With 285,600 employees, **Information Products & Services** accounts for over 20% of regional employment, and is the region's most concentrated area of economic activity.⁷ Compared to the United States, Information Products & Services is almost five times more concentrated in Silicon Valley, and includes export-oriented industries such as computer software and hardware, internet and information services, semiconductor and electronic component manufacturing, as well as communications services and equipment manufacturing.

Silicon Valley Employment Growth by Major Areas of Economic Activity Percent Change Q2 2007–Q2 2008

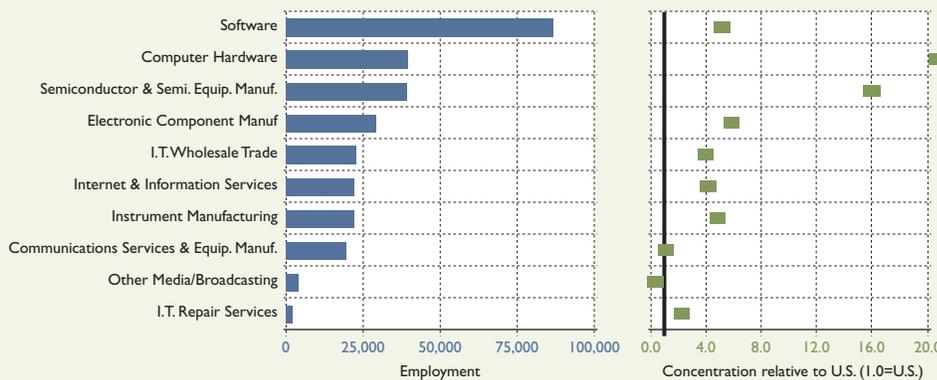
Information Products & Services	+4.1%
Life Sciences	+3.0%
Community Infrastructure	+1.1%
Innovation & Specialized Services	-0.1%
Other Manufacturing	-1.7%
Business Infrastructure	-2.0%

TOTAL EMPLOYMENT +1.4%

Note: Community Infrastructure includes health services, education, retail, transportation, government administration and other population-serving industries.

Information Products & Services

Employment and Concentration – 2007
Silicon Valley



Silicon Valley's **Computer Hardware** industry is **20-times** and **Semiconductor & Equipment Manufacturing** is **16-times** more concentrated than the nation.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

⁶ See 2009 Index of Silicon Valley. Quarterly Census of Employment & Wages (QCEW) includes detailed industry information at the 6-digit level of the North American Industry Classification System (NAICS). Monthly employment statistics based on Current Employment Statistics (CES) are more current but not available for the region at the same level of detail.

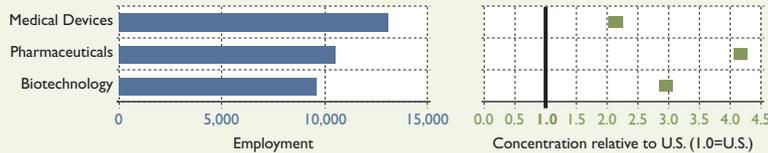
⁷ The employment concentration of a particular industry is determined by the percentage of total employment that industry represents in comparison to the U.S. For example, if the Software Industry represents 6% of total employment in the region and 1% in the U.S., then the Software Industry is six-times more concentrated in the region. This is a sign that the region's Software Industry is also more highly specialized and globally competitive.

⁵ See 2009 Index of Silicon Valley, page 14.

Silicon Valley is a vital center for **Life Sciences**. Although relatively small in employment, Life Sciences is almost three times more concentrated in Silicon Valley than the U.S. as a whole. In Pharmaceuticals, the concentration of employment is four-times that of the nation. Life Sciences includes medical devices, pharmaceuticals, and biotechnology.

Life Sciences

Employment and Concentration, 2007 – Silicon Valley



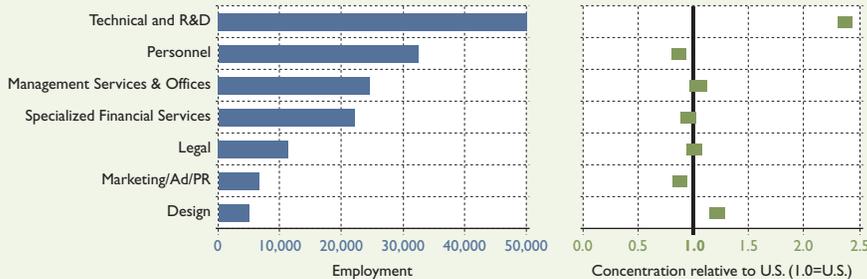
The pharmaceuticals industry is **four-times more concentrated** in Silicon Valley than the nation

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

Innovation and Specialized Services represents roughly 11% of Silicon Valley's employment. These activities provide high-value services in support of businesses across the economy and especially in export-oriented industries. With more than twice the employment concentration of the nation, Silicon Valley is an important center for R&D and technical services. Innovation & Specialized Services includes technical and R&D services, specialized financial services, and design services.

Innovation & Specialized Services

Employment and Concentration, 2007 – Silicon Valley



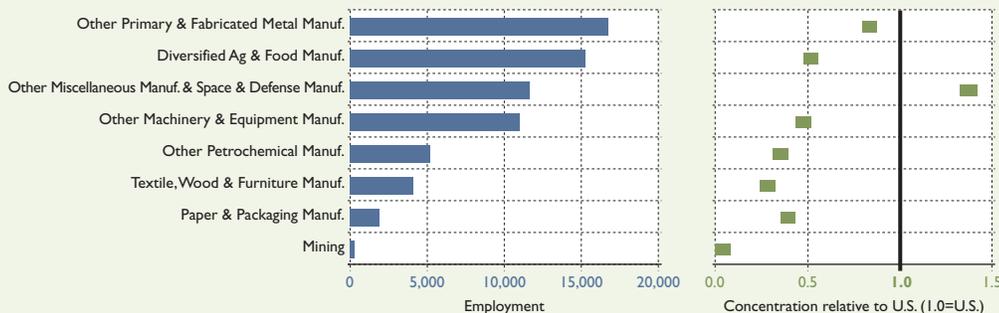
Technical & R&D Services is **2.4 times more concentrated** than the nation.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

In addition to the manufacturing industries in the area of Information Products and Services, Silicon Valley is home to a diverse array of other manufacturing industries. **Other Manufacturing** accounts for approximately 5% of regional employment, and includes industries such as other primary and fabricated metal manufacturing, diversified agriculture and food manufacturing, space & defense manufacturing, as well as other miscellaneous manufacturing.

Other Manufacturing

Employment and Concentration, 2007 – Silicon Valley

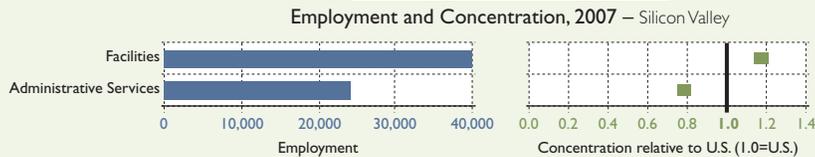


Miscellaneous and Space & Defense Manufacturing is **40% more concentrated** than the nation.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

Almost 5% of Silicon Valley's employment is in the area of **Business Infrastructure**. This consists of services such as facilities and administrative services that support basic business operations across all industries.

Business Infrastructure



20% more concentrated than the nation, services related to the operation of **facilities account for 60%** of Business Infrastructure.

Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

Community Infrastructure is the region's largest area of economic activity, accounting for almost 57% of Silicon Valley's total employment in 2007. Community Infrastructure is largely comprised of population-driven industries* including health services, education, retail, transportation, government administration, as well as other local serving industries. Some of these industries such as Transportation and some sub-segments of Education are highly specialized and also serve export markets.

Within Education, while the concentration of employment in primary and secondary education is low compared to the nation, employment in Educational Support is highly concentrated in Silicon Valley. This field consists of businesses (outside of public schools) offering instruction in fine arts, sports and recreation, language, exam preparation and tutoring, driving, as well as other miscellaneous schools, and educational support. Several of these industries are highly specialized in Silicon Valley. Language schools are more than three times more concentrated in the region compared with the U.S., exam preparation & tutoring and sports & recreation instruction are roughly two times more concentrated, and fine arts school are 1.25 times more concentrated.

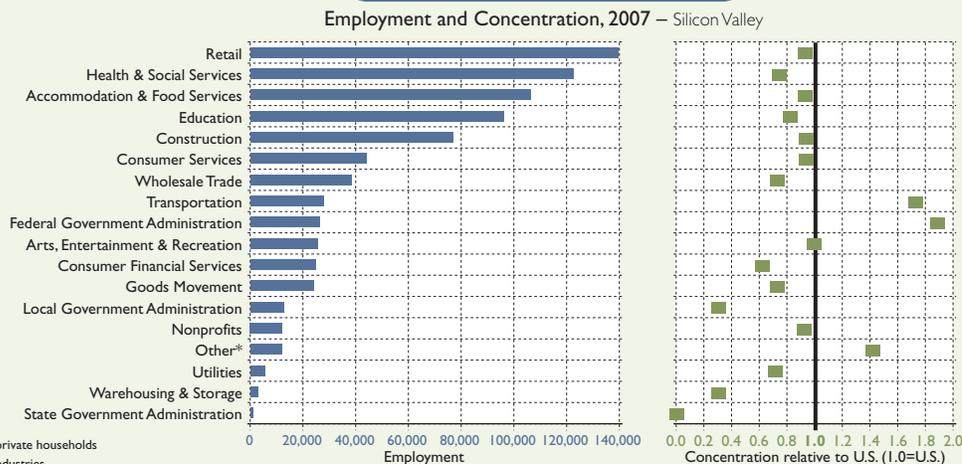
Silicon Valley Education Industry Employment by Type of Education

	2007 Employment	Percentage of Total Education Employment	Employment Concentration
Primary & Secondary Instruction	57,100	59%	0.8
Higher Education Total	39,492	34%	1.1
Educational Support & Other	6,440	7%	1.9

Note: Data for administration of education programs is classified under local, state, and federal government administration in Community infrastructure

Without the people who maintain Silicon Valley's community infrastructure, an innovative economy is not possible. Without the diversity and scope of support activities--from schools to health care to transportation--the talent and businesses involved in export-driven sectors like information products and services and biotechnology would not prosper in the region.

Community Infrastructure



*Other includes private households and unclassified industries
Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

*In contrast to industries that grow as exports increase, these are industries that grow as population increases.

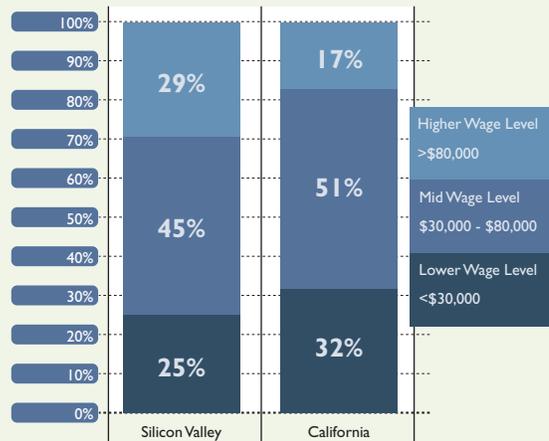
Restructuring Of Labor Demand

As Silicon Valley's industrial mix shifts and new areas of activity such as clean technology emerge, the labor skills demanded in the region also change. A workforce development system that helps people at all occupational levels upgrade their skills and make seamless transitions between industries will benefit the region's employers, families and community in general.

The region continues to demand highly skilled workers who command high wages. The largest percentage of occupations in Silicon Valley is in jobs with a median annual wage between \$30,000 and \$80,000. Occupations with annual earnings above \$80,000 account for 29% of all occupations in Silicon Valley –considerably higher than 17% in California. A quarter of occupations in the region have annual incomes below \$30,000. According to the affordability benchmark developed by the California Budget Project, a two-worker family in the Bay Area needs to earn \$77,069 to cover the basic family budget. This means that in order for a two-worker family to reach the threshold of middle class living, at least one worker must have a mid-wage job.⁹

Occupational projections for Silicon Valley estimate that the region will need to fill 30,000 jobs annually between 2006 and 2016, and 70% of these will replace current workers. The region's growing workforce needs span the entire economy especially Community Infrastructure. Computer and mathematical occupations reflect the highest projected growth of 22% from 2006 to 2016. Other occupational areas projected to gain include personal care and service (17%), healthcare support, (16%), life, physical, and social science (13%), community and social services (13%), education, training, and library (13%), and business and financial operations (13%).

Job Distribution by Lower, Mid, and Higher Income Levels
Silicon Valley and California, 2007



Note: Silicon Valley data is for San Jose-Sunnyvale-Santa Clara MSA
Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages
Analysis: Collaborative Economics

Occupational Growth in Silicon Valley

by Major Occupational Categories, 2006–2016



Note: Silicon Valley data is for San Jose-Sunnyvale-Santa Clara MSA
Data Source: California Employment Development Department, Labor Market Information Division, Occupational Employment Statistics
Analysis: Collaborative Economics

⁹ California Budget Project. 2007. *Making Ends Meet: How Much Does it Cost to Raise a Family in California?* (October 2007) Page 20. The California Budget Project defines the Bay Area as Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma Counties.

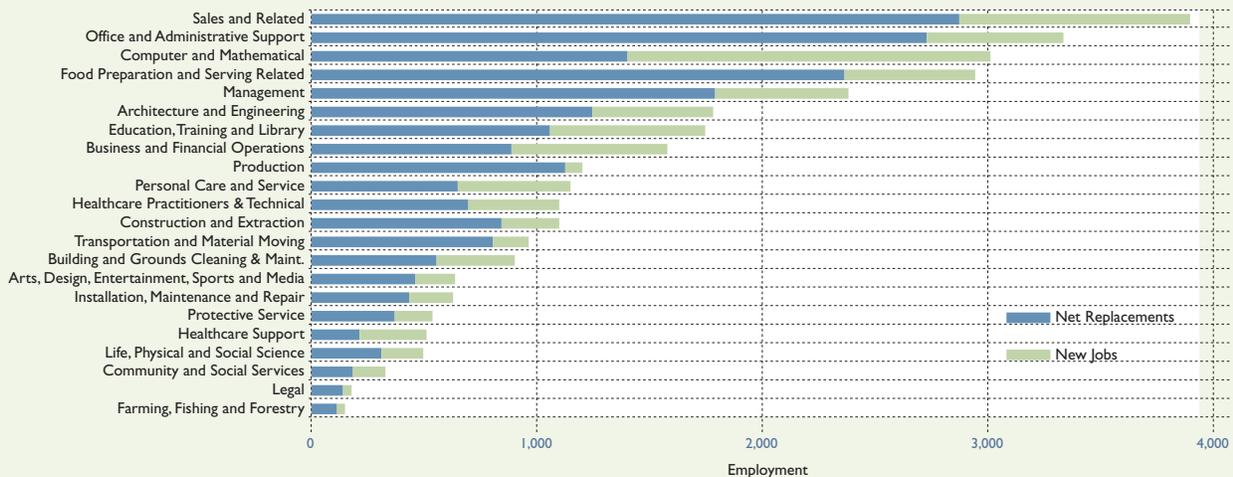
Of total projected job growth between 2006 and 2016, 30% are new jobs and 70% are replacement jobs—job vacancies expected as employees retire or leave an occupation for a new one. Replacement jobs alone, will account for more than 21,000 job openings annually in Silicon Valley. The projected growth of replacement jobs is so great, that in all occupational categories, (with the exceptions of Computer & Mathematical jobs and Healthcare Support), replacement jobs will outpace new job openings.¹⁰ The most numerous annual job openings expected up to 2016 are in the areas of Sales & Related occupations (3,906), Office & Administrative Support (3,333), and Computer & Mathematical occupations (3,019).

It is important to note that there are two different types of replacement jobs. There are those that are associated with a career path which offers opportunity for advancement such as in construction trades or information technology support. Other replacement jobs are occupations with high-turnover namely because of limited wage-growth opportunities which is the case with many positions in retail sales and health care support.

The region's fastest growing occupations are diverse and cut across many occupational categories. (See Appendix for details). The 50 fastest growing occupations are expected to increase in employment by at least 20% between 2006 and 2016. Of these fast-growing occupations, ten require work experience in a related occupation or on-the-job-training, while 40 occupations require at least some postsecondary education. Seven of the top growing occupations are computer and mathematical occupations, all of which are highly concentrated in the region (concentrations above 1.0). Six of the fastest growing occupations are in the areas of healthcare and social services. Thirteen of the top growing occupations are postsecondary teaching positions across a variety of disciplines.

Annual Job Openings in Silicon Valley

New Jobs and Net Replacements, 2006 to 2016
by Major Occupational Categories



Note: Silicon Valley data is for San Jose-Sunnyvale-Santa Clara MSA
Data Source: California Employment Development Department, Labor Market Information Division, Occupational Employment Statistics
Analysis: Collaborative Economics

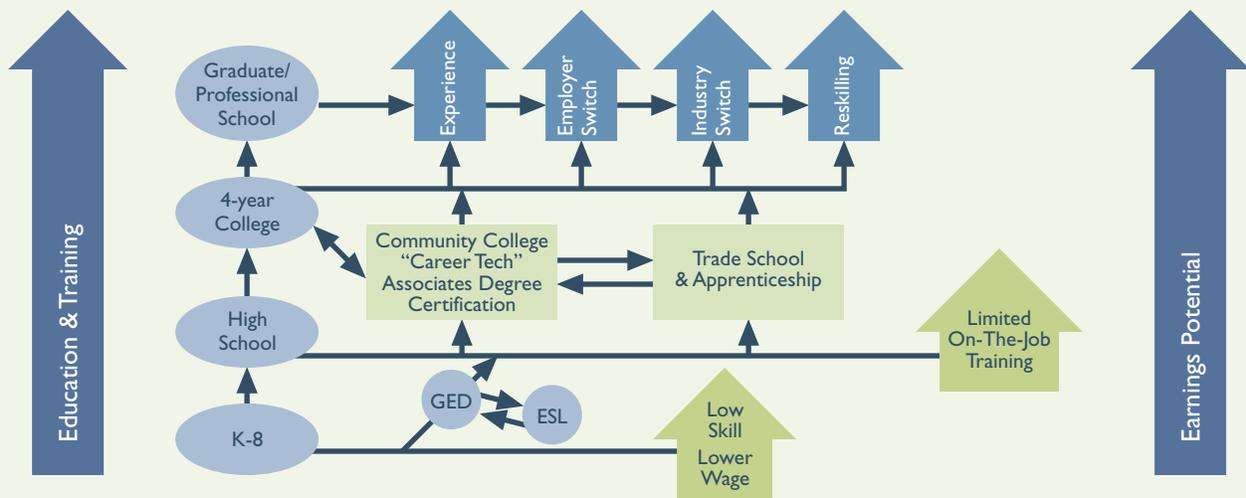
¹⁰ Although replacement jobs are not only the result of retirements, given the current economic conditions, people's decisions on the timing of retirement may vary.

Part II: Facilitating Workforce Development and Transitions

As industries and businesses respond to market forces and technological change, the skills they require of their employees change. This continual process has resulted in an increasingly turbulent employment environment in which job tenures are shortening and retraining or up-skilling is required more frequently. Navigating a career path traversing industries or within a single industry is becoming increasingly challenging.

There has always been the strong-held belief by Americans that hard work and talent will be rewarded. However, combined with increasing employment turbulence, there is mounting evidence in terms of increasing income inequality and the rising costs of education and health care that the American dream is becoming more difficult to attain. Workforce development is key to keeping workers employed and moving up income and career ladders.

There are two main issues in the discussion of workforce development. The first is foundational and concerns the quality of preparation provided our youth from kindergarten through high school. The second is adult life-long learning and concerns the support of adult workers in learning new skills in response to changing technology and market demands. Importantly, the effectiveness of adult continued education depends on how well we prepare our youth with the necessary foundational skills of reading, writing, arithmetic, natural sciences and computer literacy.



For students on the traditional academic track, the educational route is well developed to support high school graduates attain a four-year degree, although sky-high costs and state budget deficits are limiting accessibility to this option. As well, our present system for attaining graduate and professional degrees attract talent from around the world.

For adults who now require regular reskilling, no cohesive system for adult continued education exists that can provide this training in technical skills and trades. Adult education encompasses a wide range of fields and skills outside the traditional academic track and university offerings. In many cases such as health services and building trades, as new technologies are applied across sectors, acquiring new technical skills can open new paths in an industry.

Currently, there is little clarity in the numerous available routes for increasing ones skills and earnings potential after high school. Community colleges and trade schools can provide high school graduates with valuable skills, but the reality is that over time, skills will need to be upgraded. In some cases, people with four-year degrees require technical training from the community college to get ahead. In the end, the quality of the foundational skills gained in high school and the affordability of training thereafter are the determining factors of effectual adult education.

Demographic And Structural Change

Our workers and our place of employment are changing. Increasingly, Silicon Valley's workforce is coming from abroad, and residents are seeking independent work outside of a company's payroll. In light of these demographic and structural changes, what are the real consequences for benefits and social safety nets?

Silicon Valley's foreign-born workers are filling positions at both ends of the skills spectrum: from assembly and maintenance workers to highly educated science and engineering talent. Looking at the region's employed residents¹¹ by their place of birth, there are 34% more foreign-born workers than California born. The actual number of Californian-born workers in the region has not changed since 2000. In contrast, the number of workers originally from another state dropped 23% while those born abroad increased 18%, adding 87,000 workers over this period.

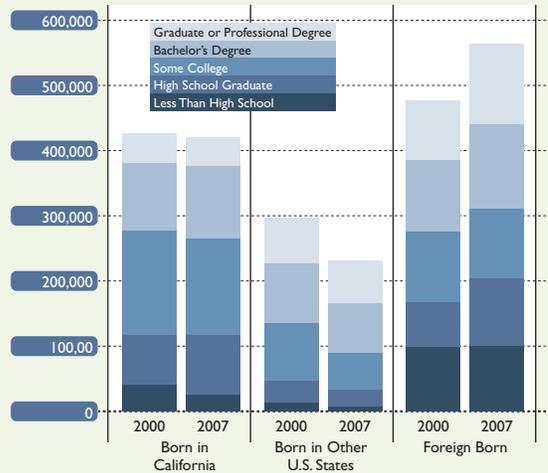
As our foreign-born talent grows in number, their numbers increase across all levels of skill, and their recent growth has been strongest among workers at both ends of the skills spectrum. In 2007, the foreign born accounted for 76% of workers with less than a high school diploma and 47% of those with a high school diploma. They also represented 53% of workers with graduate or professional degrees. Although talent from other states is dropping in total number, these workers are highly skilled and 60% have at least a 4-year degree.

In view of the educational requirements of the region's growing workforce demands over the coming decade, the strongest growth is projected in jobs typically requiring a Bachelor's Degree or an Associate Degree. Occupations requiring a four-year degree in 2006 will increase 15% by 2016, and jobs requiring a two-year degree will expand 11%.

Although Silicon Valley will continue to be a magnet for international talent, the region cannot depend on strong enough inflows to meet the growing demands. In light of Deborah Reed's recent analysis for California, the growth needed to meet projected workforce demands will not be met in foreign and out-of-state inflows. One reason for this is that other innovation centers in the world are attracting global talent, and the recent rise of rapidly developing countries as new global competitors is described in detail by Fareed Zakaria in *The Post-American World*.¹² As Reed points out, this mismatch of supply and demand will result in income polarization in which the tight supply of highly skilled workers will command premium wages and the surplus of lower skilled workers will experience wage erosion.¹³

Educational Attainment of Employed Silicon Valley Residents

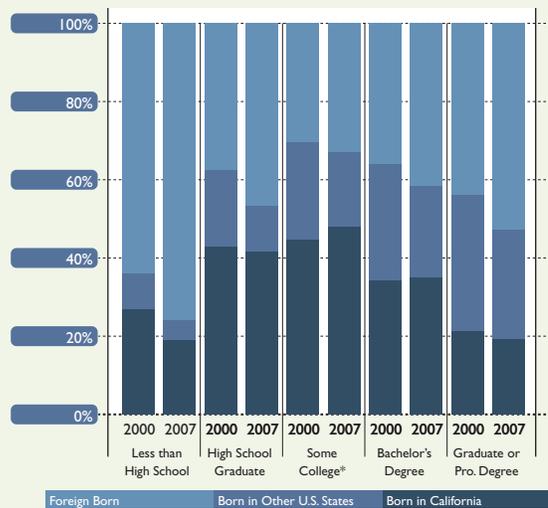
By Place of Birth



Note: Foreign born includes people born in U.S. territories/island areas
 * Some College includes: Less than 1 year of college; Some college, 1 or more years, no degree; Associates degree; Professional certification
 Data Source: U.S. Census Bureau, 2000 Decennial PUMS, 2007 American Community Survey PUMS
 Analysis: Collaborative Economics

Educational Attainment of Employed Silicon Valley Residents

By Place of Birth



Note: Foreign born includes people born in U.S. territories/island areas
 * Some College includes: Less than 1 year of college; Some college, 1 or more years, no degree; Associates degree; Professional certification
 Data Source: U.S. Census Bureau, 2000 Decennial PUMS, 2007 American Community Survey PUMS
 Analysis: Collaborative Economics

Occupations by Most Common Level of Education 2006 and Projected for 2016

	2006	2016	Percent Change
More than a Bachelor's Degree	105,670	114,570	8%
Bachelor's Degree	212,270	244,260	15%
Associate Degree	48,360	53,740	11%
Post-Secondary Vocational Education	40,730	43,110	6%
Work Experience in a Related Occupation	60,220	63,730	6%
On-the-Job Training	498,870	538,030	8%

Note: Silicon Valley data is for San-Jose-Sunnyvale-Santa Clara MSA
 Data Source: California Employment Development Department, Labor Market Information Division, Occupational Employment Statistics
 Analysis: Collaborative Economics

¹¹ This is not total employment in the region.

¹² Fareed Zakaria. 2008. *The Post-American World*. New York: W.W. Norton & Company.

¹³ Deborah Reed. 2008. "California's Future Workforce. Will there be Enough College Graduates?" Public Policy Institute of California. Pages 12-13.

In addition to demographic changes, structural change in the nature of employment is taking place in the region. Over the last decade (1997-2006), employment in companies with payroll dropped 5%, while the number of nonemployers (individuals or partnerships with no employees) grew 21%. Although both employment and nonemployers declined from 2000 to 2001, nonemployer growth bounced back sooner the following year, while employment continued to fall until 2004.

A Talent Development System To Match Our Dynamic Innovation Economy

Silicon Valley’s innovative economy is creating opportunities for people with the right skills to prosper, but the current patchwork of education and workforce development and safety net programs are failing both to prepare many workers for success and meet (public and private) employers’ need for skilled talent. This problem is national in scope, but we in Silicon Valley do not have to settle for this situation. We can pioneer a new approach to developing talent and ensuring that people can move from job to job, career to career, and industry to industry as our economy continues to change.

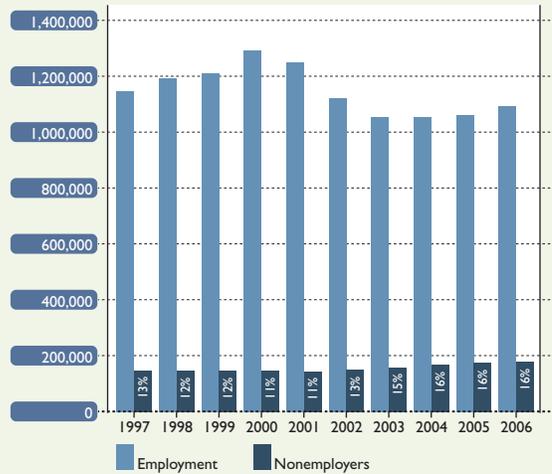
While opportunities are growing for Silicon Valley workers to get ahead and prosper in many occupations, many people are simply without the education and skills necessary to participate. The problem is that the region has an inadequate talent development system to capitalize on the opportunities created by our fundamental shift from an industrial to an innovation economy or fill the growing opportunities for replacement jobs in our Community Infrastructure.

It is clear that most industries are restructuring and innovating, simultaneously reducing lower-skilled positions while increasing mid-level and higher-skilled jobs. Many are facing talent shortages—from higher-level engineers and scientists to mid-level technicians and support personnel. A coming wave of baby boomer retirements is expected to exacerbate the problem. 2008 marks the first year in which baby boomers can retire and collect Social Security. The U.S. Department of Labor just projected that 25 million workers would retire in the next ten years and a larger number in the following decade. In California three million workers will retire by 2018, and the number of retirees in Silicon Valley will be close to 300,000. Immigration will likely be only part of the solution, as traditional sources of skilled immigrants (e.g., China, India, Taiwan, and South Korea) are providing better opportunities for their top talent to remain in their country of origin.

Businesses are becoming more concerned and vocal about the inadequacy of the nation’s talent development system to address these shortages. The Business Roundtable, an association of chief executive officers of leading U.S. companies with \$4.5 trillion in annual revenues and more than 10 million employees recommend the design and funding mechanisms for America 21, a 21st-century approach to lifelong learning for workers, as well as assistance for job dislocation.¹⁴

Structural Change of Employment

Employment and Nonemployers
Percentage Equivalence of Nonemployers to Total Employment
Santa Clara & San Mateo Counties



Note: Data is for total private industry. Nonemployers are establishments without paid employees
Data Source: California Employment Development Department, Labor Market Information Division, Quarterly Census of Employment and Wages; U.S. Census Bureau, Nonemployer Statistics
Analysis: Collaborative Economics

¹⁴ From the Business Roundtable’s, “Prospering Together: America’s Citizens, Communities and Companies,” February 2008, page 9.

The root cause of talent shortages in Silicon Valley (and the nation as a whole) is a system of workforce development and safety net programs that is geared to an industrial rather than an innovation economy. The existing social safety net and workforce development policies and programs of Silicon Valley are not well-designed to reduce insecurity, increase risk-taking, and help the nation prosper in today's economy. In the 1930s, the New Deal was enacted to provide fairness based on a social compact that everyone would benefit from economic prosperity using social insurance as a tool to help people make transitions during difficult times. Unemployment insurance was enacted to provide income support due to unforeseen cyclical economic changes. But, today, structural economic change is much more the norm. According to a Federal Reserve Bank of New York study, 80% of all jobs in the 2001 recession were in industries undergoing structural changes as compared to 57% during the recession of the early 1990s, and 51% during the early 1980s downturn.¹⁵

AMERICA 21: A 21st-Century Approach for Workers

Our goal should be to create access to a new system that would promote lifelong learning by providing education and training to Americans and assistance to dislocated workers regardless of the cause of their job loss. Business Roundtable recommends that this new approach should

- > Incorporate the following principles:
 - portability of benefits
 - flexible access to benefits depending on need
 - simplicity
 - quality
 - public-private partnership
- > Consolidate funding for current government workforce training and adjustment programs and use that funding more effectively and efficiently, plus additional investment, as needed, to create access to a redesigned system for lifelong learning and transition assistance.

ECONOMIC SECURITY IN THE INDUSTRIAL ECONOMY
Temporary Assistance During Cyclical Economic Downturns
Predictability of Benefits with Lifelong Employment
Focus on Short-Term Income Protection
Economic Security Promotes Stability



Policy in the industrial economy was built on the assumption that individuals remained in the same jobs or occupations for a lifetime, often working for stable, large bricks-and-mortar companies that offered health, retirement, and other benefits. Support in this economy primarily meant buffeting people against the temporary loss of income due to layoffs during downturns in the business cycle. As a result, the approach sought to promote stability (i.e., returning to the same job) instead of change (i.e., preparing people for job or career transitions).

Today, by contrast, the Silicon Valley economy is driven by ever-quickening dynamism and competition. It is epitomized by fast moving, entrepreneurial companies and new technologies that drive industrial change and the rules of the game. New technologies, new ideas, new products and new markets upset the status quo, rerouting demand from existing companies and industries to new ones. On the upside, winners increase sales, and they add jobs. On the downside, losers find slowing sales, and they lay off workers. Moreover, the nature of employment in this “new” economy is different. Most Americans work for small companies, and increasing numbers work part-time or for themselves, require frequent retraining and job switches to maintain their income levels, or must make costly geographical moves to other states. All of this suggests that 20th Century solutions will not be sufficient in addressing the anxiety and risk of the 21st Century.

¹⁵ Simon Groshen, *Has Structural Change Contributed to a Jobless Recovery?*, Federal Reserve Bank of New York, 2003.

In summary, Silicon Valley's economy is transforming, and the region needs to reexamine how well its "people and place" policies can cultivate a thriving space for living and working in this changing context.

- *Silicon Valley's industry mix is changing as some industries grow, others contract, and new industries emerge.*
- *Sustaining Silicon Valley's innovative economy is not possible without the people who maintain the region's community infrastructure.*
- *Silicon Valley is not currently prepared to meet its projected workforce needs for 2016. The region is not producing enough talent with the necessary skills to fill the large volume of replacement jobs opening in community infrastructure and in high tech, and it will not be able to meet these needs by importing workers from abroad and other states.*
- *The growing mismatch of jobs and skills will result in income polarization in which the tight supply of highly skills workers will command premium wages and the surplus of lower-skilled workers will experience wage erosion.*
- *Silicon Valley needs a robust system of workforce development and safety net programs – one that supports adult workers retrain and transition in addition to improving the education of today's young people.*

Silicon Valley's policies that focus on "people and place" must evolve to help the region's employers and educational institutions learn, adapt, and reorganize to maintain a thriving regional "habitat" for living and working and to meet the new demands of the global marketplace.

How can Silicon Valley support local workers in making the transitions necessary to succeed in the changing economy, moving to a talent development system that is more responsive to employer and worker needs than today's patchwork of workforce and safety net programs?

A system is needed that will support the new needs for life-long learning and provide some form of transition assistance. The cost of inaction will be the undermining of the region's innovative capacity and overall competitiveness and with it, our regional prosperity and quality of life.

Appendix

Major Areas of Economic Activity

Silicon Valley employment data are provided by the California Employment Development Department and are from Joint Venture: Silicon Valley Network's unique data set. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than once. All industries are included in the major areas of economic activity. For Quarter 2 2008 are preliminary-revised. Data is for Santa Clara and San Mateo Counties, Scotts Valley, Fremont, Newark, and Union City. Employment concentration is relative to the United States.

Job Distribution by Lower, Mid, and Higher Income Levels

Occupational data is from the Occupational Employment Statistics, Occupational Employment (May 2007) & Wage (2008 - 1st Quarter) Data, provided by the California Employment Development Department- Labor Market Information Division. The survey reference date is May 2007 for employment and the first quarter of 2008 for wage data. Silicon Valley includes data for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA). Wage Distribution is based on median annual wages and are reported in 2008 dollars. Lower-wage level occupations are defined by jobs with median annual income levels less than \$30,000, mid-wage occupations are defined by jobs with median income levels between \$30,000 and \$80,000, and higher-wage occupations are defined by jobs with median income levels above \$80,000.

Occupational Growth

Occupational projections are from the 2006-2016 Occupational Employment Projections, provided by the California Employment Development Department, Labor Market Information Division. Silicon Valley includes data for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA).

Annual Job Openings

Occupational projections are from the 2006-2016 Occupational Employment Projections, provided by the California Employment Development Department, Labor Market Information Division. Silicon Valley includes data for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA). Net Replacements openings are an estimate of the number of job openings expected because people have permanently left an occupation. It estimates the net movement of 1) experienced workers who leave an occupation and start working in another occupation, stop working altogether, or leave the geographic area minus 2) experienced workers who move into such an opening. It does not represent the total number of jobs to be filled due to the need to replace workers.

Educational Attainment of Employed Residents by Place of Birth

Data for educational attainment of the Silicon Valley employed residents are provided by the United States Census Bureau, 2000 Decennial Census and 2007 American Community Survey Public Use Microdata Samples (PUMS). The category of foreign-born includes people born in U.S. territories/island areas, residents, and naturalized citizens.

Structural Change of Employment

Employment data is from the California Employment Development Department, Quarterly Census of Wages and Employment. Employment data covers total private industry employment in San Mateo and Santa Clara Counties. The data set counts jobs in the region and uses data from the Quarterly Census of Wages and Employment program that produces a comprehensive tabulation of employment and wage information for workers covered by State unemployment insurance (UI) laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Employment data exclude members of the armed forces, the self-employed, proprietors, domestic workers, unpaid family workers, and railroad workers covered by the railroad unemployment insurance system. Covered workers may live outside of the Silicon Valley region. Multiple jobholders (i.e., individuals who hold more than one job) may be counted more than once. Data for Nonemployers are from the US Census Bureau. Nonemployer Statistics summarizes the number of establishments and sales or receipts of businesses without paid employees that are subject to federal income tax. Most nonemployers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income.

50 Fastest Growing Occupations

Occupational data are from the 2006-2016 Occupational Employment Projections, provided by the California Employment Development Department, Labor Market Information Division. Silicon Valley includes data for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA). The concentration of employment is relative to California, and is calculated based on Occupational Employment (May 2007) & Wage (2008 - 1st Quarter) Data, provided by the California Employment Development Department- Labor Market Information Division. Silicon Valley includes data for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA).

50 Fastest Growing Occupations in Silicon Valley, 2006-2016

Occupational Category	Occupational Title	2006 Employment	2016 Employment	% Change in Employment 2006-2016	Concentration 2007	Median Annual Wage 2008	Education & Training Levels
Computer & Mathematical	Network Systems and Data Communications Analysts	4,190	6,240	49%	2.3	\$ 92,098	Bachelor's Degree
	Computer Software Engineers, Applications	20,500	27,510	34%	4.1	\$ 107,213	Bachelor's Degree
	Database Administrators	1,540	1,960	27%	1.5	\$ 89,370	Bachelor's Degree
	Mathematical Scientists, All Other	150	190	27%	1.0	\$ 97,020	Master's Degree
	Computer Systems Analysts	7,160	8,810	23%	2.2	\$ 81,546	Bachelor's Degree
	Network and Computer Systems Administrators	3,360	4,130	23%	1.8	\$ 95,389	Bachelor's Degree
Personal Care & Service	Computer Software Engineers, Systems Software	17,330	21,050	22%	6.1	\$ 112,115	Bachelor's Degree
	Personal and Home Care Aides	9,180	12,530	37%	0.7	\$ 23,117	Short-Term On-the-Job Training
	Skin Care Specialists	150	190	27%	0.6	\$ 55,723	Post-Secondary Vocational Education
	Manicurists and Pedicurists	510	630	24%	0.5	\$ 27,749	Post-Secondary Vocational Education
Healthcare Support	Ushers, Lobby Attendants, and Ticket Takers	440	540	23%	0.5	\$ 18,321	Short-Term On-the-Job Training
	Home Health Aides	2,110	2,860	36%	0.7	\$ 20,740	Short-Term On-the-Job Training
Community & Social Services	Medical Assistants	3,020	3,640	21%	0.8	\$ 36,971	First Professional Degree
	Substance Abuse and Behavioral Disorder Counselors	300	410	37%	0.6	\$ 35,748	Master's Degree
Postsecondary Education	Social and Human Service Assistants	1,990	2,450	23%	1.1	\$ 31,461	First Professional Degree
	Philosophy and Religion Teachers, Postsecondary	120	160	33%	0.0		Doctoral Degree
	Foreign Language and Literature Teachers, Postsecondary	150	190	27%			Master's Degree
	Education Teachers, Postsecondary	160	200	25%		\$ 76,900	Doctoral Degree
	Art, Drama, and Music Teachers, Postsecondary	360	450	25%	0.0		Master's Degree
	Business Teachers, Postsecondary	290	360	24%	0.0	\$ 84,243	Master's Degree
	Law Teachers, Postsecondary	380	470	24%	0.0		First Professional Degree
	Computer Science Teachers, Postsecondary	170	210	24%		\$ 61,867	Master's Degree
	Psychology Teachers, Postsecondary	170	210	24%		\$ 68,071	Doctoral Degree
	Health Specialties Teachers, Postsecondary	990	1,220	23%	0.0	\$ 65,384	Master's Degree
	English Language and Literature Teachers, Postsecondary	260	320	23%			Master's Degree
	Graduate Teaching Assistants	350	430	23%	0.0	\$ 19,638	Bachelor's Degree
	Nursing Instructors and Teachers, Postsecondary	270	330	22%		\$ 59,641	Master's Degree
	Vocational Education Teachers, Postsecondary	470	570	21%	0.7	\$ 48,187	Post-Secondary Vocational Education
Business & Financial Operations	Logisticians	1,740	2,150	24%	2.2	\$ 77,627	Bachelor's Degree
	Financial Analysts	3,280	3,980	21%	2.1	\$ 86,765	Bachelor's Degree
Protective Service	Business Operations Specialists, All Other	10,000	12,120	21%	1.0	\$ 67,135	Bachelor's Degree
Healthcare Practitioners & Technical	Private Detectives and Investigators	230	280	22%	0.0	\$ 74,290	Work Experience in a Related Occ.
	Pharmacy Technicians	1,290	1,620	26%	0.9	\$ 40,373	First Professional Degree
Sales & Related	Veterinary Technologists and Technicians	320	390	22%	0.7	\$ 38,517	Associate Degree
	Sales Representatives, Wholesale & Manufacturing, Except Tech & Sci Products	6,870	8,280	21%	0.8	\$ 65,316	First Professional Degree
Arts, Design, Entertainment, Sports, & Media	Interpreters and Translators	1,180	1,450	23%	0.0	\$ 44,588	Long-Term On-the-Job Training
	Multi-Media Artists and Animators	440	540	23%	0.4	\$ 92,651	Bachelor's Degree
	Designers, All Other	150	180	20%	0.0	\$ 25,042	Bachelor's Degree
Architecture & Engineering	Industrial Engineers	3,820	4,930	29%	3.7	\$ 100,189	Bachelor's Degree
	Biomedical Engineers	430	540	26%	2.2	\$ 101,183	Bachelor's Degree
Installation, Maintenance, & Repair	Coin, Vending, and Amusement Machine Servicers and Repairers	340	460	35%	1.1	\$ 30,851	First Professional Degree
	Industrial Machinery Mechanics	850	1,110	31%	1.1	\$ 51,576	Long-Term On-the-Job Training
	Electronic Equipment Installers and Repairers, Motor Vehicles	190	230	21%	1.1	\$ 49,474	Post-Secondary Vocational Education
Legal	Court Reporters	100	120	20%	0.0	\$ 61,405	Post-Secondary Vocational Education
Office & Administrative	Customer Service Representatives	9,730	12,050	24%	0.8	\$ 41,925	First Professional Degree
Transportation & Material	Service Station Attendants	360	450	25%	0.7	\$ 20,881	Short-Term On-the-Job Training
Production	Etchers and Engravers	100	180	80%	1.4	\$ 38,458	Long-Term On-the-Job Training
	Sawing Machine Setters, Operators, and Tenders, Wood	100	130	30%	0.5	\$ 26,808	First Professional Degree
	Tailors, Dressmakers, and Custom Sewers	160	200	25%	0.3	\$ 30,069	Long-Term On-the-Job Training
	Power Plant Operators	160	200	25%		\$ 72,595	Long-Term On-the-Job Training

Note: Data is for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area. Concentration could not be calculated for some occupations because the California employment estimates in the Occupational Employment Statistics were unavailable. Data Source: California Employment Development Department, Labor Market Information Division, Occupational Employment Statistics. Analysis: Collaborative Economics

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3,689	Pounds of Greenhouse Gases

Calculations based on research by Environmental Defense Fund and other members of the Paper Leaf team.

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