

People Economy Society Place Governance

2023

Silicon

Valley

Index

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ABOUT THE 2023 SILICON VALLEY INDEX

Dear Friends:

Silicon Valley is in flux.

For one thing, people are leaving. 91,000 people departed over the past two years (the highest number on record since the dot.com bust) and there is no longer a significant influx of people from other places. And yet the economy is at full employment, growing even despite a round of layoffs.

For another, those remaining—especially the tech set—are working at home. Silicon Valley reports the nation's highest percentage of remote workers, which has emptied our transit systems, upended commercial real estate, shuttered our downtowns, and it is rendering those in the supporting sectors obsolete.

The economy is in a funny in-between place, no longer shattering performance records, generating less venture capital, churning out fewer start-ups. IPOs have mostly run dry. Having realized the pandemic was only a temporary spike in demand, the tech sector is re-sizing and re-calibrating. Innovation seems to be headed for a new, yet-to-be-determined place, fueled by artificial intelligence.

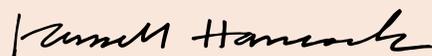
The departing techies may still be working Silicon Valley jobs, but they are also giving rise to new centers of innovation and economic growth in places like Seattle, Austin, Denver and Salt Lake. That's all for the good, but it signals a new reality in which Silicon Valley becomes one node (albeit a major node) in a more dispersed innovation ecosystem. The term "Silicon Valley" may start to lose meaning.

What remains are the region's gaping disparities, and the developments of late have only exacerbated them. Pay rates for people performing the noble (and necessary) in-person functions haven't come close to keeping pace with inflation. The growth in the daily number of meals our food banks are serving is astonishing. Despite herculean efforts, our unhoused population continues to rise.

We continue to document a growing income divide and the nation's largest wealth gap. Stratified by race, ethnicity, or even gender, those gaps become still more pronounced, and educational attainment has not been the leveler that we might have expected.

Small wonder, that our 2023 report also documents a regression in our mental health and emotional well-being.

There's a lot of sorting out for our region to do, and some hard choices to be making. Through it all, this organization will continue keeping count and providing the analytical foundation for decision making.



Russell Hancock

President & Chief Executive Officer
*Joint Venture Silicon Valley
Institute for Regional Studies*

WHAT IS THE INDEX?

The Silicon Valley Index has been telling the Silicon Valley story since 1995. Released early every year, the Index is a comprehensive report based on indicators that 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?

An Indicator is a quantitative measure of relevance to Silicon Valley's economy and community health, that can be examined either over a period of time, or at a given point in time.

Good Indicators are bellwethers that reflect the fundamentals of long-term regional health, and represent the interests of the community. They are measurable, attainable, and outcome-oriented.

Appendix A provides detail on data sources and methodologies for each indicator.

THE SILICON VALLEY INDEX ONLINE

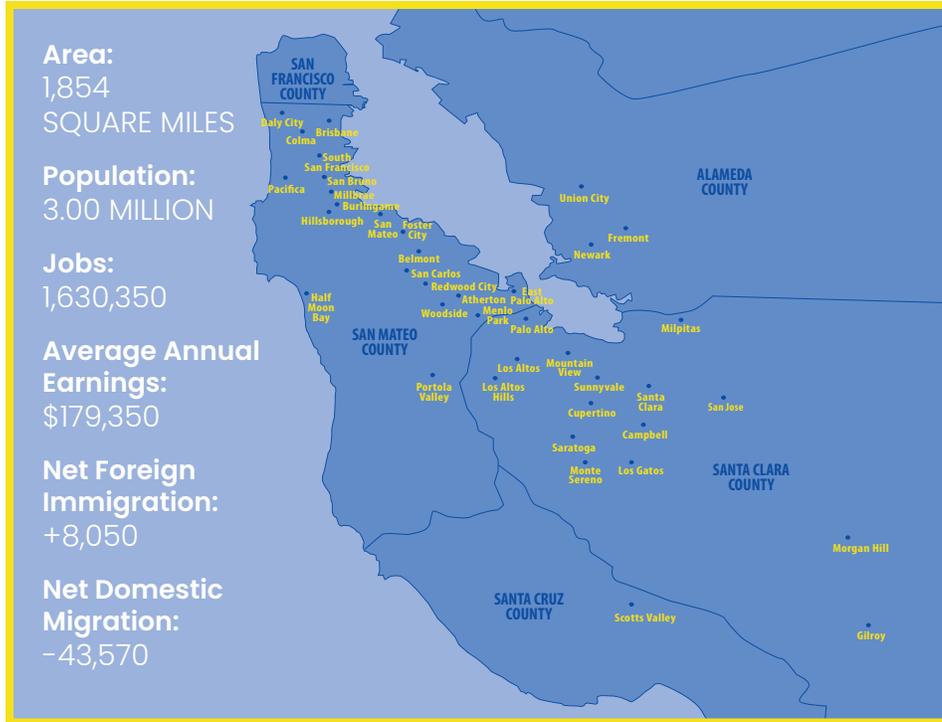
Data and charts from the Silicon Valley Index are available on a dynamic and interactive website that allows users to further explore the Silicon Valley story.

For all this and more, please visit the Silicon Valley Indicators website at www.siliconvalleyindicators.org.

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PROFILE OF SILICON VALLEY



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

SAN MATEO COUNTY (ALL)

Atherton, Belmont, Brisbane, 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

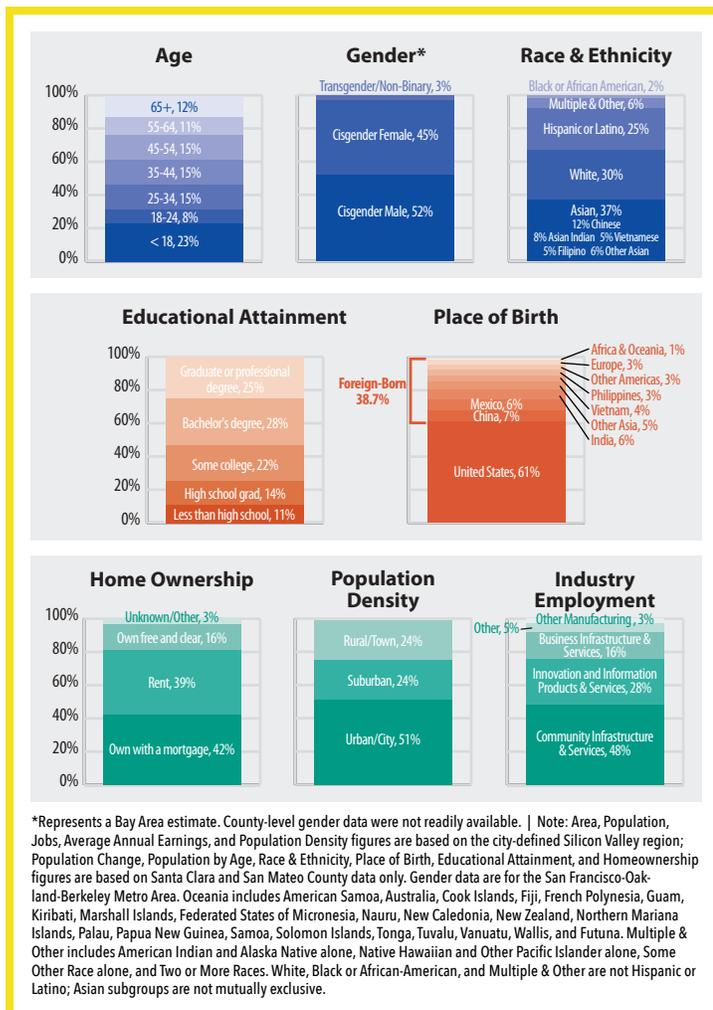
ALAMEDA COUNTY

Fremont, Newark, Union City

SANTA CRUZ COUNTY

Scotts Valley

Note: The cities contained in the Index comprise present-day jurisdictions, based on artificial boundaries that did not inherently exist. The region was originally and continues to be home to the Chochenyo, Tamien, Ramaytush, and Awwaswas peoples.



FEATURES



Equity Lens icon - Indicates a breakdown by race and/or ethnicity.



Web icon - Indicates additional data is available online.



Red Shading - Highlights pandemic-period data and narrative.

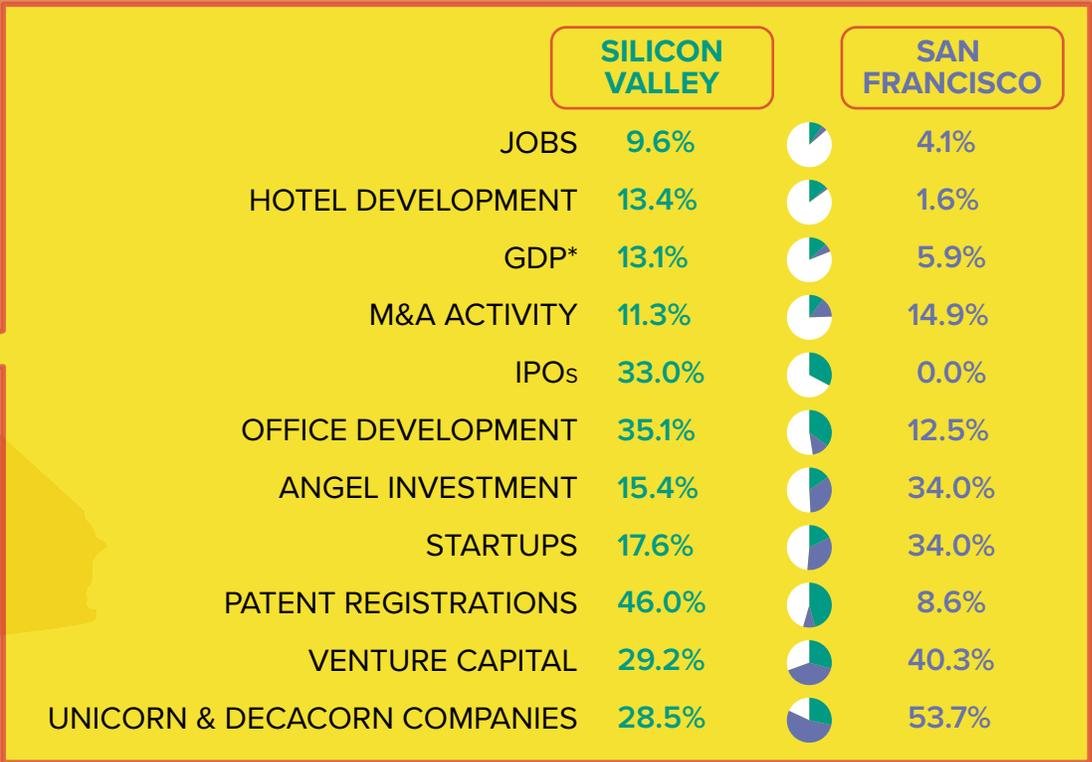


Mini Chart - Presents data in a simplified format.

WHAT IS SILICON VALLEY?

Silicon Valley is a dynamic regional economy that has grown precipitously over the last half-century, reshaping the world through technological innovation. It is also the place that more than three million residents call home. The geographical boundaries of Silicon Valley, however, are difficult to define. Over time, the region's core industrial center, which began as Santa Clara County and a handful of adjacent cities, has expanded its radius to include all of San Mateo County and parts of Santa Cruz and southern Alameda Counties. While San Francisco is distinct from Silicon Valley in many ways, its role in the tech economy has grown and is thus included in various charts throughout the Index.

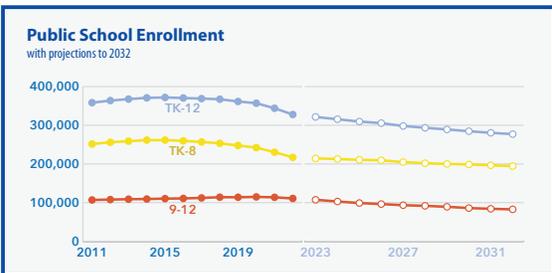
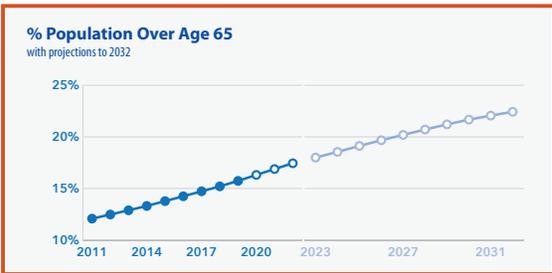
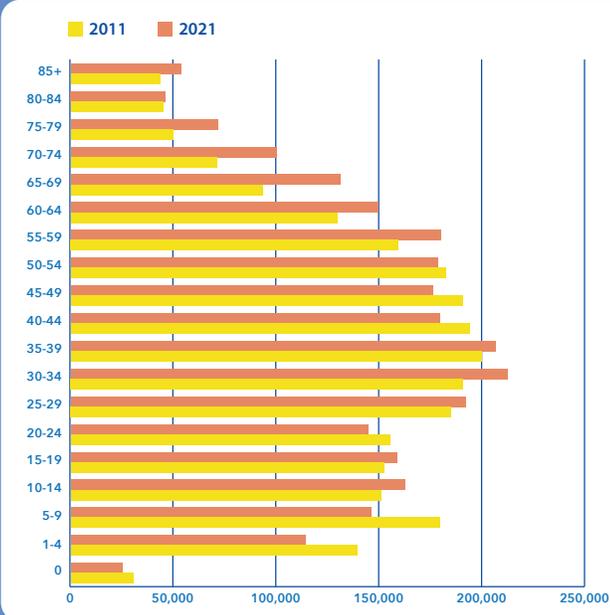
The Region's Share of California's Economic Drivers



*Silicon Valley share of California GDP includes San Mateo and Santa Clara counties only. | Note: The individual share of California M&A deals involving at least one Silicon Valley company and the share involving at least one San Francisco company are not additive - they do not add up to the share of California deals involving either a Silicon Valley or San Francisco company. | Data Source: Land Area (U.S. Census Bureau, 2010); Population (California Department of Finance, E-4 Estimates, 2022); GDP (Moody's Economy.com, 2022); Venture Capital is by total dollar amount (CB Insights, 2022); Patent Registrations (U.S. Patent and Trademark Office, 2022 estimate based on data through November); Initial Public Offerings (Renaissance Capital, 2022); Jobs (U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages; JobsEQ, Q2 2022); Angel Investment is by total dollar amount (CB Insights, 2022); Mergers & Acquisitions by total number of deals (Factset Research Systems, 2022); Unicorns and Decacorns include private companies with valuations of \$1 billion+ and \$10 billion+, respectively (CB Insights, 2022); Startups by number of newly-funded startup companies (CB Insights, 2022); Office Development is the share of completions, by square footage across California's nine major markets (JLL Research, 2022); Hotel Development is the share of hotel rooms completed (Atlas Hospitality Group, 2021).

Population by Age

Santa Clara & San Mateo Counties



Note: Data and projections include Santa Clara and San Mateo Counties; TK-12 includes all students from ages four (Transitional Kindergarten) through twelfth grade. | Data Source: California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

2023 Index Highlights

HEALTH AND WELLNESS

The region continued battling surges, but the COVID death rate per capita declined in 2022. An increasing share of the population experiences depression and anxiety.

- COVID-19 dropped to Silicon Valley's sixth leading cause of death in 2022, down from third in 2021. The cumulative number of COVID deaths was 3,320 at the end of the year.
- The total number of reported COVID cases rose to 642,200 in 2022. Approximately a quarter of Silicon Valley's population has contracted the virus.
- More Silicon Valley residents (17,000) died during the first year of the pandemic than in any prior year on record. 12 percent of the deaths were COVID-related.
- When asked, 20 percent of Bay Area residents report anxiety and/or depression most days of the week. That figure is down from 24 percent in 2021 and 30 percent in the pandemic's first year. The anxiety rates are elevated for young adults (ages 19-29), non-Hispanic Black, and Hispanic or Latino residents.
- One in eight students in middle or high school report they have considered suicide. The share is higher for female students (16 percent, compared to 7 percent of males).

EMPLOYMENT

The region recovered from pandemic job losses by April 2022. Unemployment hit an historic low. Tech is becoming more highly concentrated.

- Silicon Valley added 88,000 jobs between mid-2021 and mid-2022, a growth rate of 5.4 percent. An estimated 22,000 jobs were added in the second half of the year.
- Since 2010, tech jobs have grown at nearly twice the rate of overall employment in the region.
- The largest tech companies, though growing their Silicon Valley workforce by 22 percent since 2020, are growing more rapidly in other parts of the nation (+33 percent) and world (+66 percent).
- At the end of 2022 Silicon Valley was home to a quarter of the US workforce for our largest tech companies. Layoffs commencing in the second half of 2022 resulted in a one percentage point loss in the region's share of this 1.1 million-person workforce.
- The tech sector (including San Francisco) continues to become more concentrated. The 30 largest firms account for 42 percent of employment (19 percent are at Google, Apple and Meta alone).
- Silicon Valley's unemployment rate hit an historic low (1.8 percent) in May of 2022. The rate varies by race and ethnicity, however. Black or African American residents filed claims at more than twice the rate of White residents (2.4x), followed by Hispanics or Latinos (1.4x).

TECH PROSPERITY AND THE INNOVATION ECOSYSTEM

The rise and fall of the stock market drove large shifts in venture funding and IPOs.

- Pandemic-period stock market gains of nearly \$9 trillion proved transitory as the market tumbled in 2022. The plunge triggered major shifts in the larger ecosystem, including venture capital (a combined \$48 billion in San Francisco and Silicon Valley, down from a record high of \$90 billion). Angel investment declined 90 percent, from \$360 million to \$40 million. The region continues to hold the nation's highest share (34 percent) of venture dollars.
- Half of all venture capital flowing to Silicon Valley or San Francisco companies was in the form of megadeals (\$24.7 billion spread across 116 megadeals).
- 2022 was a very slow year for traditional IPOs. Silicon Valley recorded four public launches; San Francisco recorded none. The newly public companies ended the year with negative returns.
- San Francisco continued to dominate the Decacorn list in 2022, with 39 Percent (21) of the 54 Decacorns worldwide and 68 percent of the nation's 31 Decacorns.

COMMERCIAL SPACE

Demand for commercial space is tempered by remote work but specialized R&D space is hot.

- Though remote work is shifting the dynamic, leasing activity remained strong throughout 2022, reaching 24.8 million square feet (up 2 percent). While there was a 45 percent increase in the number of lease agreements, the average amount of space per lease has sharply declined (to 12,700 square feet).
- Bay Area companies requiring other commercial types have not downsized, reflecting how R&D, laboratory and industrial spaces are less inherently able to be replicated off-site. The amount of office development in the pipeline remains robust, indicating a continued desire of owners to expand their footprint, and optimism from developers.
- Rental rates rose in 2022 for all space types, although Office rates did not outpace inflation. Rates for lab space have climbed the most rapidly. With the majority of Silicon Valley's premier tech companies announcing layoffs, sublease space has started to appear.
- A total of five million square feet of new Silicon Valley commercial space was completed in 2022 (61 percent Office, 10 percent Lab, 12 percent R&D and 8 percent Industrial), an amount nearly half of what was completed in 2021.
- Google, Apple, Meta, Amazon, LinkedIn and Netflix, combined, occupy 20 percent (54.2 million square feet) of office and R&D space. Of these six companies, Google occupies the most (approximately 20.5 million square feet).

REMOTE WORK AND TRANSPORTATION

Remote work is increasing, creating extra capacity on roadways and decimating public transit.

- The share of Silicon Valley workers working from home grew to 35 percent in 2022, up from 28 percent in 2021. The share was 6 percent in 2019.
- Private commuter shuttles are being put out of service.
- The number of commuters in Santa Clara and San Mateo counties dropped from 1.2 million in 2020 to 850,000. The number of megacommuters (those driving 3+ hours daily) dropped by 65 percent.
- Caltrain ridership has fallen to a mere 4,100 daily riders, down from 67,000 (a 92 percent decline). BART has recovered 35 percent of its pre-pandemic riders. Both systems are among the nation's lowest recovery rates for heavy rail.

2023 Index Highlights *continued*

POPULATION CHANGE AND MIGRATION

Silicon Valley's population is declining; the share of young people is also falling.

- Silicon Valley's population declined by 38,900 residents between mid-2020 and mid-2021, the highest figure ever recorded. The decline was due to a 74 percent rise in domestic outmigration, a reversal of the net flow of foreign immigrants (-103 percent), declining birth rates, and rising death rates.
- The domestic outmigration totals of 2021 (47,800) rivaled those of the dot-com bust in 2001 (48,300).
- Silicon Valley's birth rate has declined steadily since 1991.
- 26 percent of outmigrants in 2021 stayed within the Bay Area (12 percent to Alameda County, 6 percent to San Francisco, 8 percent to other Bay Area locations); likewise, a large share (21 percent) moved to adjacent regions (Monterey, Sacramento, San Joaquin Valley).
- Net foreign immigration was negative in 2021 for the first time in recent history. That trend reversed in 2022, with a moderate (+8,000) foreign influx into Santa Clara and San Mateo counties.
- Silicon Valley's population continues to age, with a growing number of residents over age 65 (up 32 percent since 2011) and a shrinking number of children under age 18 (down 8 percent).

HOUSING

The pandemic and patterns of outmigration haven't affected soaring home prices.

- Silicon Valley's high home prices rose 7 percent in 2022, reaching a record-breaking median price of \$1.53 million. The increases stem from a steadily rising share of higher-end homes on the market (76 percent of homes sold were above \$1 million) as well as pent-up demand given the region's longtime shortage.
- The share of first-time homebuyers who can afford a median priced home fell to 27 percent, and is as low as 14 percent for the region's Black or African Americans and Hispanic or Latino residents. Only 8 percent of homes sold in 2022 were below \$600,000 and 28 percent of these were sold to buyers paying all-cash (as opposed to those trying to amass a down payment).
- Half of Silicon Valley renters are "burdened" by housing costs (spending more than 30 percent of their income on housing). The figure is higher (58 percent) for renters above age 65.
- The region's cities are not meeting the Regional Housing Needs Allocation (RHNA) handed down by the state. Seven years into an 8-year cycle of allocations, the region has yet to meet its share of new Very Low-, Low-, or Moderate-Income housing. The region has, however, met its share in the Above Moderate income category.

COST OF LIVING AND INCOME ADEQUACY

Inflation has outpaced income gains; assistance programs scale upwards.

- Increases in the regional Consumer Price Index since 2019 have outpaced household income gains, resulting in a \$550 decline in median household income. Childcare costs have risen twice as quickly as the regional inflation rate since 2010 (+85 percent compared to +44 overall).
- Average wages vary significantly across racial and ethnic groups in Silicon Valley, with the largest disparity between Hispanic or Latino residents and White, not Hispanic or Latino residents. The five-year average wage for White residents was 138 percent higher than Hispanic or Latino residents, and 88 percent higher than Black or African American residents.
- For those with a bachelor's degree or higher, racial disparities still exist. White, not Hispanic or Latino workers earned an average wage 61 percent higher than Hispanic or Latino workers, and 62 percent higher than Black or African American workers over the period 2016-2021.
- The gender wage gap in Silicon Valley is wider at higher levels of educational attainment, and growing. The gap was \$59,000 in 2021 (\$7,500 higher than 2019) for those holding a bachelor's degree or higher. The gap is \$12,400 for workers without a high school diploma (\$5,300 higher than 2019).
- Large swaths of Silicon Valley's population struggle to get by, as reflected in the sharp increases in food assistance. There are double-digit percentages of residents (and a disproportionate share of children) in need of assistance but ineligible for public benefits because their income exceeds eligibility thresholds. Those needs are being addressed in part by nonprofit food banks.

INCOME AND WEALTH DIVIDE

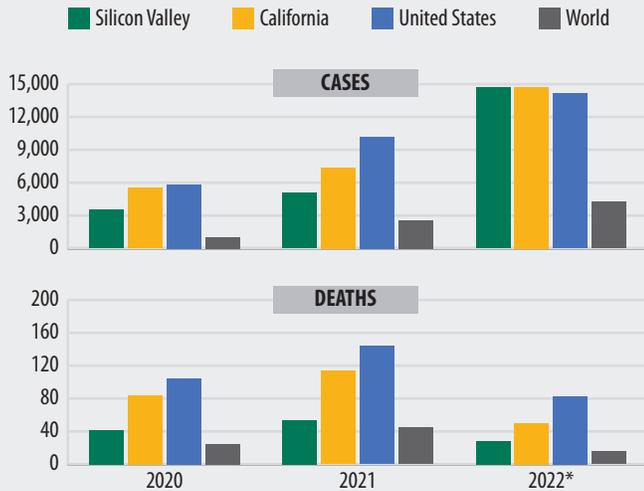
Silicon Valley has the nation's largest gaps, and they are increasing.

- While income inequality was lessening in the state and nation (down 1 and 3 percent) it rose in Silicon Valley by 5 percent in 2021. The pace of increase since the Great Recession has been twice that of the nation.
- After New York and Hong Kong, the San Francisco Bay Area is home to the greatest concentration of billionaires in the world (85 in 2021). Aggregate household wealth in Silicon Valley is estimated at \$835 billion in 2022 without including the ultra-high net worth outliers and nearly \$1.1 trillion with them.
- Of Silicon Valley's 163,000 millionaire households (more than \$1 million in investable assets), an estimated 8,300 have more than \$10 million—representing less than 1 percent of the region's households but holding 36 percent of the collective wealth. By contrast, an estimated 220,000 Silicon Valley households have less than \$5,000 in total investable assets.
- Approximately 2 percent of Silicon Valley households (22,000) do not hold bank accounts.
- The share of Silicon Valley residents living below the poverty threshold (23 percent) increased by three percentage points between 2019 and 2021. 28 percent of Silicon Valley households are below income-adequacy.
- 42 percent of children in San Mateo and Santa Clara counties live in households that are not self-sufficient. The largest factor influencing self-sufficiency for these households is childcare.
- Self-sufficiency varies significantly by race and ethnicity. Among household types that were most likely to live below self-sufficiency in 2022 were Hispanic or Latino non-citizens and those with limited English (estimated 74 percent below the standard for both household types).
- In 2022 the top 10 percent of Silicon Valley households held 66 percent of the wealth; eight Silicon Valley residents hold more wealth than that of the bottom 50 percent combined (nearly half a million households).

Snapshot of Key Indicators

Annual COVID-19 Cases & Deaths per 100,000 People

Santa Clara & San Mateo Counties, California, United States, and Worldwide



Data Sources: County of Santa Clara; San Mateo County Health; California Department of Public Health; *The New York Times*; World Health Organization; California Department of Finance; United States Census Bureau; United Nations Population Division | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley's economic and community health are influenced by a wide variety of factors and trends, spanning the five sections (and eighteen sub-sections) of the Silicon Valley Index. While these many indicators and the story they tell cannot be whittled down to a mere handful of charts, these two pages contain key trends, relevant topics, strengths, and long-time disparities.

Many of these trends have been affected, to a large degree, by the recent pandemic — whether by the public health crisis itself, by policies intended to mitigate spread of the virus, or by the economic and political climate of the past several years.

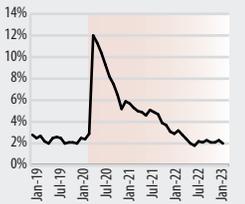
COVID-19 cases, deaths, and per capita case rates are included here; additional charts and up-to-date data are available on the Silicon Valley Indicators website:

www.SiliconValleyIndicators.org/live-updates/covid-data.

While the number of cases per capita of COVID-19 continued to rise in 2022, the death rates declined significantly.

JOBS

Unemployment Rate

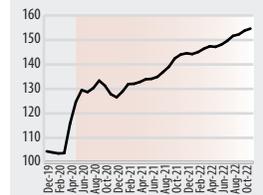


Silicon Valley's unemployment rate spiked to an unprecedented 11.9% in April 2020, and — despite a steady decline — took two years to fully recover to pre-pandemic levels. In May 2022, the unemployment rate hit an historic low of 1.8% briefly in May, then hovered around 2% for the remainder of the year.

Data Sources: United States Bureau of Labor Statistics; California Employment Development Department

HUNGER

CalFresh Enrollees (thousands)



Based on enrollment in CalFresh (California's Supplemental Nutrition Assistance Program), the need for food assistance in Silicon Valley increased sharply at the onset of the pandemic, and has continued to rise steadily ever since. Similarly, federal pandemic P-EBT program assistance rose precipitously in the 2021-22 fiscal year, serving approximately one-third (33%) of the region's school-aged children and their families.

Data Sources: California Department of Social Services

MOBILITY

Monthly Freeway Miles per Person

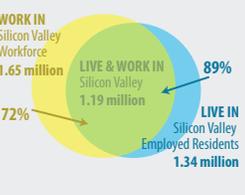


Average monthly freeway driving remained around 5% lower than pre-pandemic levels in the second half of 2022; this compares to 4% throughout the Bay Area, and 1% statewide.

Data Sources: Caltrans PeMS; California Department of Finance

WORKFORCE

% Living and Working in Silicon Valley

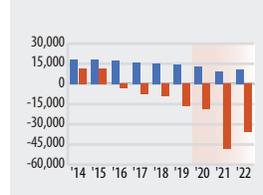


72% of Silicon Valley's workforce lives in Santa Clara or San Mateo Counties; the other 28% either commute in or work remotely.

Data Sources: United States Census Bureau, 2021 American Community Survey 1-Year Estimates

POPULATION CHANGE

Natural Change & Net Migration

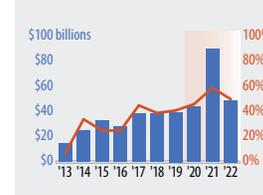


Silicon Valley's recent population decline represents four (out of only six years in the last 76) with negative population growth. The recent decline is due to residents moving away, combined with historically low birth rates, and increasing death rates. More Silicon Valley residents died during the first year of the pandemic than in any prior year on record.

Data Sources: California Department of Finance

PRIVATE EQUITY

Venture Capital & Megadeals (Silicon Valley & San Francisco)



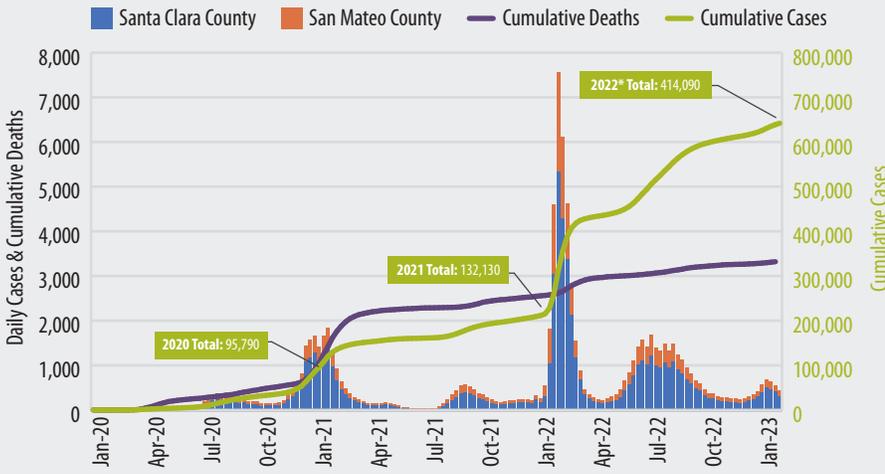
Total venture capital funding to Silicon Valley and San Francisco companies in 2022 was significantly lower than the all-time high of 2021; however, it was still greater than any other year on record, back to the height of the dot.com boom in 2000.

Data Sources: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: CB Insights (Q4 2015-2016), Thomson Reuters (prior to Q4 2015); CB Insights (2017+); Thomson ONE

Note: Unemployment Rate, Freeway Driving, CalFresh Enrollees, % Living and Working in Silicon Valley, Population Change & Net Migration, Remote Work, Average Wages, and Share of Wealth (estimated total household net assets) include Santa Clara and San Mateo Counties; Aggregate Regional Market Cap includes all Silicon Valley and San Francisco Public Companies; Venture Capital & Megadeals include San Francisco and the city-defined Silicon Valley region (in billions of dollars, inflation-adjusted to 2022). Megadeals include those over \$100 million each. In-Store vs. Online Spending includes the city-defined Silicon Valley region, and excludes Store Card purchases. Average wages by race and ethnicity include all full-time workers over age 15 with earnings, with a bachelor's degree or higher.

COVID-19 Cases & Deaths

Santa Clara & San Mateo Counties



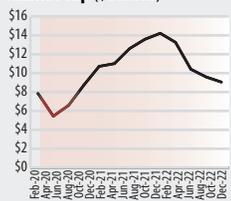
*May be lower than the true number due to at-home testing. | Note: Annual case totals were rounded to the nearest ten. | Data Sources: County of Santa Clara; San Mateo County Health; California Health and Human Services Agency | Analysis: Silicon Valley Institute for Regional Studies

The total death toll from COVID-19 in Santa Clara and San Mateo Counties rose to 3,320 in mid-December.

While the cumulative number of COVID cases on record rose to more than 642,000 at the end of 2022, the actual number may be higher than that due to at-home testing (with cases going unreported).

INVESTMENT

Aggregate Regional Market Cap (\$trillions)



The aggregate regional market cap for Silicon Valley and San Francisco's publicly traded companies began a 21-month upward trend, gaining \$8.8 trillion by the end of 2021.

Data Sources: IEX Cloud; Google Finance; Crunchbase

CONSUMER SPENDING

In-Store vs. Online Purchasing

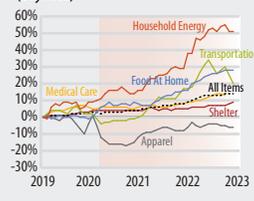


Consumer spending patterns shifted at the onset of the pandemic, with Silicon Valley residents starting to purchase more online than in stores. While there were seasonal fluctuations in 2021 and 2022, the trend continued to become even more pronounced.

Data Sources: Earnest Research

COST OF LIVING

Relative Change in Prices (Bay Area)

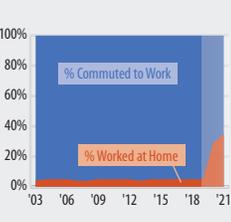


The cost of living rose precipitously since early 2019; components of the regional inflation rate with the largest gains were Household Energy (+51%), Food at Home (+28%), and Transportation (+20%).

Data Sources: United States Bureau of Labor Statistics

COMMUTING

Remote Work

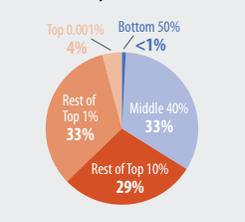


The rise of remote work initiated at the start of the pandemic persisted through 2021, reaching unprecedented levels.

Data Sources: United States Census Bureau, 2021 American Community Survey 1-Year Estimates

WEALTH INEQUALITY

% Wealth, by Percentile

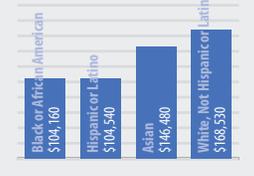


For the first time ever, we glimpsed the region's wealth inequality with *ultra high net worth* households included. Through this lens, inequality is even more stark, with the top 0.001% of Silicon Valley's households holding more wealth than the nearly 500,000 households in the bottom 50%.

Data Sources: Claritas; Altrata; Forbes; Phoenix Global Wealth Monitor

PERSISTENT DISPARITIES

Average Wages, Bachelor's Degree+ (2021)



Although educational attainment plays a role in wage wage disparities among Silicon Valley's racial and ethnic groups, it is only one of many factors; large disparities persist at similar levels of educational attainment.

Data Sources: United States Census Bureau, 2021 American Community Survey Public Use Microdata (PUMS) 5-Year Estimates

PEOPLE

Talent Flows and Diversity

Bay Area residents most likely to move out of the region include those who are Republicans or Independents (75% and 61%, respectively), Renters (62%), those with household incomes less than \$75,000 (61%), and Hispanic or Latino/a/x residents (61%); in contrast, homeowners, White residents, Democrats, those with household incomes of \$250,000 or more, and retirees are less likely to move (41-51%). The Silicon Valley Poll shows a clear bifurcation between respondents who thought the Bay Area economy was in poor condition (75% said they were likely to move out) and those who indicated the regional economy was in good or excellent shape (40%).

Silicon Valley's population declined for the fifth year in a row in 2022, driven by fewer births (despite a slight uptick year-over-year), more deaths, and an outflow of people leaving for other parts of the state and nation. More than a quarter of them are moving to other parts of the Bay Area, another third moving further out but staying in California; 40% of the outmigration in 2021 was to other parts of the U.S. such as Seattle and other rising tech centers like Austin, Dallas-Fort Worth, and Denver. By some measures, the region lost more than 100,000 residents in 2021 alone, though the pace of fluctuations in migration, with COVID surges and

disparate data time horizons make it difficult to quantify this loss.

Net foreign immigration was negative in 2021 for the first time in recent history, indicating that more people left the region for other countries than came in; however, that trend reversed in 2022 with a resurgence of foreign immigration into Santa Clara and San Mateo counties, reaching moderate

levels in an historical context. The population is changing at such a rapid pace, that the share of residents with a bachelor's degree or higher shot up by more than eight percentage points since 2010 (and by 34 percentage points since 1970). The region's share of foreign-born residents held steady near the recent peak of 39% in 2019 (and 66% of tech workers), and more than half of

Continued on page 14

More Silicon Valley residents died during the first year of the pandemic than in any prior year on record.³ The two counties combined lost more than 17,000 people between July 2020 and June 2021; 2,015 of these deaths (12%) were COVID-related.

a. California Department of Finance, Deaths by County (from 1968).

Between mid-2020 and mid-2021 — the first year of the pandemic — Silicon Valley experienced the largest population decline on record (-38,900),³ which occurred precipitously at more than double the magnitude of the prior year's (then-record-breaking) decline of -16,900 residents. Although year-over-year population change was already slightly negative prior to the pandemic, the first half of 2020 marked the beginning of a rapid and steady downtrend.

a. Population for Santa Clara and San Mateo Counties currently available from the California Department of Finance includes 76 years of data, going back to 1947.

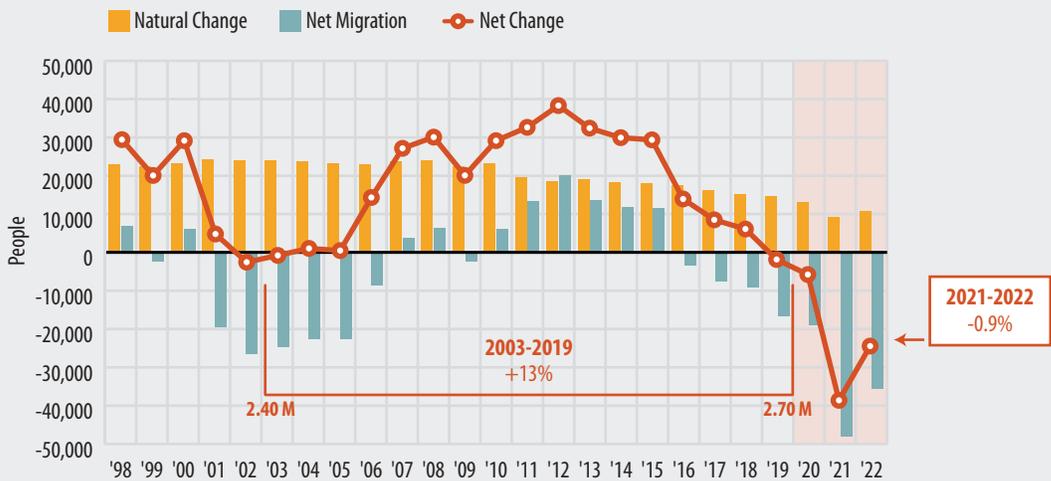
Silicon Valley's population has only declined during six of the past 76 years (2002, 2003, and the past four years, 2018-2022) based on official mid-year population estimates.

The combined population of Santa Clara and San Mateo Counties fell by 0.9% between mid-2021 and mid-2022. Similarly, the state of California's population fell by 0.5% year-over-year.

POPULATION CHANGE

Components of Population Change

Santa Clara & San Mateo Counties



Data Source: California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

The 2022 mid-year population estimate of 2.62 million (for Santa Clara and San Mateo Counties, combined) is equivalent to the region's population circa 2013.

The region's record-breaking population decline that occurred between mid-2020 and mid-2021 of -38,900 residents was primarily due to a 47% rise in net domestic outmigration, a reversal of the net flow of foreign immigrants (-108%), an increase in deaths (+10%), and a decline in births (-9%).

Net foreign immigration for Santa Clara and San Mateo Counties combined was negative in 2021 for the first time in recent history,^a indicating that more people left the region for other countries than came in.

a. Based on available data from the California Department of Finance, which goes back to 1991.

Silicon Valley has only experienced a net in-migration from other parts of the state and country during three of the past 32 years (2011-2013). From mid-2021 to mid-2022, domestic outmigration exceeded in-migration by nearly 43,600 people.

Revised estimates of domestic outmigration (residents leaving for other parts of the state and country) indicate that nearly as many people left Santa Clara and San Mateo Counties between mid-2020 and mid-2021 (net of approximately 47,800) as at the beginning of the dot.com bust in 2001 (net of approximately 48,300).

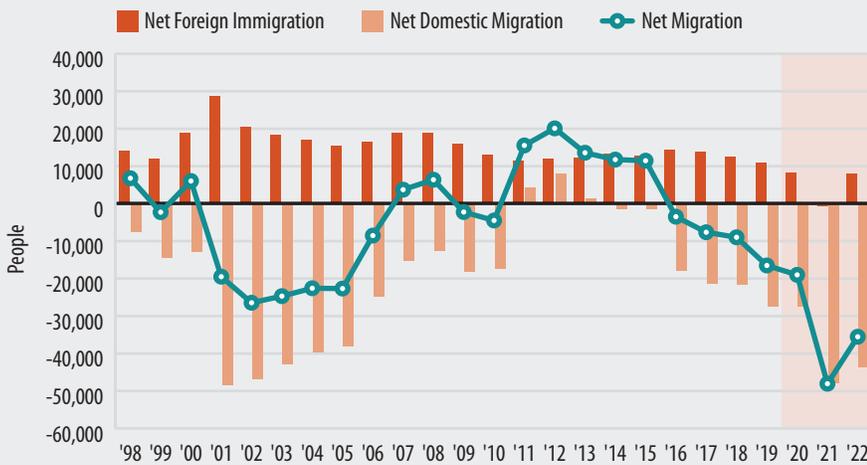
Silicon Valley's domestic outmigration^a between mid-2020 and mid-2021 (-47,800) was greater than any other year since 2001 (-48,300).

a. Migration from Santa Clara or San Mateo Counties to other parts of the state and nation.

MIGRATION FLOWS

Foreign and Domestic Migration

Santa Clara & San Mateo Counties



Data Source: California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

There was a resurgence of foreign immigration into Santa Clara and San Mateo Counties in 2022, reaching moderate levels in an historical context while representing a complete flow reversal from the prior year (in which there was a net outflow of several hundred residents to other countries).

Net domestic outmigration from Santa Clara and San Mateo Counties from July 2020 through July 2022 (-91,400 to other parts of the state and nation) totaled nearly that of the prior four years combined (-97,800) according to recently released data from the California Department of Finance.³

Refugee Arrivals



*2021 data include Santa Clara County only. Data Source: Refugee Processing Center, California Immigrant Data Portal | Analysis: National Equity Atlas; Silicon Valley Institute for Regional Studies

% Likely to Move Out

Bay Area | 2022

Republican	75%
Think the Bay Area economy is in poor condition	75%
Renters	62%
Independent	61%
Hispanic or Latino/a/x	61%
Income <\$75,000	61%
Employed	58%
Overall	56%
White	51%
Democrat	47%
Income \$250,000+	47%
Owners	47%
Retired	41%
Think the Bay Area economy is in excellent or good condition	40%

Data Source: Silicon Valley Poll (www.jointventure.org/svpoll)

The likelihood of Bay Area residents moving out of the region — as self-reported through the 2022 Silicon Valley Poll — varies widely from 41% of retirees and 47% of homeowners, to 62% of renters and 75% of Republicans.

Refugee³ arrivals in Santa Clara and San Mateo Counties have declined significantly over the past dozen years, from approximately 581 in 2009 to a mere 32 in 2021, with declines since 2017 due in large part to the suspension of the U.S. refugee program and subsequent lowering of admission ceilings by the Trump Administration.⁴ While declines have also occurred throughout the state — down 91% since 2009 — California admitted more refugees than any other state in FY 2021-22, with the largest numbers coming from Syria and Ukraine.⁵

a. According to the U.S. Department of Health and Human Services, a refugee is someone outside of their home country who is unable or unwilling to return because of persecution or a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group, or political opinion.

PEOPLE

Talent Flows and Diversity

Continued from page 12

all households speak another language at home other than exclusively English.

Silicon Valley's largest tech companies remain largely White and Asian, with an underrepresentation of Black or African American, Hispanic or Latino, and female workers.

Why is this important?

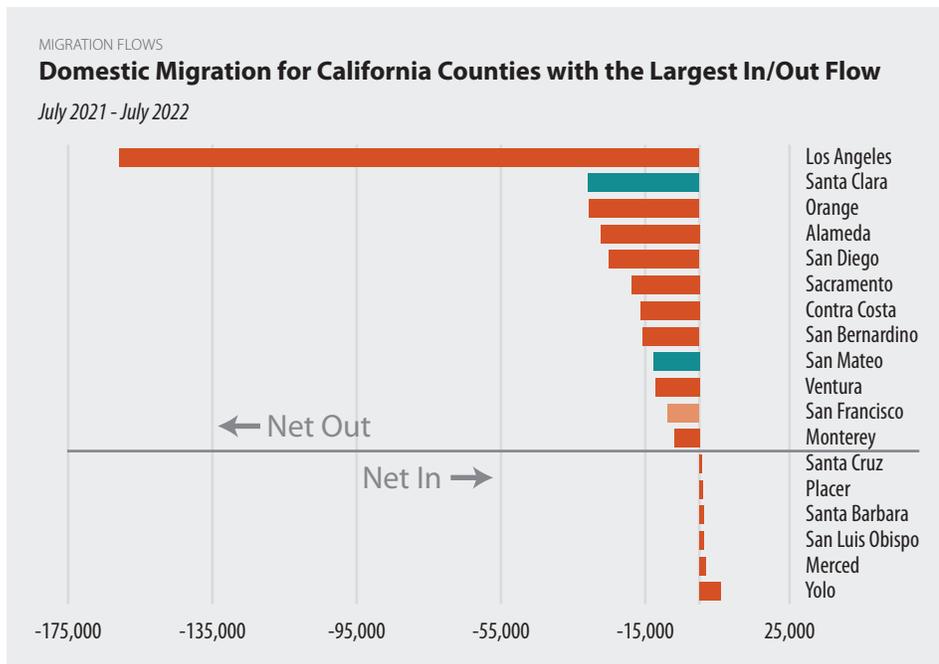
Silicon Valley's most important asset is its people who drive the economy and shape the region's quality of life. Population growth is reported as a function of migration (immigration and emigration) and natural population change (the difference between the number of births and deaths). Delving into the diversity and makeup of the region's

people — and its newcomers — helps everyone to better understand the region's assets and challenges.

The number of science and engineering degrees awarded regionally helps to gauge how well Silicon Valley is preparing talent for its high tech sector. A highly-educated local workforce is a valuable resource for generating innovative ideas, products, and services. The region has benefited significantly from the entrepreneurial spirit of people drawn to Silicon Valley from around the country and the world. Historically, immigrants have contributed considerably to innovation and job creation in the region, state, and nation,^{1, 2} as well as through their taxes and spending.³

Increasing the region's diversity also enriches the fabric of the community. Diversity and the coming together of people with different backgrounds, cultures, genders, races, and ethnicities is critical to the success of businesses and the region as a whole. These backgrounds shape the perspective from which tasks are undertaken. By creating inclusive communities and workplaces, everyone is better able to build, succeed, and grow together. Numerous efforts aim to create and maintain equality within the talent pool (and in educating a future workforce), and tracking this progress allows all to reflect and continue to strive for a better, more inclusive region.

a. California immigrants contributed \$391 billion to the U.S. economy through their local, state, and federal taxes in 2018, in addition to contributions through their spending (California Immigrant Data Portal, Data Summaries, accessed 2/7/22).



Data Source: California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

Of California's 58 counties, 39 experienced a net outflow of domestic migrants between mid-2021 and mid-2022. The majority (60%) of Silicon Valley's domestic outmigrants in 2021 stayed in California — 26% remaining in the Bay Area, 6% moving to the nearby Monterey Bay Area, 6% to the Sacramento area, 7% to San Joaquin Valley, and 13% to Southern California.

Santa Clara County ranked second among California's 58 counties for the largest net domestic outmigration between July 2021 and July 2022, with a net loss of approximately 30,900 residents.

The number of people moving out of the Bay Area to the top 10 U.S. destinations rose sharply between 2019 and 2021 for a *net* loss of approximately 47,800.^a Domestic migration gains in 2022, however, more than made up for those two years of net losses (with an estimated *net* gain of 57,300).

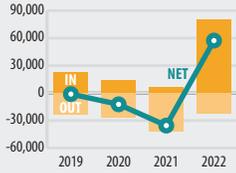
a. Change over the prior year, based on net domestic outmigration estimates to the top 10 U.S. destinations (using self-reported worker moves and several assumptions, described in Appendix A).

Based on data self-reported by professionals on LinkedIn, the top ten domestic destinations for outmigrants in 2021 were all among the nation's top 25 tech talent regions^a (Austin, Los Angeles, Seattle, Sacramento, San Diego, New York City, Denver, Portland, Dallas-Fort Worth, and Phoenix). The list was similar in 2022, but also included two cities not on the tech talent list (Reno and Miami-Fort Lauderdale).

a. Based on CBRE Scoring Tech Talent 2022, top 50 tech talent markets in North America and smaller, emerging tech talent regions among the "Next 25."

Domestic In/Out Migration

Between the Bay Area and top ten U.S. origins/destinations



Data Source: LinkedIn; U.S. Census Bureau American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

More than a quarter (26%) of Silicon Valley's domestic outmigrants in 2021 moved to another part of the Bay Area.

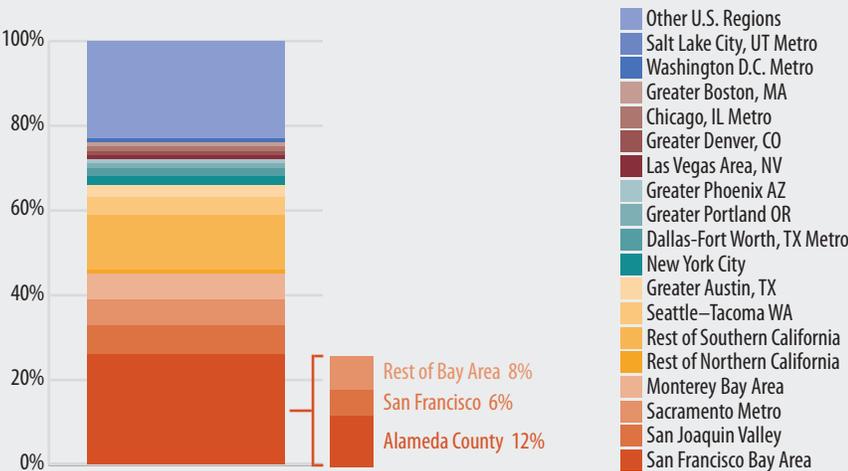
Eight out of ten people who moved out of Silicon Valley to other parts of the state or nation in 2021 settled in one of 18 major regions (six of which are in California).

In contrast to the 7% share of Silicon Valley's population that moved to other parts of the state and country in 2021 (based on gross domestic outmigration), only 2% of Bay Area residents left the nine-county region altogether that year.

MIGRATION FLOWS

Domestic Outmigration Destinations

Santa Clara & San Mateo Counties | 2021



Data Source: United States Census Bureau | Analysis: Silicon Valley Institute for Regional Studies

In 2021, Santa Clara and San Mateo counties combined lost as many as 194,000 residents to other parts of the state and country (not subtracting counterflow).^a This rate of departures amounts to a residential turnover of approximately 7% of the region's population each year — up from 5% pre-pandemic (2019).

a. Note that estimates of gross (and net) outmigration using U.S. Census Bureau, 2021 American Community Survey 1-Year Estimates (calendar-year data) typically align closely with California Department of Finance (DOF) Estimates (fiscal-year data), despite being offset by a six month period; however, Census calendar year 2021 and DOF fiscal year 2020-21 estimates were particularly dissimilar. This may be due to differences in estimation methodologies, as well as increased temporal variability and magnitude of change during the pandemic.

26% of Silicon Valley's domestic outmigrants in 2021 stayed within the Bay Area (12% went to Alameda County, 6% to San Francisco, and 8% to other parts of the region); likewise, a large share (21%) moved to the nearby Monterey Bay area, the Sacramento metro, San Joaquin Valley, or other parts of Northern California.

Top out-of-state destinations for Silicon Valley's outmigrants include the Seattle-Tacoma area (4%), Greater Austin (3%), New York City (2%), the Dallas-Fort Worth metro (2%), in and around Portland Oregon (1%), Greater Phoenix (1%), and Las Vegas (1%).

PEOPLE

Talent Flows and Diversity

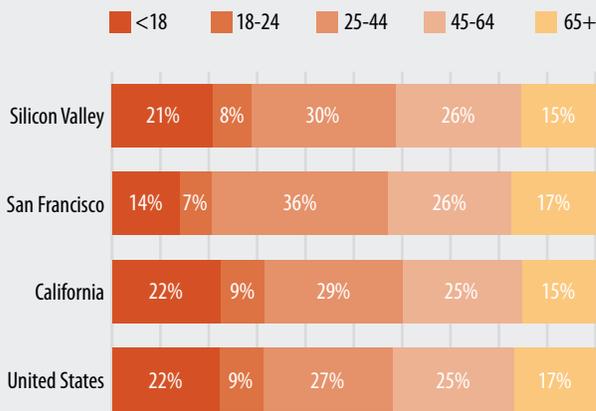
Between 2011 and 2021, the population of infants and preschool-aged children, as well as children ages five to nine, declined in Santa Clara and San Mateo Counties. The number of infants and preschool-aged children declined by more than 30,000 (-18%), with a similar decline (31,000) among children ages five to nine. The decline in the region's youth population has contributed to a drop in public school enrollment (-8%) over the past several years.



The core working age group (25-44) makes up a significantly larger share of San Francisco's population (36%) than that of Santa Clara and San Mateo Counties (30%), the state (29%), and the nation (27%).

POPULATION BY AGE Age Distribution

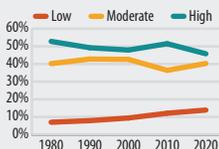
Santa Clara and San Mateo Counties, San Francisco, California, and the United States 2021



Between 2011 and 2021, Santa Clara and San Mateo Counties gained an additional 86,000 residents; among the age groups that increased in number, 75% of the growth was accounted for by those ages 55 and over.

Silicon Valley's population continues to age, with a growing number of residents ages 65 and over (up by 32% since 2011) and a shrinking number of children under the age of 18 (down nearly 8% over the same period).

Divergence Index: Share of Census Tracts by Degree of Racial Residential Segregation Santa Clara and San Mateo Counties



Asians have represented the largest share of Silicon Valley's population since 2017. Although the Bay Area is relatively diverse at the regional level, nearly 50% of neighborhoods in Silicon Valley are highly segregated.

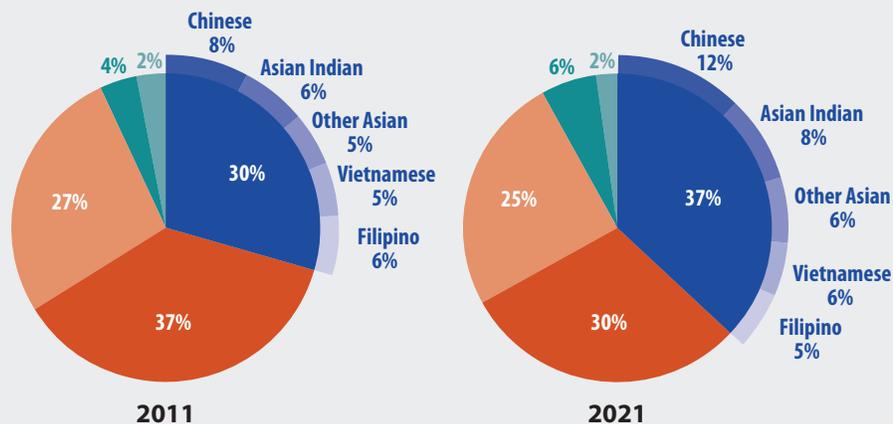
Data Sources: United States Census Bureau, American Community Survey
Analysis: Silicon Valley Institute for Regional Studies

RACIAL AND ETHNIC COMPOSITION

Population Share by Race & Ethnicity

Santa Clara & San Mateo Counties

Asian White Hispanic or Latino Multiple & Other Black or African American



Silicon Valley's population share of Black or African American residents has remained at just over two percent for the past decade.

Diversity Index



Note: The Diversity Index (DI) indicates the probability that two people chosen at random will be from different racial and/or ethnic groups; a DI of zero indicates no diversity, whereas a DI of 1 indicates complete diversity (everyone is of a different race and/or ethnicity). The probabilities have been converted into percentages to make them easier to interpret.

In 1980, a majority of Silicon Valley census tracts (53%) were highly segregated. By 2020, that percentage had dropped to 46%, suggesting modest gains for increased diversity at the neighborhood level.

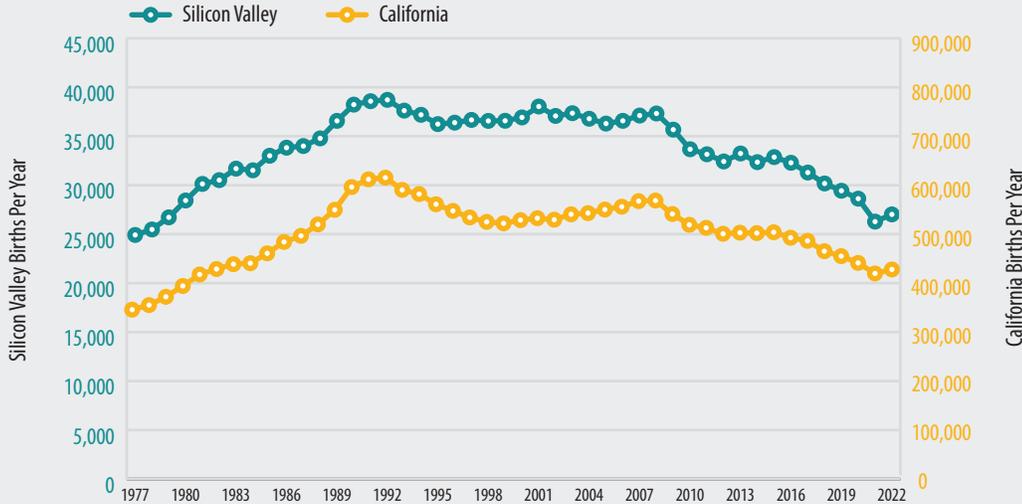
Note: Other Asian includes Korean, Japanese, and all other Asian except Chinese, Asian Indian, Vietnamese, and Filipino. | Data Source: United States Census Bureau, American Community Survey; Othering & Belonging Institute, University of California, Berkeley | Analysis: Silicon Valley Institute for Regional Studies

The total number of births in Santa Clara and San Mateo Counties increased in 2022 (+3% year-over-year) for the first time since 2015; likewise, the total number of births statewide increased by 2%.

BIRTHS

Total Number of Births

Santa Clara & San Mateo Counties, and California



Between mid-2021 and mid-2022, more than 27,000 babies were born in the two-county region; this number was up from 26,300 the prior year, which was the lowest annual total since 1978.

Prior to the slight uptick in 2022, total births per year in Santa Clara and San Mateo Counties had declined significantly since the most recent peak (down 30% between 2008 and 2021).

Data Source: California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

Despite an uptick in the region's total number of births in 2022, the birth rate in 2021 and 2022 (9.9 and 10.3 births per 1,000 people, respectively) in Santa Clara and San Mateo Counties combined was lower than any other year over the last half-century. The birth rate has declined steadily since 1991 when it last peaked at nearly 18 births per 1,000 people.

Silicon Valley is a relatively diverse region, with a Diversity Index of 70% in 2021 — indicating that there is a 70% chance of two people chosen at random being from different racial or ethnic groups; this compares to a Diversity Index of 60% in the U.S. as a whole. Silicon Valley's Diversity Index has remained constant at 70% over the past decade, while California and the U.S. have become more diverse.

Asian residents represented 37% of Silicon Valley's population in 2021 (up from 30% a decade prior). The region's Asian population is diverse with respect to ethnicities represented, with the largest shares being Chinese (12%), Asian Indian (8%), Vietnamese (6%), and Filipino (5%).

PEOPLE

Talent Flows and Diversity

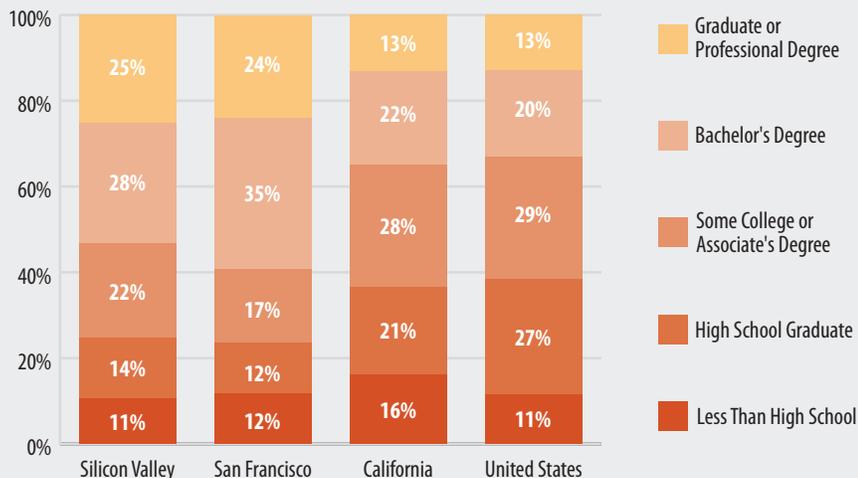
Silicon Valley and San Francisco have much higher levels of educational attainment than California or the United States as a whole, with 53% and 59% of adults, respectively, having a bachelor's degree or higher.

The share of Silicon Valley residents with a bachelor's degree or higher (53%) increased by more than eight percentage points since 2010 and 34 percentage points since 1970.

EDUCATIONAL ATTAINMENT

Percentage of Adults, by Educational Attainment

Santa Clara & San Mateo Counties, San Francisco, California, and the United States | 2021



% Bachelor's or Higher Silicon Valley



Educational attainment disparities persist across racial and ethnic groups in Silicon Valley. Hispanic or Latino residents have significantly lower educational attainment than other racial and ethnic groups.

25% of Silicon Valley adults have a graduate or professional degree.

Data Source: United States Census Bureau, Decennial Census and American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley residents have higher levels of educational attainment, overall, than the state or nation, with increasing levels across all racial and ethnic groups over the past decade.

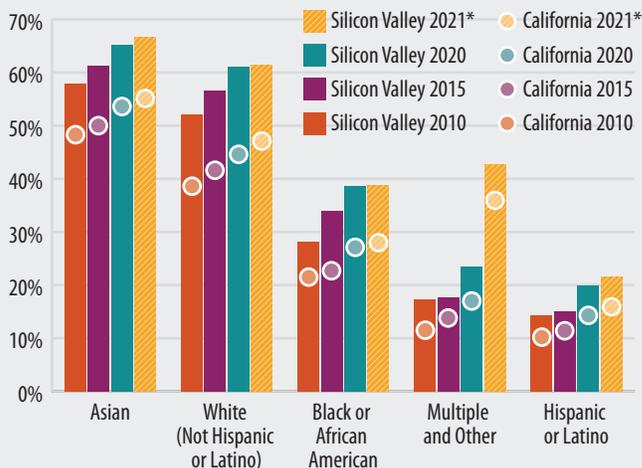
Less than 40% of Silicon Valley Black or African American residents have a bachelor's degree or higher, compared to nearly 62% of White, not Hispanic or Latino residents, and 67% of Asian residents.

While educational attainment levels for Silicon Valley's Hispanic or Latino residents remain low relative to other racial and ethnic groups, they have increased over time; the share with a bachelor's degree or higher rose from 14% to 22% between 2010 and 2021.

EDUCATIONAL ATTAINMENT

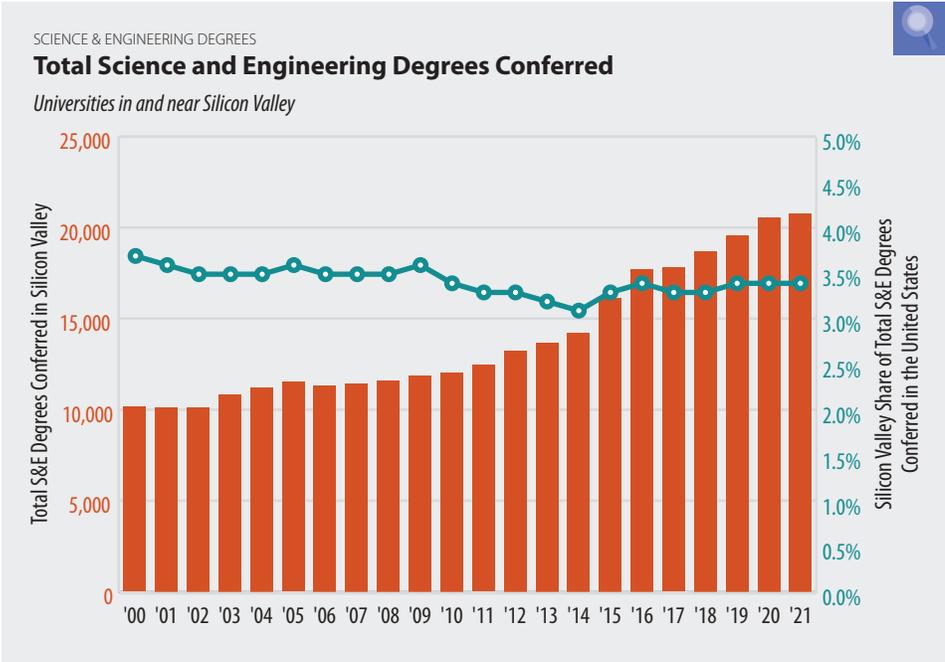
Percentage of Adults with a Bachelor's Degree or Higher by Race & Ethnicity

Santa Clara & San Mateo Counties, and California



*2021 data from 1-year estimates | Note: Multiple and Other includes Alaska Native and American Indian, Native Hawaiian and Other Pacific Islander, Some Other Race and Two or More Races. | Data Source: United States Census Bureau, Decennial Census and American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

In 2021, there were 20,800 science and engineering degrees conferred among Silicon Valley's top academic institutions — approximately 200 more than the previous year.



Data Source: National Center for Educational Statistics, IPEDS | Analysis: Silicon Valley Institute for Regional Studies

More than 72% of science and engineering degrees were conferred to students identifying as White or Asian, compared to 17% Hispanic or Latino and slightly more than two percent to Black or African American students.

The share of Silicon Valley science and engineering degrees conferred to women has remained in the 37-41% range since the year 2000, and has increased by only four percentage points over the past decade.

While the total number of science and engineering degrees conferred in and around Silicon Valley continues to increase, the share conferred to women has remained relatively stagnant for nearly two decades (increasing by roughly two percentage points since 2011).



Share of Science and Engineering Degrees Conferred, by Race and Ethnicity
Silicon Valley, 2021

Asian	40.9%
White	31.8%
Hispanic or Latino	17.7%
Two or More Races	7.0%
Black or African American	2.2%
Other	4.6%

Note: Other includes American Indian, Alaska Native, and Native Hawaiian or Other Pacific Islander. Percentages represent a share of degrees where race or ethnicity was reported.

The overwhelming majority of science and engineering degrees conferred in 2021 went to students identifying as White or Asian.

PEOPLE

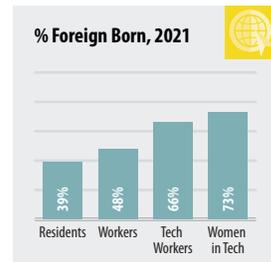
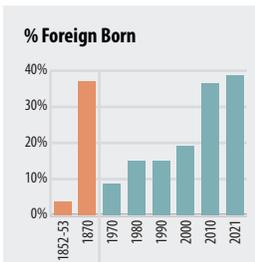
Talent Flows and Diversity

An estimated 18% of Santa Clara and San Mateo Counties' foreign-born residents are undocumented, with the majority Latino (104,200) and Asian Americans (68,500); 30% are lawful permanent residents (18% Asian American, 6% Latino, and 5% White).

Nearly half (48%) of all Silicon Valley's employed residents and 66% of tech workers were born outside of the country; 73% of Silicon Valley's female tech workers are foreign-born.

39% of Silicon Valley's population was born outside the U.S. — a much higher share than the state (27%) or nation as a whole (14%).

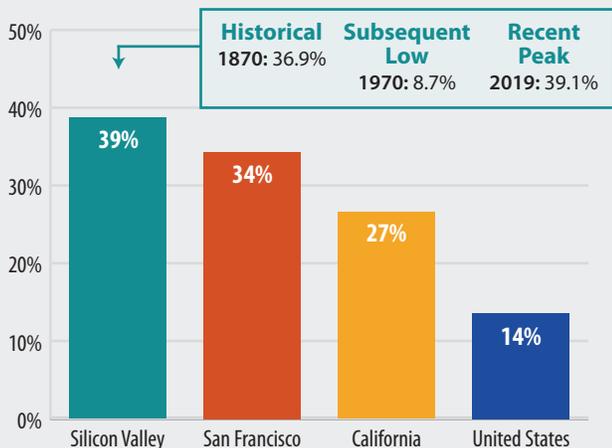
Silicon Valley's foreign-born population share reached a level in 2019 (39%) higher than any other year on record (going back to the mid-1800s), and held steady into 2021.



FOREIGN BORN

Percentage of the Total Population Who Are Foreign Born

Santa Clara & San Mateo Counties, San Francisco, California, and the United States | 2021

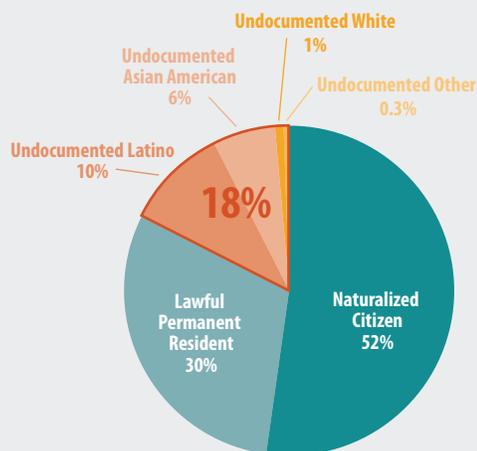


Note: Tech includes Computer & Mathematical, Architectural & Engineering occupations. Workers include those over age 16 who are employed and at-work. | Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

FOREIGN BORN

Immigration Status

Santa Clara & San Mateo Counties | 2019



Data Source: California Immigrant Data Portal (Data: IPUMS USA) | Analysis: University of Southern California's Equity Research Institute (ERI); Silicon Valley Institute for Regional Studies

Over the past decade, Silicon Valley's population has shifted from mostly speaking English exclusively at home to a majority speaking another language.

Silicon Valley has a slightly larger share of limited English-speaking households (9%) compared to California (8%) and the United States (4%), though this number has declined by two percentage points over the past decade.

Population Share That Speaks a Language at Home Other Than Exclusively English

	2011	2021
Silicon Valley	49%	51%
San Francisco	46%	44%
California	44%	44%
United States	21%	22%

FOREIGN LANGUAGE

Population Share Speaking A Language Other Than English at Home

Santa Clara & San Mateo Counties, San Francisco, California, and the United States | 2021



Silicon Valley has a widespread distribution of languages spoken at home, with a smaller share of foreign-language speakers speaking Spanish (33%) than in California (64%) or the United States (61%), and a larger share speaking languages such as Chinese, Vietnamese, and Tagalog.

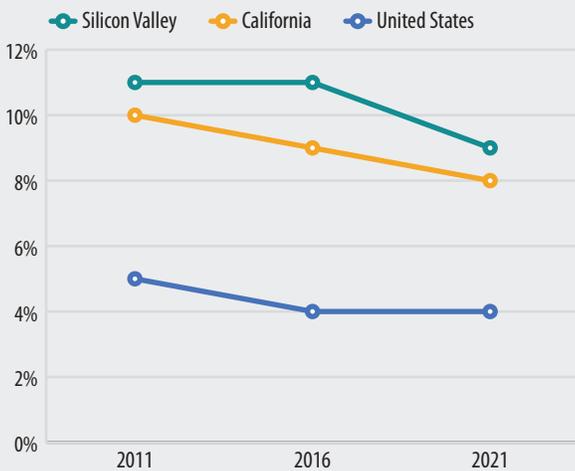
Asian and Pacific Island languages are spoken in more than 61% of Silicon Valley's limited English-speaking households, compared to 25% speaking Spanish.

Note: Includes the population five years of age and older. | Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

FOREIGN LANGUAGE

Share of Households That Are Limited English-Speaking

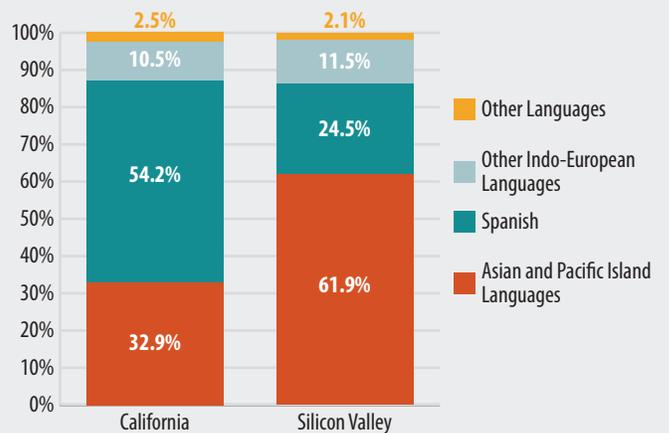
Santa Clara & San Mateo Counties, California, and the United States



FOREIGN LANGUAGE

Languages Spoken in Limited English-Speaking Households

Santa Clara & San Mateo Counties, and California | 2021



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

PEOPLE

Talent Flows and Diversity

While women make up 45% of Silicon Valley's regional civilian workforce, they account for 40% of employees at the region's 20 largest tech companies; they account for an even lower share of leadership positions (37%) and technical roles (31%).

A larger share of Silicon Valley's highly-educated tech workers were from India and China combined (42%) than from within the United States (30%) in 2021.

At the region's 20 largest tech companies, 40% of overall employees (and 30% of those in technical roles) are women.

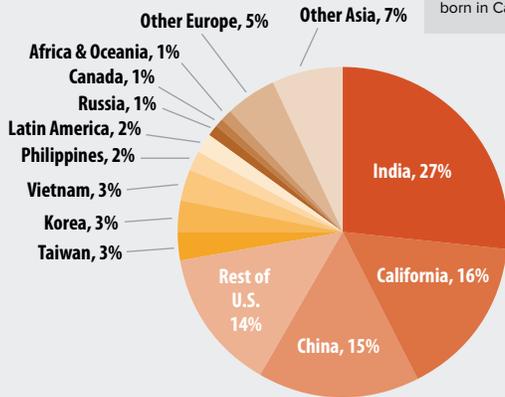
Asian workers represent 38% of technical roles and roughly 19% of all employees at the region's 20 largest technology companies.

TECH TALENT

Share of Residents in Technical Occupations with a Bachelor's Degree or Higher, by Place of Origin

Santa Clara & San Mateo Counties | 2021

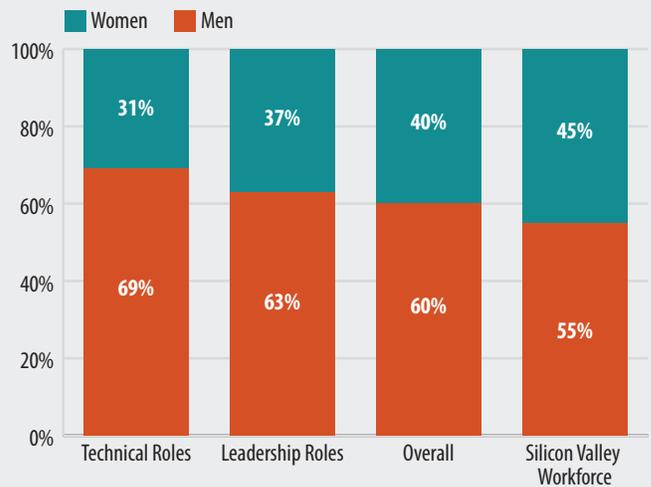
Of Silicon Valley's tech talent with a bachelor's degree or higher, 16% were born in California.



TECH TALENT

Share of Female Employees at Silicon Valley's Largest Technology Companies

2021



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Seventy percent of Silicon Valley's tech talent — including those with a bachelor's degree or higher in technical occupations — are foreign-born, with the largest shares coming from India (27%) and China (16%).

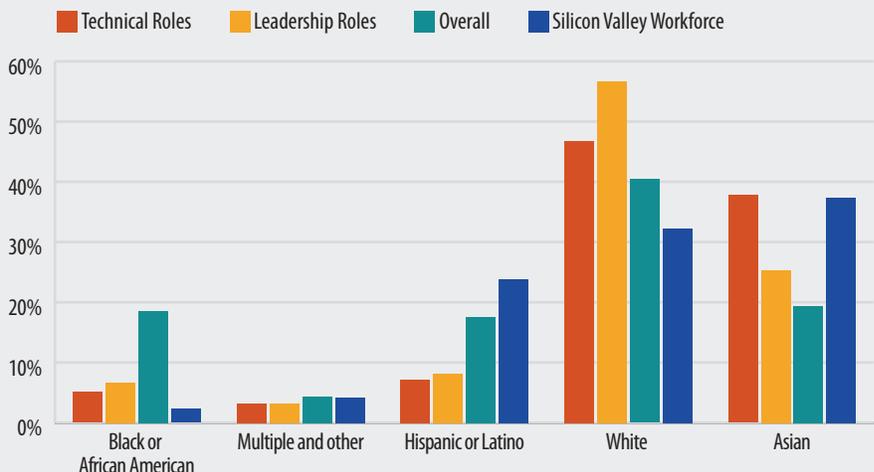
The share of Black or African American workers at Silicon Valley's 20 largest tech companies is 6% without including Amazon, and 19% with Amazon; that 19%, however, only includes a 5% share of technical roles and a 7% share of leadership roles.

White, not Hispanic or Latino workers make up 32% of the civilian workforce but account for approximately 57% of leadership roles in the tech industry and 47% of technical roles. In stark contrast, Hispanic or Latino workers represent only 17% of employees at these same companies, despite representing 24% of the Silicon Valley workforce.

TECH TALENT

Share of Employees at Silicon Valley's Largest Technology Companies, by Race & Ethnicity

2021

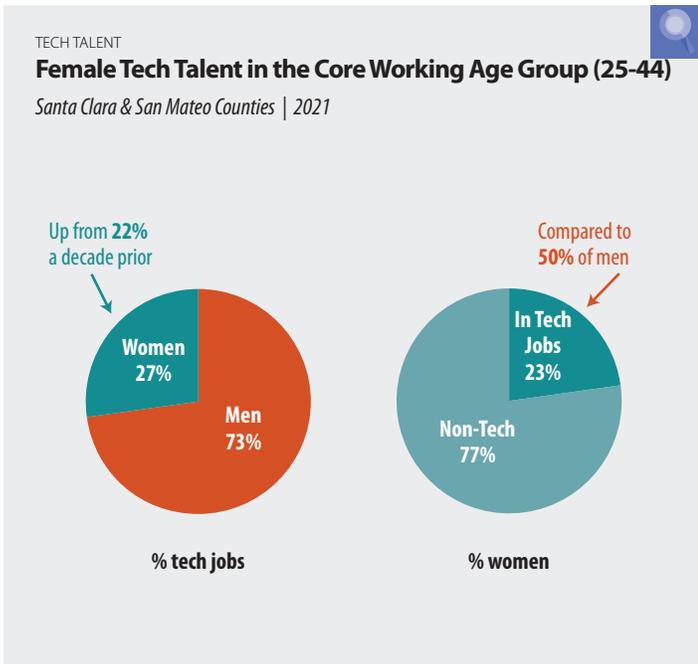


Note: Analysis includes the 20 largest technology companies. | Data Sources: Individual company EEO-1 reports; *Silicon Valley Business Journal*; LinkedIn; United States Census Bureau, American Community Survey, 5-Year Estimates | Analysis: Silicon Valley Institute for Regional Studies

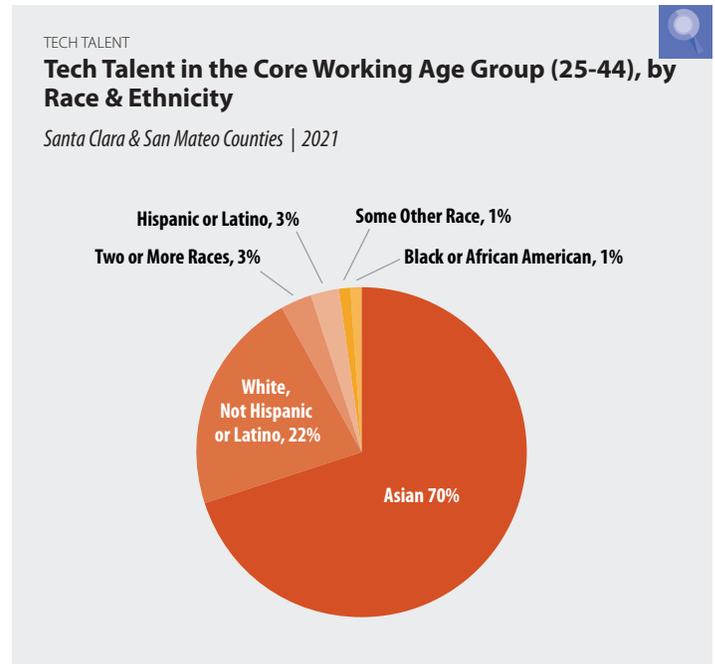
Only 23% of working women in the region are in tech roles, compared to 50% of working men.

The share of Silicon Valley tech jobs occupied by women ages 25-44 in Silicon Valley has increased over the past decade to 27%, up from 22% in 2011.

Of Silicon Valley's core working age group (ages 25-44) in tech roles, 70% are Asian and 22% are White, not Hispanic or Latino.



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

ECONOMY

Employment

Silicon Valley experienced continued employment gains, with an increase of more than 88,000 jobs between mid-2021 and mid-2022 (+5.4%, following a +5.1% gain the prior year), and an estimated additional +22,000 in the second half of the year. The shift in regional jobs by type that occurred at the onset of the pandemic persisted, with a larger share of jobs in tech (28%, up two percentage points since pre-pandemic) and a smaller share in Community Infrastructure & Services jobs such as retail, education, transportation, and nonprofits (48%, down from 50% in 2019). This shift is an extension of the trend that began at the start of the Great Recession recovery period; since 2010, Silicon Valley's tech jobs have grown at

nearly twice the rate as overall employment (+56%, compared to +33% overall). Within the greater Silicon Valley region — including San Francisco — an estimated 42% of Innovation and Information Products & Services jobs last year were at the 30 largest tech companies (19% at Google, Apple, and Meta alone).

The region's largest tech employers have continued to grow their local workforces since prior to the pandemic (+22% from January 2020 through 2022), but have been growing them more rapidly in other parts of the nation (+33%) and world (+66%). At the tail end of last year, Silicon Valley was home to approximately 24% of the U.S. workforce of the largest 20 tech companies; however, layoffs in January 2023 contributed to a

one percentage point loss in the region's collective share of this 1.1 million-person U.S. workforce (from 24.0% in December 2022, to 23.1% in February 2023).

Silicon Valley's unemployment rate reached pre-pandemic levels by April 2022, and hit an historic low of 1.8% briefly in May. For the remainder of 2022, the unemployment rate hovered around 2% — indicative of a region at full-employment. Despite this low level overall, unemployment continues to vary by race and ethnicity. Black or African American residents filed unemployment insurance claims at 2.4 times the rate of White residents last year, and Hispanic or Latino residents filed them at a rate 1.4 times higher.

In mid-2022, the total number of jobs in Silicon Valley was 33% higher than the low-point of the Great Recession (mid-2010); in comparison, employment levels in California overall were only 23% higher.

Silicon Valley employment grew by nearly 88,240 jobs between mid-2021 and mid-2022, followed by an estimated 22,300 in the second half of 2022.^a

a. Second half 2022 growth rates, as reported by the California Employment Development Department (EDD) for June through November.

At the end of 2022, total employment levels in Silicon Valley were approximately^a two percent higher than pre-pandemic (2019) levels; in contrast, those of San Francisco, Alameda County, and the Bay Area overall remained approximately 1% below pre-pandemic levels.

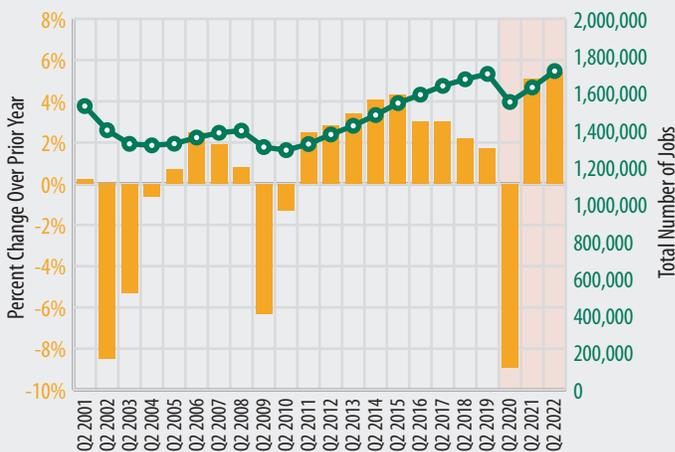
a. Based on Q2 2022 plus second half data using 2022 growth rates for Santa Clara and San Mateo Counties, as reported by the California Employment Development Department (EDD) for June through November.

Silicon Valley job growth was steady over the two-year period between mid-2020 and mid-2022, up 5.1% and 5.4% each year, respectively.

JOB GROWTH

Total Number of Jobs and Percent Change Over Prior Year

Silicon Valley



Second Half 2022* Growth Rates

Santa Clara County	+1.3%
San Mateo County	+1.1%
Combined	+1.3%
Alameda County	+0.5%

*based on EDD reported June through November growth rates by county. | Note: Percent change from 2012 to 2022 is based on unsuppressed numbers. Percent change for prior years is based on QCEW data totals with suppressed industries. | Data Sources: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages; JobsEQ | Analysis: BW Research

Silicon Valley's tech industry had three straight years of positive growth (through mid-2022). Community Infrastructure & Services — including industries such as education, construction, retail, and personal services — lost 15% of its employment between mid-2019 and mid-2020, and despite two years of gains remained 3% below pre-pandemic (2019) levels in 2022.

Why is this important?

Employment gains and losses are a core means of tracking economic health and remain central to national, state, and regional conversations. Over the course of the past few decades, Silicon Valley (like many other communities) has experienced shifts in the composition of industries that underpin the local economy. The types of jobs and the composition of the region's workforce affect the availability of opportunities and uncover potential skills gaps. Examining employment by wage and skill level allows

for a higher level of granularity to help us understand the changing composition of jobs within the region. While employment by industry provides a broader picture of the region's economy as a whole, the unemployment rates of the population residing in the Valley reveals the status of the immediate Silicon Valley-based workforce. Changes in the region's industry patterns show to what extent our economy is balancing the needs of its community with maintaining its position in the global economy.

An estimated 39% of Silicon Valley and San Francisco tech jobs in mid-2022 were at the 20 largest tech companies alone, with another 3% at the next largest ten; 58% were at all other tech companies, combined. The latter represents a one percentage point change from the prior year (57% of tech jobs at companies other than the 30 largest in 2021).

Of the 608,000 tech (Innovation & Information Products and Services) jobs within Silicon Valley and San Francisco in 2022, as many as 257,000 of them (42%) are employed at one of the region's 30 largest tech companies (and 26% at the largest six alone); Google and Apple employ the highest shares (approximately 8% and 7%, respectively), followed by Meta (4%), Amazon (3%), Cisco (2%), and Tesla(2%).

In mid-2022, Community Infrastructure & Services jobs remained below pre-pandemic (2019) levels by nearly 22,000, while tech jobs (Innovation and Information Products & Services) were up by 34,600.

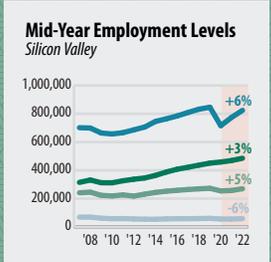
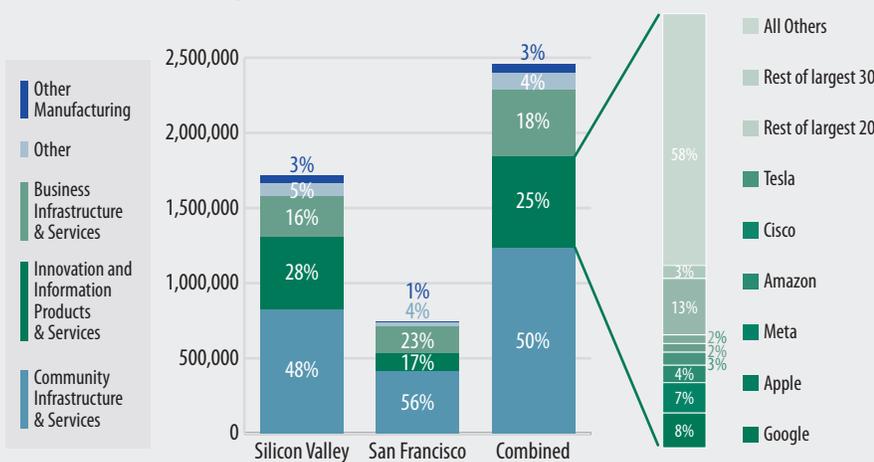
The concentration of pandemic-related job losses in Community Infrastructure & Services — which had only halfway recovered by mid-2021 — accompanied by a boom in tech prosperity (market gains and hiring) — led to an increased share of Silicon Valley's workforce in tech jobs. That share (which grew slowly from 24% in 2009 to 26% a decade later) rose precipitously to 30% in 2020 and remained at 28% in mid-2022. Correspondingly, the share of jobs in Community Infrastructure & Services fell from 50% in 2019 to 46% in 2020, remaining at 48% in mid-2022.

MAJOR AREAS OF ECONOMIC ACTIVITY

Total Employment, by Major Areas of Economic Activity

with estimated shares of Innovation & Information Products and Services Jobs at the Region's Largest Tech Companies

Silicon Valley and San Francisco | 2022



Jobs in Innovation and Information Products & Services have grown at nearly twice the rate of overall employment in Silicon Valley since the start of the Great Recession recovery period (in 2010).

Note: Definitions of the major areas of economic activity are included in Appendix A. | Data Sources: BW Research; U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages; JobsEQ; Silicon Valley Business Journal; LinkedIn | Analysis: BW Research; Silicon Valley Institute for Regional Studies

Silicon Valley jobs in Innovation and Information Products & Services — such as Computer Hardware, Software, Internet & Information Services, and Biotechnology — were 56% higher in mid-2021 (up by nearly 174,000 jobs) than the Great Recession-low (in 2010); in contrast, overall regional employment levels were only 33% higher than in 2010.

Silicon Valley job growth has been positive for the tech industry since the start of the pandemic, with a gain of 2-3% each year from mid-2019 to mid-2022.

ECONOMY

Employment

42% of all Silicon Valley jobs are Tier 2 (mid-skill/mid-wage); 26% are Tier 1 (high-skill/high-wage), and 32% are Tier 3 (low-skill/low-wage).

43% of Community Infrastructure & Services jobs are Tier 3; in contrast, Innovation and Information Products & Services (tech industry) jobs are primarily (48%) Tier 1.

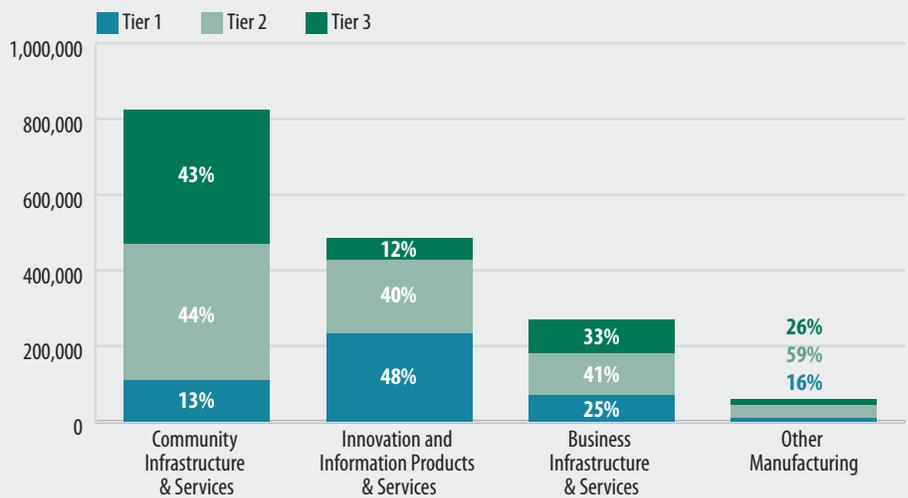
While Business Infrastructure & Services jobs are 25% Tier 1 (high-skill/high-wage), there is also a relatively large share (41%) of them that are Tier 2 (mid-skill/mid-wage).

Between mid-2012 and mid-2020, the shares of Silicon Valley jobs in each tier have remained almost unchanged; however, uneven pandemic-related losses and recovery led to a shift in employment by tier in 2021, with a noticeably higher share (albeit a small numeric change of one percentage point) of Tier 1 jobs, and a lower share of Tier 3 jobs.

MAJOR AREAS OF ECONOMIC ACTIVITY

Employment in Major Areas of Economic Activity, by Tier

Silicon Valley | 2022

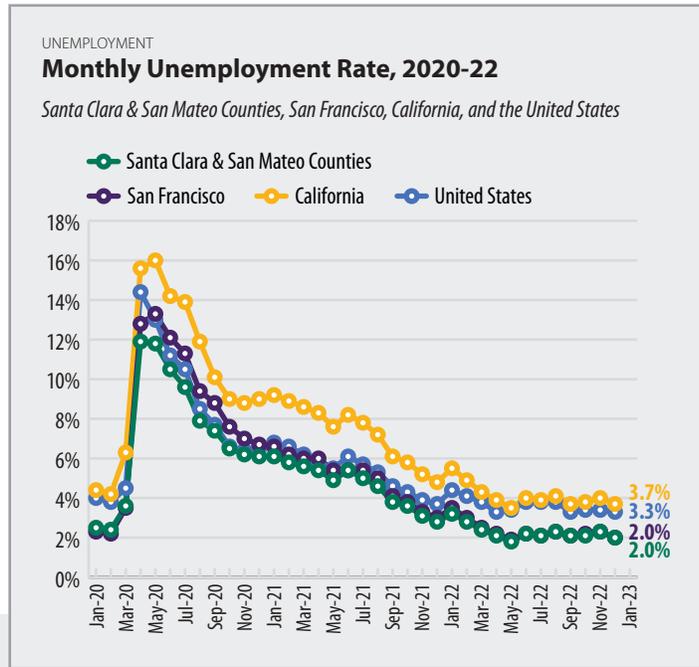


Note: Definitions of the major areas of economic activity, and of Tier 1 (high-skill/high-wage), Tier 2 (mid-skill/mid-wage), and Tier 3 (low-skill/low-wage) jobs are included in Appendix A. | Data Sources: BW Research; U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages; California Employment Development Department; JobsEQ | Analysis: BW Research

Prior to the pandemic, Silicon Valley's unemployment rate was at a 20-year low — reaching 2.1% in the spring of 2019, lower than any other month since December 1999. Within one month of the crisis, the region's unemployment rate skyrocketed to an historic high of 11.8% in mid-April. By April 2022, the unemployment rate had again dropped to historic lows, which were recorded at 1.8% briefly by May.

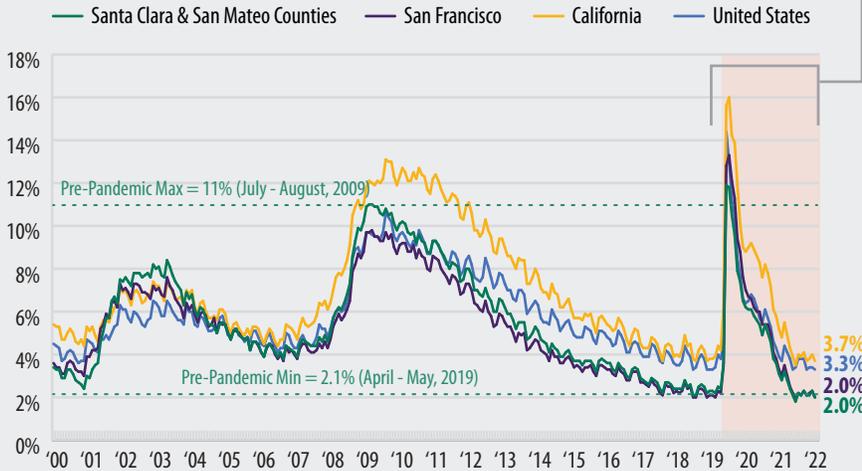
Silicon Valley’s unemployment rate reached pre-pandemic levels by April 2022, and hit an historic low of 1.8% briefly in May. For the remainder of 2022, the unemployment rate hovered around 2% — indicative of a region at full-employment.

Silicon Valley’s unemployment rate — which peaked in April 2020 at an unprecedented 11.9%, higher than the 11% Great Recession-peak in July and August 2009 and any other year on record (30+ years including the dot.com bust) — returned to pre-pandemic (February 2020) rates by April 2022. By the end of that year, the region’s unemployment rate had dropped by another 1.6 percentage points to 2.0%.



UNEMPLOYMENT
Monthly Unemployment Rate

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Note: County-level and California data for November 2022 and December 2022 are preliminary; Rates are not seasonally adjusted. | Data Source: U.S. Bureau of Labor Statistics, Current Population Survey (CPS) and Local Area Unemployment Statistics (LAUS); California Employment Development Department (EDD) | Analysis: Silicon Valley Institute for Regional Studies

The December 2022 unemployment rate was 2.0% in Silicon Valley (Santa Clara and San Mateo Counties, combined), 2.4% in the nine-county Bay Area, 2.0% in San Francisco, 3.7% in California overall, and 3.3% nationwide.

Greater Silicon Valley^a employment levels between mid-November and mid-December 2022 increased most notably in Trade, Transportation, and Utilities (+2,700 jobs, or +1.0%), Educational and Health Services (+1,200, or +0.3%), and Financial Activities (+1,000, or +0.8%). Government (-1,400, or -0.6%) and Leisure and Hospitality (-1,000, or -0.5%) both declined over that period.

a. Including the San Jose-Sunnyvale-Santa Clara MSA (Santa Clara and San Benito Counties) and San Francisco-Redwood City-South San Francisco MSA (San Francisco and San Mateo Counties).

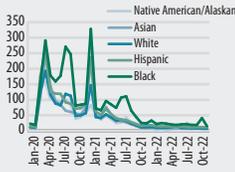
As of mid-December, approximately 30,300 people in Silicon Valley’s labor force remained unemployed (8,600 in San Mateo County, and 21,700 in Santa Clara County), a decrease of more than 4,400 since mid-November, and a drop of approximately 22,000 since the region recovered to its pre-pandemic unemployment rate (in October 2021).

ECONOMY

Employment

Weekly Initial UI Claims Per 10,000 in Labor Force, by Race & Ethnicity

Santa Clara & San Mateo Counties
January 2020 through December 2022



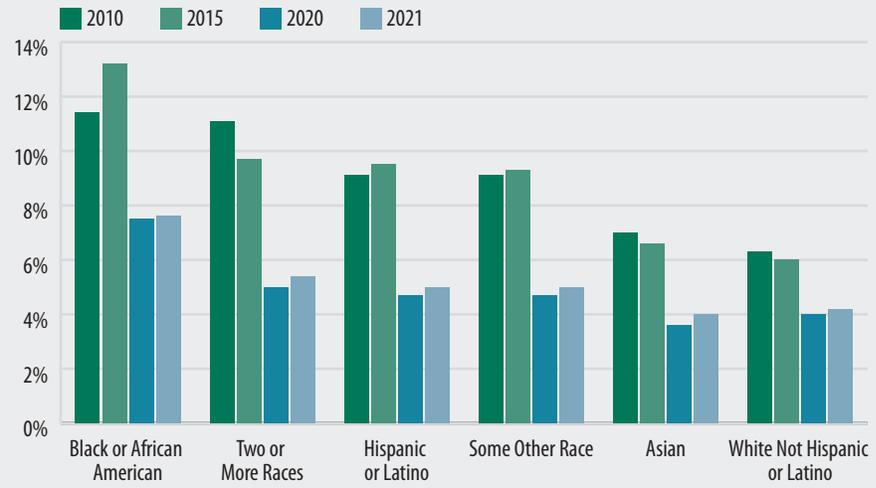
Initial unemployment insurance (UI) claims filed from 2020 through 2022 show the lingering impacts of the pandemic on job losses, disproportionately affecting Black or African American and Hispanic or Latino residents (with UI claims filed at 2.4 and 1.4 times the rate of White residents, respectively).

Unemployment rates across all racial and ethnic groups in Silicon Valley declined from Great Recession highs in 2009 through 2016, and then remained relatively steady through 2019. In 2020, however, the effects of the pandemic led to unemployment rates increasing across nearly all racial and ethnic groups, though not to the same degree. The annual unemployment rate for Black and African American residents in the labor force increased from 6% to 11% between 2019 and 2021, whereas the unemployment rate for White, not Hispanic or Latino residents rose from less than 3% to 6% over the same period.

UNEMPLOYMENT

Average Unemployment Rate by Race & Ethnicity

Santa Clara & San Mateo Counties



Note: Data include civilian workers ages 16 and over. Data from the 2020 United States Census Bureau, American Community Survey 1-Year Estimates are experimental. | Data Source: United States Census Bureau, American Community Survey; California Employment Development Department | Analysis: Silicon Valley Institute for Regional Studies

Emerging U.S. tech talent regions since 2016 — by percent growth — include Salt Lake City (+29%), Denver (+23%), Austin (+21%), and Dallas / Ft. Worth (+15%).

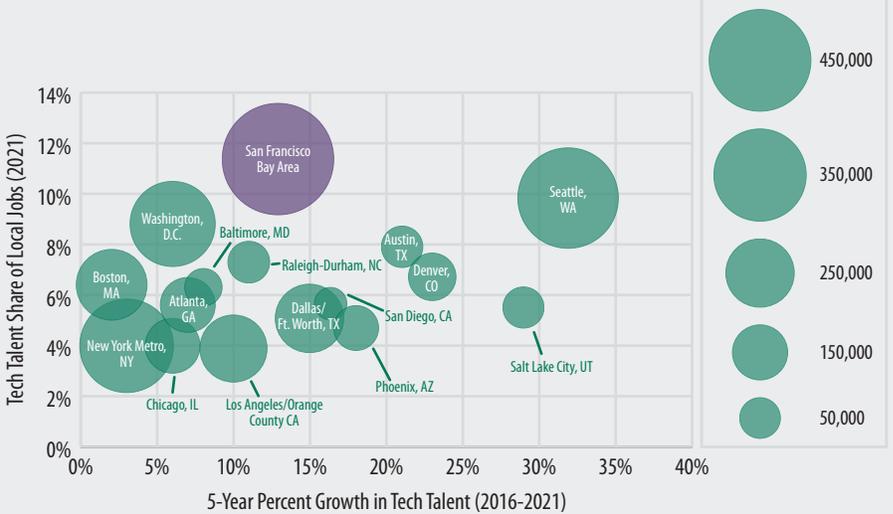
The Bay Area remains a top U.S. tech talent center in terms of total number of tech jobs^a as well as the share of local jobs that are in tech. However, five-year tech job growth rates have been much higher in several other regions, such as Seattle, Denver, Salt Lake City, and Phoenix — areas that not only have lower average wages for tech workers (by as much as \$50,000 annually) but also have more rapid growth in the population share of young adults in their 20s (+6-19% growth since 2015).

a. Includes software developers and programmers; computer support, database and systems; technology and engineering related; and computer and information system managers — all of which are highly concentrated within the high-tech services industry but are spread across all industry sectors.

TECH TALENT CENTERS

Top U.S. Tech Talent Centers

by percent growth, share of local jobs, and total number of tech jobs

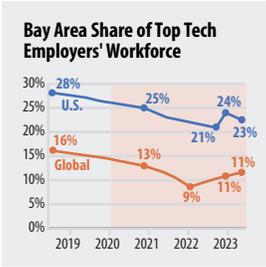
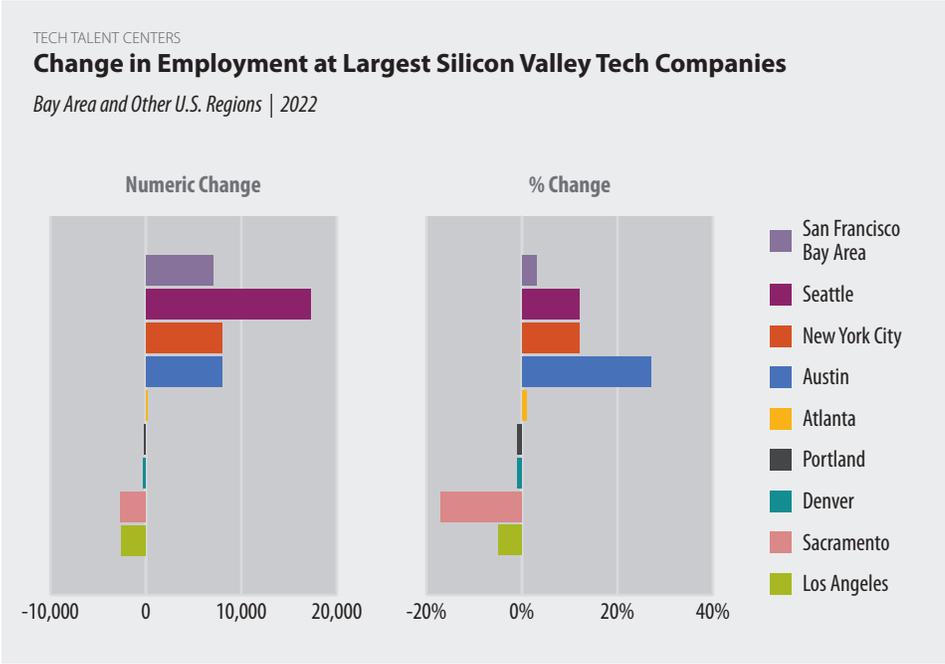


Data Source: CBRE Research, Scoring Tech Talent 2022 | Analysis: CBRE Research; Silicon Valley Institute for Regional Studies

Layoffs among Silicon Valley's largest tech companies in January 2023 contributed to a one percentage point loss in Silicon Valley's share of their collective 1.1 million-person U.S. workforce (from 24.0% in December 2022, to 23.1% in February 2023).

Domestic growth of Silicon Valley's largest tech employers' workforce in 2022 was most pronounced in the Greater Seattle area (+17,300), primarily due to growth at Meta (+7,300), Amazon (+6,000), and Google (+2,800) – all of which have had a growing real estate footprint in Seattle's South Lake Union and other neighborhoods.⁶

Beyond Silicon Valley, the largest 20 tech employers collectively expanded their presence most noticeably in the Austin Metro (+27% year-over-year), Greater Seattle (+12%), and the New York City Metro (+12%) areas last year.



Data Source: LinkedIn; *Silicon Valley Business Journal* | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley's largest tech companies have continued to grow their local workforce since pre-pandemic (+22% from January 2020 through 2022); however, their workforces are growing more rapidly in other parts of the state and country (+33%) and world (+66%).

14 out of Silicon Valley's top 20 tech employers had fewer Bay Area workers in February 2023 than in December, 2022. The largest losses were at Apple, Google, and Meta (down by 11,000 combined), followed by Cisco, LinkedIn, and Salesforce (-2,800); the remaining eight companies lost less than 500 employees each over that period. In contrast, Amazon, Tesla, Oracle, Nvidia, and Microsoft did not exhibit losses as of February 1.^a

a. According to self-reported data on LinkedIn.

Bay Area employment at Silicon Valley's largest 20 tech employers has grown by +22% since pre-pandemic (January 2020 through December 2022), adding approximately 48,200 jobs. However, the region's share of those companies' aggregate U.S. and global workforces has declined (from 26% to 24%, and from 15% to 11%, respectively) over that same period.

ECONOMY

Income & Wealth

Silicon Valley has vast income and wealth disparities, which are evident across a variety of metrics — each with a nuanced approach to gleaning information about the region’s economic wellbeing.

Income disparities persist even at comparable levels of educational attainment. They translate to both a growing income divide as well as extreme levels of wealth inequality, which are more pronounced in Silicon Valley than in the state or country as a whole (especially when the

Silicon Valley’s inflation-adjusted per capita personal income rose slightly in 2021 due to a combination of total personal income gains and a declining population (thus a smaller denominator in the per capita income calculation).

ultra high net worth households — which are typically removed from regional datasets as outliers — are included). Particularly since the start of the Great Recession recovery period in 2010 — and exacerbated by the growth in the wealth divide during the first two years of the pandemic — Silicon Valley’s wealth inequality has grown even more drastic; in 2022, the top 10% of households held 66% of the wealth; eight residents held more wealth than the bottom 50% (nearly half a million households) combined.

Of Silicon Valley’s 163,000 millionaire households (those with more than \$1 million in investable assets), an estimated 8,300 have more than \$10 million — representing less than 1% of the region’s households, but holding 36% of the collective wealth. By contrast, an estimated 220,000 Silicon Valley households have less than \$5,000 in total investable assets. Despite a relatively low household poverty rate of 5% in 2022, nearly one-third (28%) of all Silicon Valley households did not earn enough money to meet their most basic needs without public or private/informal assistance.

While educational attainment levels are closely linked to wages, differences in educational attainment do not fully explain

Continued on page 38

Per capita income gains for residents of Silicon Valley have outpaced inflation every year except one since the recovery from the Great Recession began in 2010; however, Black or African American residents have experienced much smaller gains than other racial/ethnic groups.

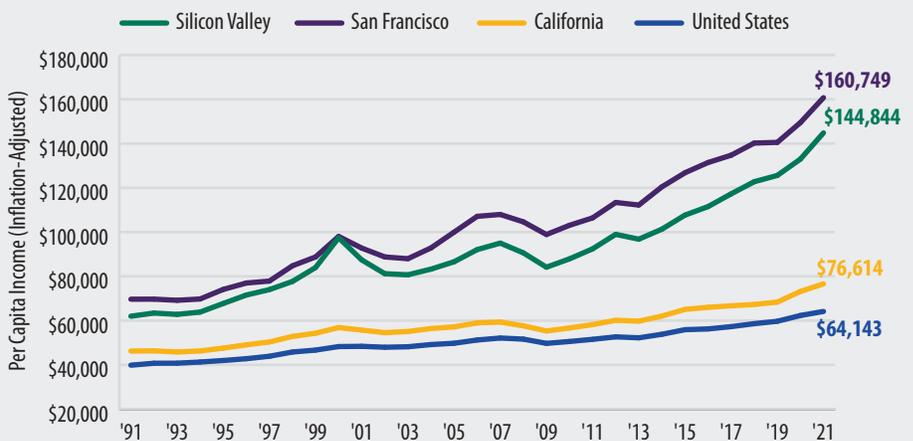
Inflation-adjusted per capita income has been increasing steadily in Silicon Valley since 2009, reaching an all-time high of over \$145,000 in 2021 despite pandemic-effects on employee compensation. This compares to \$161,000 in San Francisco, \$77,000 in California, and \$64,000 nationwide.

In places like Silicon Valley that have a large degree of income inequality, per capita income is highly influenced by the number of extremely high income earners (who were also less likely to have experienced pandemic-related job losses).

PERSONAL INCOME

Per Capita Personal Income

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



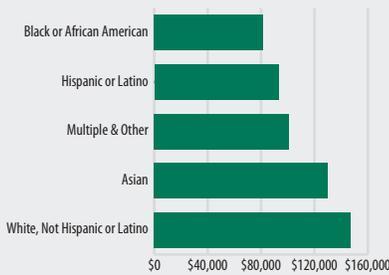
Note: Personal income is defined as the sum of wage and salary disbursements (including stock options), supplements to wages and salaries, proprietors' income, dividends, interest, rental income, and personal current transfer receipts, less contributions for government social insurance. | Data Source: United States Department of Commerce, Bureau of Economic Analysis | Analysis: Silicon Valley Institute for Regional Studies

Between 2020 and 2021, total personal income in Santa Clara and San Mateo counties combined increased by nearly 11%. The regional inflation rate was +3.2% and the total population declined by 1.6%, resulting in a nearly 9% year-over-year rise in Silicon Valley’s inflation-adjusted per capita personal income.

Over the decade between 2011 and 2021, inflation-adjusted personal per capita income in Silicon Valley rose significantly for most racial/ethnic groups (14-29%) with Black or African American residents experiencing the lowest increase at 14% over those ten years. One contributing factor to the disparity in per capita incomes by race and ethnicity is the variability in educational attainment levels across racial and ethnic groups (and the linkage between income and educational attainment); in 2021, only 40% of Black or African American and 22% of Hispanic or Latino residents had undergraduate degrees, compared to 62% of White and 67% of Asian residents.

Per Capita Income for Residents with a Bachelor's Degree or Higher by Race & Ethnicity

Santa Clara & San Mateo Counties | 2021



Percent Change in Inflation-Adjusted Per Capita Income, by Race & Ethnicity (2021 dollars)			
	2011-2016	2016-2021	2011-2021
Asian	+0.3%	+16%	+16%
Multiple & Other	+0.6%	+28%	+29%
Hispanic or Latino	-2.7%	+17%	+14%
White, Not Hispanic or Latino	-5.9%	+30%	+22%
Black or African American	-4.4%	+25%	+20%
ALL	-1.5%	+21%	+19%

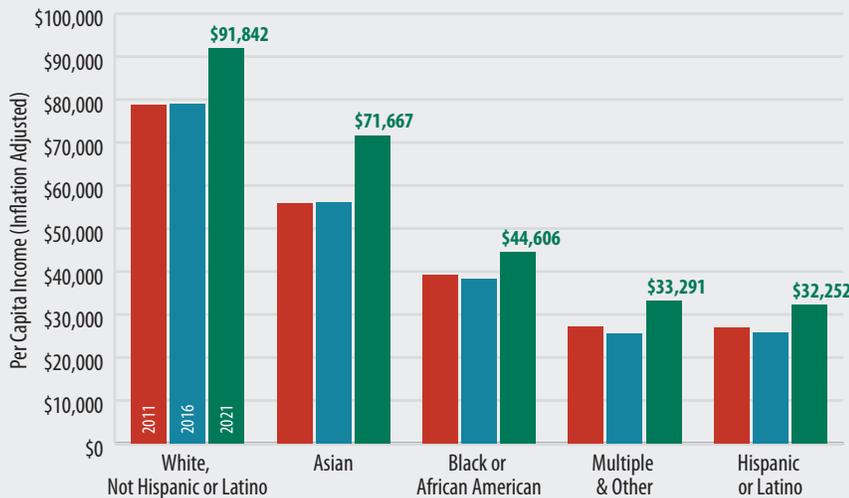
The differential between per capita income for White, not Hispanic or Latino residents and Hispanic or Latino residents is over \$59,000 (or Hispanic or Latino residents have a per capita income that is 35% of White, not Hispanic or Latino per capita income).

When participants were asked if their personal financial situation is in good to excellent shape in the 2022 Silicon Valley Poll, over 52% of respondents said yes with the majority of Men (58%), White (58%), and AAPI (57%) respondents indicating yes, whereas to a much lesser degree Black (41%), Hispanic or Latino (33%), and 18- to 34-year-olds (44%) indicated that their personal financial situation was in good to excellent shape.

PERSONAL INCOME

Per Capita Income by Race & Ethnicity

Santa Clara & San Mateo Counties



Note: Multiple & Other includes Native Hawaiian & Other Pacific Islander Alone, American Indian & Alaska Native Alone, Some Other Race Alone and Two or More Races; Personal income is defined as the sum of wage or salary income, net self-employment income, interest, dividends, or net rental welfare payments, retirement, survivor or disability pensions; and all other income; White is not Hispanic or Latino. | Data Source: United States Census Bureau, American Community Survey Analysis: Silicon Valley Institute for Regional Studies

The highest earning among racial/ethnic groups in 2021 were White, not Hispanic or Latino residents at nearly \$92,000 (based on Census data, which include income from cash or cash equivalents only).⁸ This number is significantly lower than per capita income estimates for the overall population from the Bureau of Economic Analysis (\$160,700) due to exclusion of non-monetary compensation, bonuses, and additional employer benefits from the dataset, and because the dataset is limited to individuals only.³

a. The Bureau of Economic Analysis personal income estimates include "nonprofit institutions serving individuals, private noninsured welfare funds, and private trust funds" in addition to individuals.

Education alone does not explain the differential between the per capita incomes of different race and ethnic groups. For those with a bachelor's degree or higher, per capita incomes vary significantly between race/ethnic groups with White, not Hispanic or Latino residents with a bachelor's degree or higher having a per capita income that is 80% greater than Black or African American college educated residents.

ECONOMY

Income & Wealth

Continued from page 36

income disparities. The largest gap in wages by gender are at the highest levels of education, and across a variety of measures, White (not Hispanic or Latino) residents earn more than similarly-educated Hispanic or Latino, or Black or African American residents.

Per capita income increased in the region as did average wages, but high inflation in the Bay Area eroded some of those gains; inflation outpaced year-over-year gains in median household income, reflected in an apparent decline in 2021. When compared

to other parts of the Bay Area, average earnings are higher in Silicon Valley, due in large part to the number of high-wage tech jobs as well as a higher share of residents with investment income. Still, large swaths of the population struggle to get by, as reflected in the sharp increases in the community need for food assistance; while the region's nonprofit food bank serves residents at higher incomes than public assistance programs, there remain double-digit percentages (and a disproportionate

share of children) in need of assistance but ineligible for benefits.

Why is this important?

Income growth is as important a measure of Silicon Valley's economic vitality as job growth. Considering multiple income measures together provides a clearer picture of regional prosperity and its distribution. Per capita income rises when a region generates wealth faster than its population increases. The median household income

Continued on page 40

Although educational attainment plays a role in average wage disparity among racial/ethnic groups, it is only one of many factors. For residents with a bachelor's degree or higher, disparities still exist. White, not Hispanic or Latino workers earned an average wage (5-year average from 2016-2021) that is 61% higher than Hispanic or Latino workers, and 62% higher than Black or African American workers.

Average wages vary significantly across racial/ethnic groups in Silicon Valley with the largest disparity between Hispanic or Latino residents, and White, not Hispanic or Latino residents. The five-year average wage (2016-2021) for White, not Hispanic or Latino residents was 138% higher than Hispanic or Latino residents, and 88% higher than average wages of Black or African American residents.

Since 2014, the number of Silicon Valley cities that have minimum wage ordinances has increased from one (Sunnyvale) to 20, representing 51% of the region's 39 cities.

% Silicon Valley Cities with Minimum Wage Ordinances



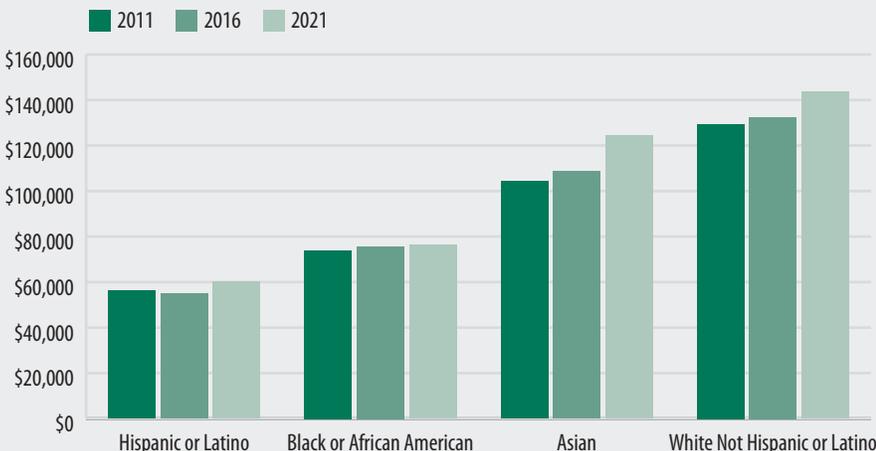
Note: Minimum wage ordinances are city-level policies that set a higher minimum wage than is required by the state. | Data Source: U.C. Berkeley Labor Center | Analysis: U.C. Berkeley Labor Center; Silicon Valley Institute for Regional Studies

As of January, 2023, Silicon Valley city minimum wage ordinances ranged from \$16.00 per hour (in Fremont) to \$18.15 per hour (in Mountain View).

WAGES BY RACE & ETHNICITY

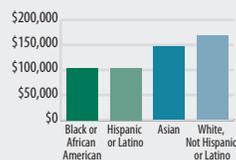
Average Wage for Full-Time Workers by Race & Ethnicity

Santa Clara & San Mateo Counties



Note: Includes all full-time workers over age 15 with earnings. Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Average Wages, Bachelor's Degree+ | 2021



Inflation-adjusted average wages increased across all racial/ethnic communities in Silicon Valley from 2011 to 2021, although Black or African American residents saw an increase of only 3% over the ten-year period; and less than 1% from 2016 to 2021.

Silicon Valley workers with a bachelor's degree earned an estimated \$60,000 more than those with only a high school diploma (2.5 times more) in 2021; this compares to a ratio of 2.0 in California and 1.7 in the United States overall that year.

Disparity in Median Income between Highest and Lowest Educational Attainment Levels

2021

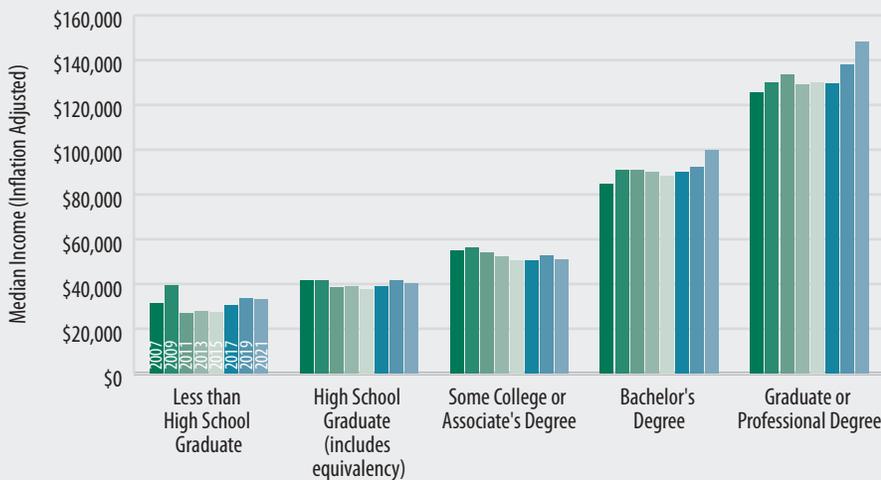
	Silicon Valley	San Francisco	California	United States
Lowest-Earning: Less than High School Graduate	\$33,087	\$26,270	\$28,501	\$28,085
Highest Earning: Graduate or Professional Degree	\$148,360	\$126,193	\$99,341	\$80,077
Gap	\$115,273	\$99,923	\$70,840	\$51,992
Ratio	4.5	4.8	3.5	2.9

In contrast to per capita income (which is often used to compare relative economic prosperity in different locales), median individual income is useful to better understand disparities among segments of the population without skewing the numbers due to other population variables or outliers (as with an average). In 2021, those at the highest level of educational attainment (graduate or professional degree) had incomes over 4.5 times greater than those at the lowest level (without a high school diploma or equivalency).

PERSONAL INCOME

Individual Median Income, by Educational Attainment

Santa Clara & San Mateo Counties



Note: Some College includes Less than 1 year of college; Some college, 1 or more years, no degree; Associate degree; Professional certification.
Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

The income gap between residents of varying educational attainment levels is much wider in Silicon Valley and San Francisco than in California or the United States as a whole, with a \$59,674 gap between the median income of those with a bachelor's degree compared to those with only a high school diploma in Silicon Valley.

Between 2019 and 2021, Silicon Valley individual inflation-adjusted median income rose by nearly 8.5% for residents with a bachelor's degree and 7.5% for those with a graduate or professional degree. For all other education levels, median income decreased, by approximately 3% for high school graduates or those with some college but no degree. Median income remained stagnant for those with less than a high school diploma or equivalency.

Individual Median Income, by Educational Attainment

Santa Clara & San Mateo Counties | 2021

	Silicon Valley	San Francisco	California	United States
High School Graduate	\$40,281	\$33,521	\$36,311	\$35,019
Bachelor's Degree	\$99,955	\$99,929	\$71,142	\$61,073
Gap	\$59,674	\$66,408	\$34,831	\$26,054
Ratio	2.5	3.0	2.0	1.7

Note: High School Graduate includes equivalency.

ECONOMY

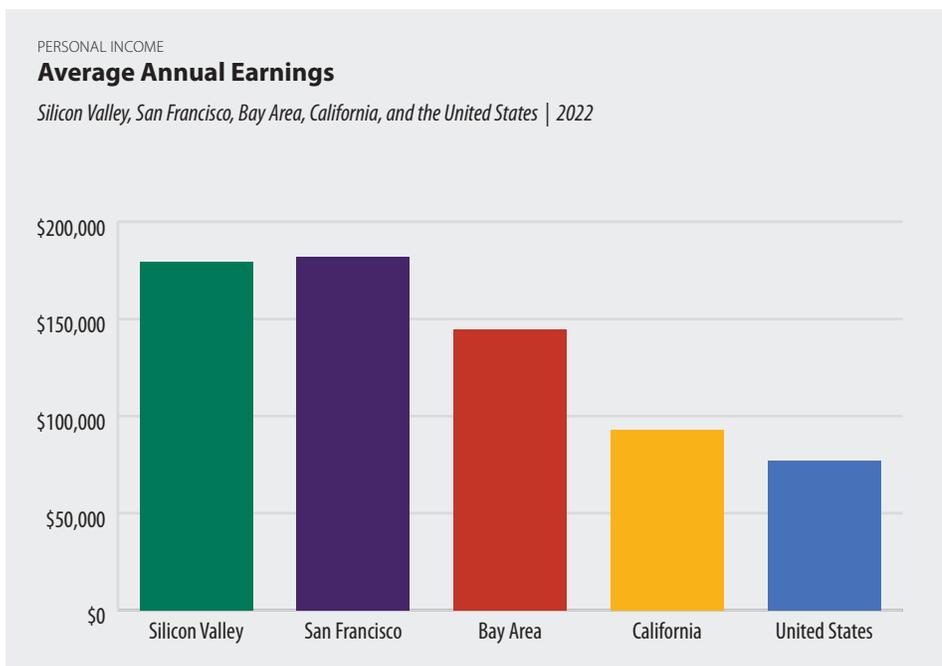
Income & Wealth

Continued from page 38

represents the middle of the income distribution, and does not skew the way an average would with a small number of extremely high earners. Examining income by educational attainment, sex, race, ethnicity, and occupational groups reveals the complexity of our income gap. Looking at the shares of households by investable assets indicates the amount of money available for consumer

and discretionary spending, higher education, retirement, philanthropy, and overall financial security; it also helps to examine the extent to which income inequality leads to wealth inequality. A lack of equality has been shown to negatively impact the way community members maintain social bonds, put pressure on the achievements of economic success without the means to

achieve it in legal ways, and conjure feelings of unjust deprivation.⁷ The share of households living below the federal poverty limit and/or Self-Sufficiency Standard are key indicators of the challenges facing many Silicon Valley residents, and directly relate to their risks of food insecurity, housing insecurity, and overall need for assistance.



Average annual earnings — including wages and supplements — are much higher in Silicon Valley and San Francisco (\$179,300 and \$182,100, respectively, in 2022) than the Bay Area overall (\$144,400), California (\$92,800), or the United States (\$76,800).

In 2022, Greater Silicon Valley workers in Service Occupations earned a median wage of \$49,500 per year — a (pre-tax) total that equates to around \$24 per hour for full-time, year-round workers. While this hourly amount is higher than minimum wage, after taxes it is barely enough to cover one movie theater ticket.^a

a. Based on example movie theater ticket prices as of February, 2022, from Cinemark USA (including Century Theatres, CineArts, and other brands) which ranged from \$15.25 to \$19.25, with lower prices for matinees.

Note: Includes wages, salaries, profits, benefits, and other compensation.
Data Source: California Employment Development Department; JobsEQ | Analysis: BW Research

Average annual earnings in Silicon Valley and San Francisco are higher than elsewhere for a variety of reasons, including larger shares of high-wage tech jobs which often include company stock. The relatively high impact of investment income on average earnings within the region is reflected in the share of individuals claiming investment earnings on their tax returns (16% in Santa Clara & San Mateo Counties, combined, and 14% in San Francisco) compared to 9% of individual returns in the rest of the Bay Area (six counties), 5% in California, and 3% nationwide;^a it is also reflected in the share of Bay Area households with tech employees whose household income is heavily reliant on employer-provided stock options and/or purchase plans (estimated at 23% overall, and as high as 70% for the highest income levels in 2022) compared to households with no tech company employees (4% and 5%, respectively).^b

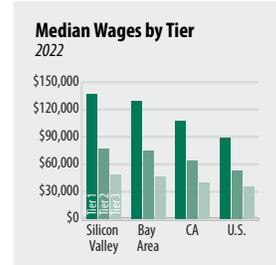
a. Based on 2020 Individual Income Tax Returns (U.S. Internal Revenue Service).
b. 2022 Silicon Valley Poll (www.jointventure.org/svpoll).

Median wages vary significantly by occupational category for Silicon Valley workers. In 2022, those in Management, Business, Science and Arts Occupations earned three times more than those in Service Occupations.

Median Wages, by Occupational Category	
Greater Silicon Valley* 2022	
Management, Business, Science and Arts Occupations	\$131,600
Natural Resources, Construction and Maintenance Occupations	\$52,100
Sales and Office Occupations	\$52,200
Production, Transportation and Material Moving Occupations	\$64,000
Service Occupations	\$49,500

*Greater Silicon Valley includes the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (Santa Clara and San Benito Counties) plus the San Francisco-San Mateo-Redwood City MSA (Marin, San Francisco, and San Mateo Counties) through 2015, and the San Francisco-Redwood City-South San Francisco Metropolitan Division (San Francisco and San Mateo Counties) for 2016-2020. | Data Sources: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages; JobsEQ | Analysis: BW Research

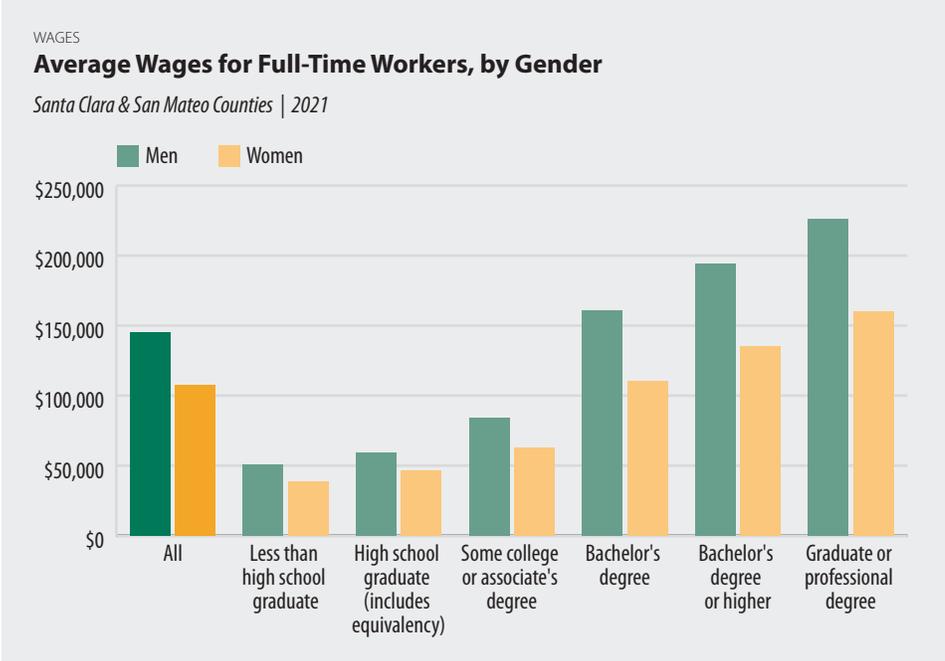
The median wage for Silicon Valley Tier 1 (high-wage/high-skill) workers was \$136,600 in 2022 — nearly three times more than Tier 3 workers (a gap of \$88,300); this compares to gap of \$53,900 between Tier 1 and Tier 3 workers in the country as a whole.



Note: Definitions of Tier 1 (high-skill/high-wage), Tier 2 (mid-skill/mid-wage), and Tier 3 (low-skill/low-wage) jobs are included in Appendix A. | Data Source: BW Research; U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages; California Employment Development Department; JobsEQ | Analysis: BW Research

Men in Silicon Valley with a bachelor's degree or higher earned an average of \$194,000 annually in 2021 — 44% more than women with the same level of educational attainment. National data suggest that the gender-pay gap remained stagnant through the pandemic.⁹

The gender wage gap in Silicon Valley is wider at higher levels of educational attainment. For full-time workers with a bachelor's degree or higher, the gender wage gap was \$59,000 in 2021 (\$7,500 greater than in 2019); in comparison, the gap was \$12,400 for workers without a high school diploma (a gap that has grown since 2019 by \$5,300). This same trend can be seen at the state and national levels, though the gender wage gap is greater in Silicon Valley.



Note: Includes all full-time workers over age 15 with earnings. Some College includes Less than 1 year of college; Some college, 1 or more years, no degree; Associate degree; Professional certification. | Data Source: United States Census Bureau, American Community Survey PUMS Analysis: Silicon Valley Institute for Regional Studies



The female:male average wage ratio for full-time workers has remained fairly consistent in Silicon Valley over the past decade with an average ratio of \$0.74. The greatest gender wage disparity (\$0.68) across a range of characteristics including education, nativity, and occupation is amongst those who live with related children.^a

a. Adults ages 16 to 62.

The 2021 gender-wage gap was wider in Silicon Valley — where women were paid an average of \$0.74 for every dollar a man earned — than in San Francisco (\$0.79 on the dollar), California (\$0.79), or the United States as a whole (\$0.76).

ECONOMY

Income & Wealth

Inflation-adjusted median household income has increased by 31% in San Francisco and 25% in Silicon Valley since 2011, the first year of positive household income growth following Great Recession losses (compared to 16% statewide, and 15% in the U.S. overall).

Increases in the regional Consumer Price Index since 2019 outpaced household income gains, resulting in a \$550 decline in Silicon Valley median household income over that two-year period (after inflation-adjustment).

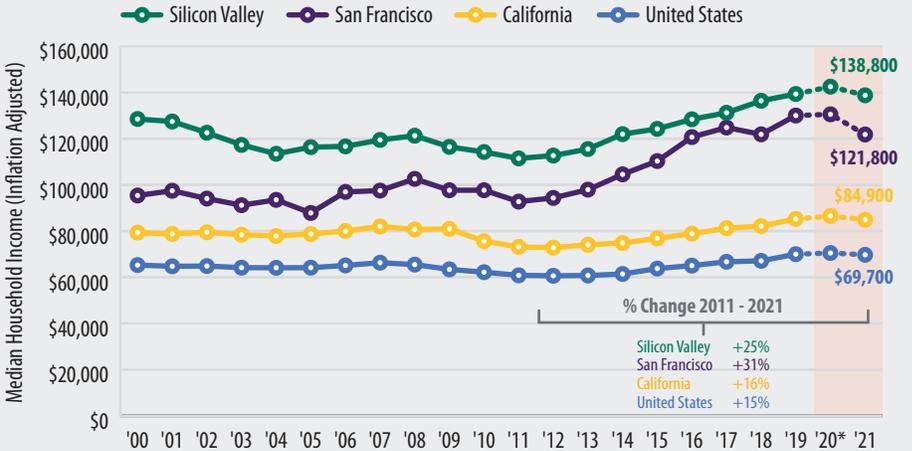
The median household income in Santa Clara and San Mateo counties combined was approximately \$138,800 in 2021, representing a 2.6% year-over-year decline. This compares to \$121,800 in San Francisco, \$84,900 in California overall, and \$69,700 nationally.

HOUSEHOLD INCOME

Median Household Income

Santa Clara & San Mateo Counties, San Francisco, California, and the United States

Median household income in Silicon Valley remained around 1.6 times higher than in California overall, and more than twice the national figure in 2021.



*2020 estimate from 1-year American Community Survey microdata with experimental weights | Note: Household income includes 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, excluding stock options. Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Net investment tax claimed on 2020 individual tax returns by Silicon Valley filers was not only more common than filers throughout the state, but the amount claimed was 1.9 times higher.

A larger share of Silicon Valley and San Francisco individuals/families claim investment gains on their tax returns. In 2020, 16% of Santa Clara and San Mateo County tax filers claimed gains such as those from the sale of stocks or investment property; this compares to 14% in San Francisco, 9% in the rest of the nine-county Bay Area, 4% in the rest of the state, and 3% in the rest of the country.

Bay Area households with one or more tech employee(s) are six times more likely than those without to have incomes reliant on stock gains. While this difference was observed across all household income levels, the gap was larger with increasing income.

% Tax Returns Claiming Investment Income

2020

Silicon Valley	16%
San Francisco County	14%
Rest of Bay Area	9%
Rest of California	4%
Rest of United States	3%

Data Source: United States Internal Revenue Service (IRS)

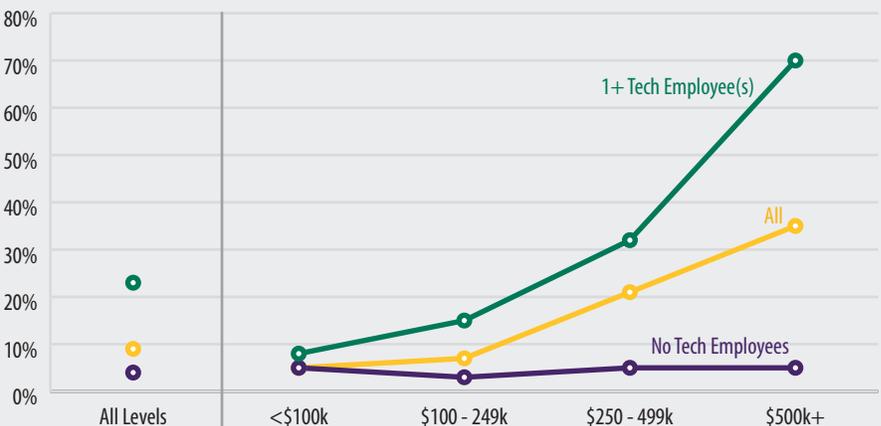
Silicon Valley residents are more likely to have passive income through investment gains than those in other parts of the Bay Area, state, or country. The region also has a higher share of total employment in the tech sector (28% in 2022) than elsewhere, and — based on the responses to the 2022 Silicon Valley Poll — households with at least one tech sector worker are more likely to report heavy income reliance on gains from employer-provided stocks options and/or purchase plans.

HOUSEHOLD INCOME

Share with Household Income Heavily Reliant on Employer-Provided Stock Gains

by household income level

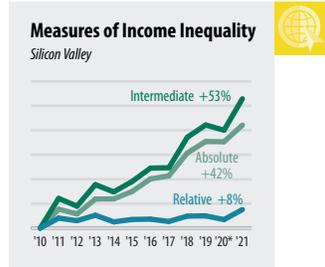
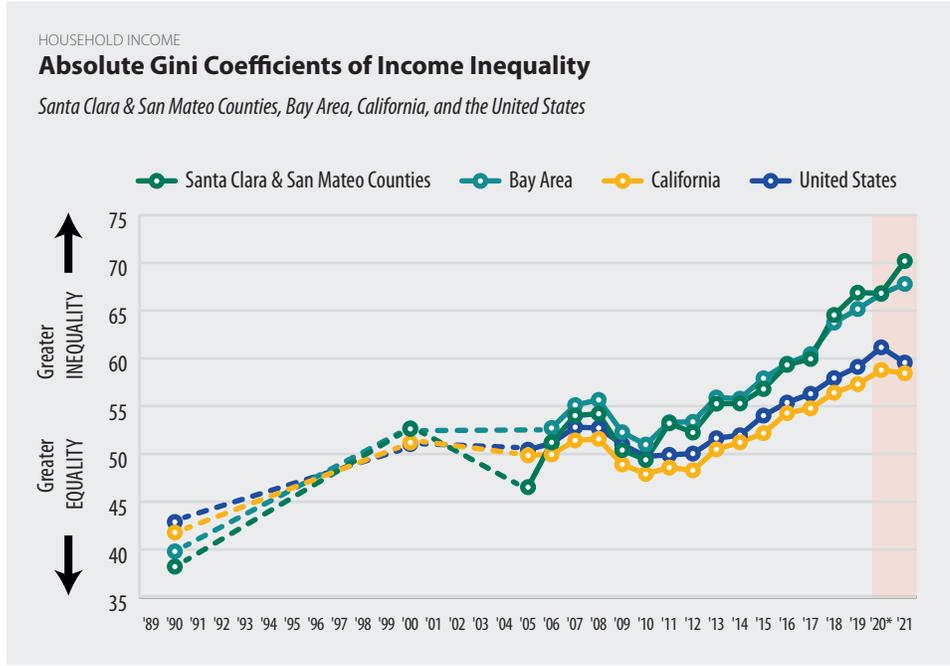
Bay Area | 2022



Note: Stock income includes employer-provided stock options and/or purchase plans. Estimates based on survey responses; not a probability-based sample. Data Source: Silicon Valley Poll (www.jointventure.org/svpoll) | Analysis: Silicon Valley Institute for Regional Studies

By several measures of income inequality — Relative, Absolute, and Intermediate (the product of the two) — Silicon Valley has grown more unequal over the past several decades; although most of the increase occurred in the 1990s, it has accelerated again since the beginning of the post-recession economic recovery in 2010.

Increases in the cost of living in Silicon Valley occur in actual dollars, not in percentages. Measures of inequality that rely on the latter — whereby a proportion of income is assumed to be spent on, and be enough to cover the cost of certain items — do not adequately describe the effects of that rise on struggling individuals and families.



The growing income divide in Silicon Valley has accelerated since the beginning of the Great Recession recovery period, increasing twice as quickly as the state or nation as a whole between 2010 and 2021.

*2020 estimate from 1-year American Community Survey microdata with experimental weights. | Note: The Absolute Gini is the product of the Relative Gini and the inflation-adjusted mean household income, and has been scaled to equal the Relative Gini in 1990. | Data Source: United States Census Bureau, American Community Survey | Analysis: Jon Haveman; Silicon Valley Institute for Regional Studies

Income inequality lessened, to some degree, in California and the U.S. overall in 2021 (down 1% and 3%, respectively); in contrast, it rose by 5% in Silicon Valley and 2% throughout the Bay Area.

Various coefficients are used to determine the extent of inequality within a given income distribution. In relative terms — where equality remains the same with equiproportional income growth — Silicon Valley is no more unequal than the nation overall and has risen by 8% since 2010 (compared to 5% in California and 4% nationally). In contrast, the absolute measure of income inequality — where equality remains the same with equal monetary increments of income gain — indicates that the extent of income inequality in Silicon Valley is more than double (2.1x) that of the U.S. overall, increasing by 42% since 2010 (compared to 20% nationally). Increases in the latter measure have been tied, by some, to a rise in housing prices due largely to increased demand by high-income households.¹⁰

In contrast to the Gini coefficient, which is a relative measure of income inequality, the Absolute Gini¹² accounts for differences in average household income and therefore the absolute (monetary) gap between the highest- and lowest-income households. It corresponds directly to their ability to purchase necessary goods and services. The traditional Gini assumes that high-income and low-income households spend the same proportions of earnings on basic needs like food, childcare, and housing; however, that is not the case. For example, low-income families throughout the country spent 27% on food in 2020, whereas high-income families only spent 7%.¹³ The absolute amount (actual dollar amount) of money spent by the latter was approximately three times higher.

Utilizing measures that account for changes in the actual (monetary) income gap between the highest- and lowest-earning households, Silicon Valley income inequality reached an all-time high in 2021. However, a dampening of this rise was observed in 2020 despite increasing inequality in the state and nation as a whole. This leveling off may be related to the use of cash income only in the U.S. Census dataset,¹⁴ when, in reality, 16% of Silicon Valley individual taxpayers report investment earnings, and many of Silicon Valley's higher-income earners receive significant amounts of non-monetary compensation, bonuses, and additional employer benefits. This divide between regular cash-income and additional compensation was greater during 2020, given the extraordinary stock market gains that year for Silicon Valley public companies.

ECONOMY

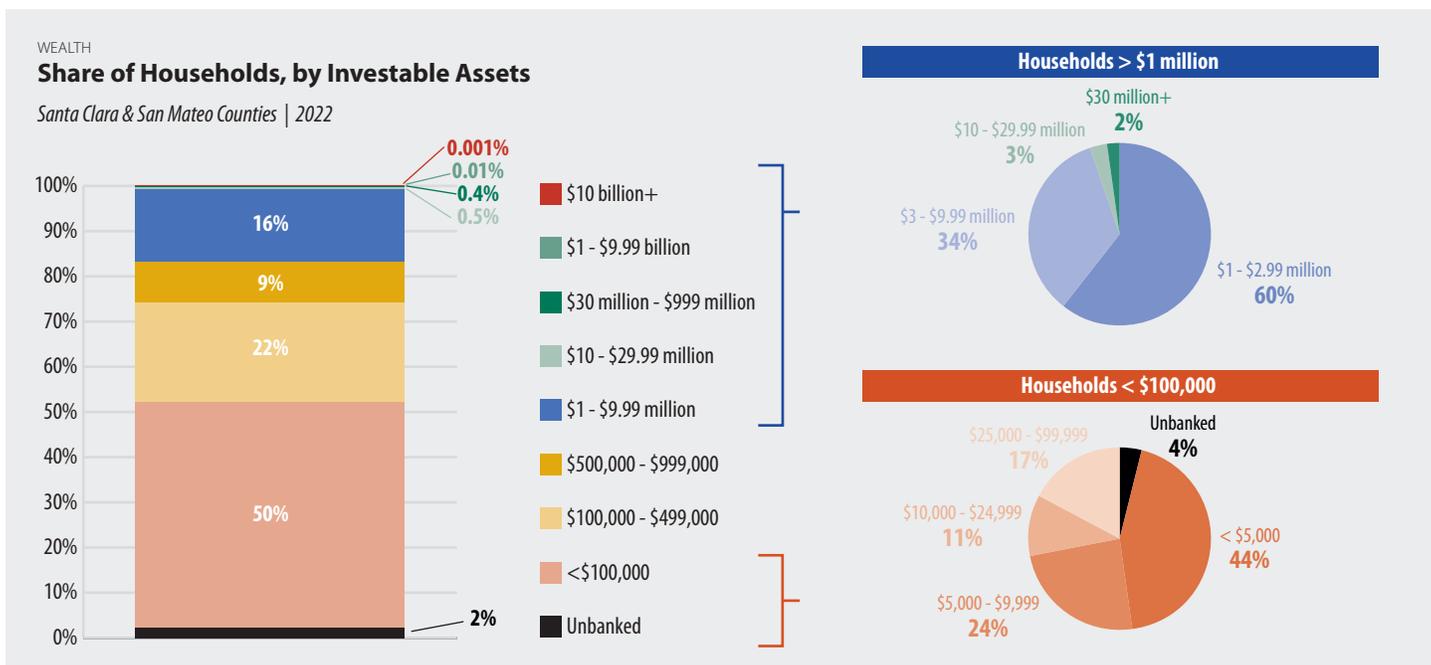
Income & Wealth

An estimated 2% of Silicon Valley households (approximately 22,000) are unbanked, meaning that none of the household members have a bank account. According to the FDIC National Survey of Unbanked and Underbanked Households 2021, more than 40% of survey respondents cited that they did not have enough funds to meet a bank's minimum opening deposit requirements; eight out of ten unbanked households were unbanked long-term.

Eight Silicon Valley residents hold more wealth than 50% of the region's households combined (nearly 500,000 households).^a

a. Estimates based on available data. See Appendix A for details.

Of Silicon Valley's 163,000 millionaire households (those with more than \$1 million in investable assets), an estimated 8,300 have more than \$10 million — representing less than 1% of the region's households, but holding 36% of the collective wealth.



Note: Ultra High Net Worth (UHNW) households include those with net investable assets of \$30 million or more. Data represent estimates. Investable assets are all liquid assets such as checking accounts, CDs, and retirement accounts. Percentages are rounded and may not add up to 100%. | Data Source: Claritas; Altrata; Forbes; Phoenix Global Wealth Monitor | Analysis: Silicon Valley Institute for Regional Studies

Datasets based on national-level surveys and broadly-applicable estimation methodologies are not adequate for characterizing wealth inequality in Silicon Valley. The inclusion of ultra high-net worth outliers — households with more than \$30 million in net assets — provides a more accurate and stark picture of the extent of inequality, and supports the need for more robust, local data collection to better understand regional wellbeing.

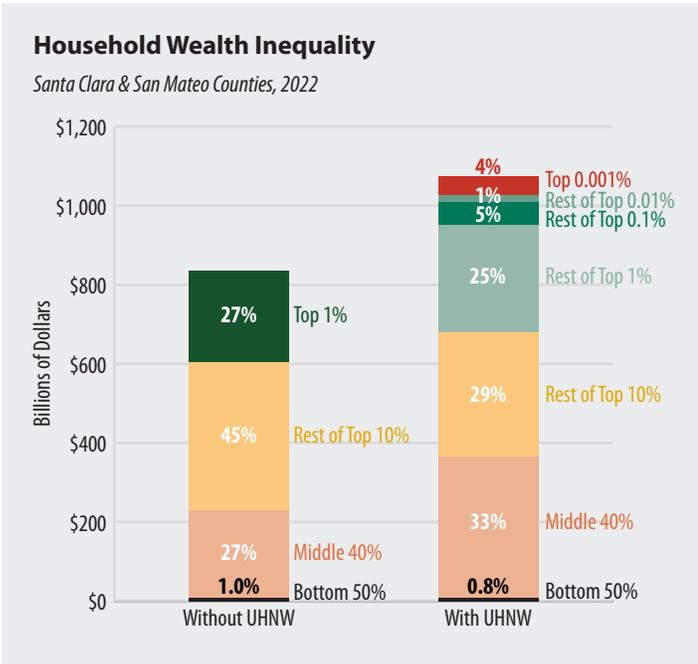
Wealth inequality in Silicon Valley is more pronounced than in the U.S. overall or globally, with the top 1% of households holding 48 times more of the total liquid wealth than the bottom 50% (compared to 23 times more nation- and world-wide) despite similar shares of total wealth held by the top 1% (37% in Silicon Valley, 35% in the U.S., and 40% globally).

One out of every ten California millionaire households is in either San Francisco, Santa Clara, or San Mateo Counties.

An estimated 220,000 Silicon Valley households have less than \$5,000 in total investable assets, which provides little buffer to cover potential job losses or unexpected expenses. The approximately 22,000 unbanked households are assumed to have zero (or near zero) net assets.

Silicon Valley's share of millionaire households has more than doubled over the past seven years, from 8% in 2015 to 17% in 2022 (compared to 14% in San Francisco, 12% in California, and 9% in the U.S. overall).

The top 0.001% of Silicon Valley households hold an estimated 4% of the collective wealth; the top 1% and 10% hold approximately 37% and 66%, respectively.



The San Francisco Bay Area is home to the greatest concentration of billionaires in the world (85 in 2021) aside from New York and Hong Kong (138 and 114, respectively).^a An estimated \$63 billion in liquid wealth is held among only those with primary residences in San Mateo or Santa Clara Counties, equivalent to an average that is 21,000 times more than each of the approximately 500,000 households in the bottom 50%; gross billionaire wealth (liquid assets plus public and private holdings, and real estate) in Silicon Valley (\$349 billion) represents 5% of all the billionaire wealth in North America, and 1% worldwide.

a. Altrata, Billionaire Census 2022.

Silicon Valley's Middle 40% of households held an estimated 33% of the liquid wealth in 2022. In the mid-1980s, the Middle 40% of the U.S. distribution held as much as 35% of the wealth, but that share has since declined (especially since the late 1990s) to 28% in 2021. The Western European distribution of wealth, however, looks slightly different — with the Middle 40% holding more of the wealth (38%) and the top 1% holding less (24%, compared to 35% in the U.S.¹⁵ and 37% in Silicon Valley).

Aggregate household wealth in Silicon Valley is estimated at \$835 billion in 2022 without including the ultra-high net worth outliers,^a and nearly \$1.1 trillion with them. Additionally, wealth in residential real estate is valued at approximately \$424 billion^b for a combined total of nearly \$1.26 trillion — an amount comparable to the Gross Domestic Product of Mexico.¹⁴ If that \$1.26 trillion were evenly distributed among the region's households, it would amount to \$1.1 million each.

a. Those households with >\$30 million in investable assets, which are not typically included in survey data.

b. Real property values are estimated at \$598 billion (using data from the Santa Clara County Assessor's 2022 Annual Report, and County of San Mateo 2018-2019 Assessor's Annual Report), approximately \$174 billion (29%) of which is accounted for by outstanding mortgages. These figures result in a net household real estate equity of approximately \$424 billion.

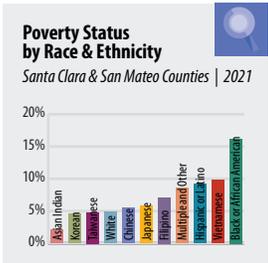
ECONOMY

Income & Wealth

Self-sufficiency varies significantly by race and ethnicity, educational attainment level, family-type, citizenship status, and many other factors. Among the Silicon Valley household types that were most likely to live below Self-Sufficiency in 2022 were Hispanic or Latino non-citizens and those with limited English (an estimated 74% below the Standard for both household types).

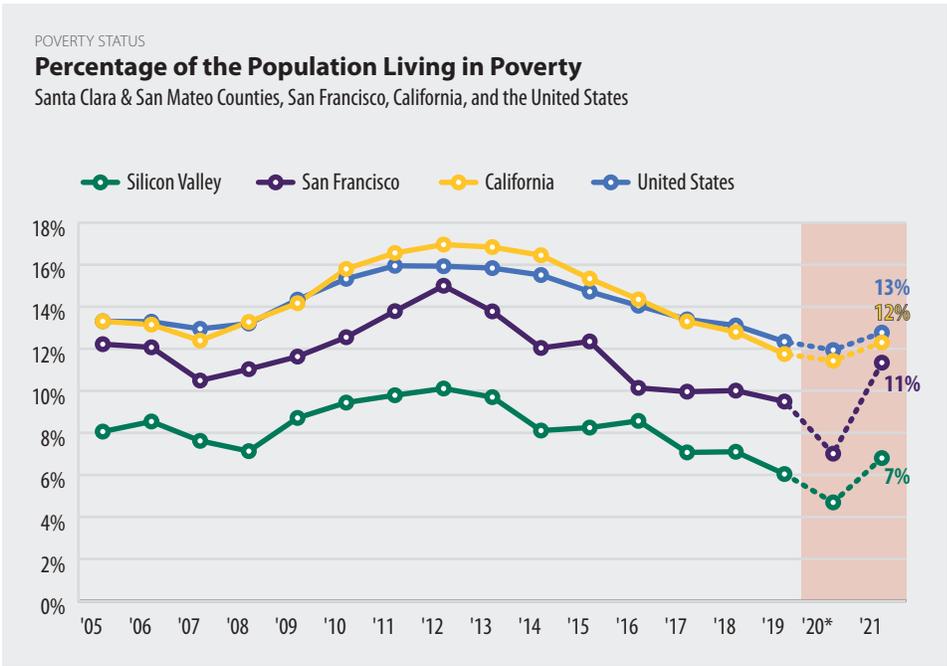
Silicon Valley's poverty rate remains low (7%) compared to San Francisco (11%), California (12%), and the United States as a whole (13%); however, these poverty estimates are based on the Federal Poverty Threshold (e.g., \$26,500 for a family of four in 2021¹⁶), and therefore do not take into consideration the region's high cost of living.

The poverty rate in Santa Clara and San Mateo counties combined in 2021 was 6.8% – less than one percentage point above the recent low of 6% pre-pandemic (in 2019).



Note: Multiple and Other includes Some Other Race Alone, Two or More Races, and Native Hawaiian and Other Pacific Islander alone (Santa Mateo County only), and American Indian and Alaska Native alone (Santa Clara County only). White is not-Hispanic or Latino. Asian ancestries are not mutually exclusive.

Silicon Valley poverty rates varied significantly by race and ethnicity in 2021; the poverty rate for Black or African American residents (16%) was more than triple that of White (not Hispanic or Latino) residents. While the poverty rate was relatively low for the Asian population overall (6.1%), rates ranged from a low of 2.1% for Asian Indians, to 5.5% for Chinese and 9.8% for Vietnamese residents — illustrating the masking effect of aggregating people into bulk racial and ethnic groups.

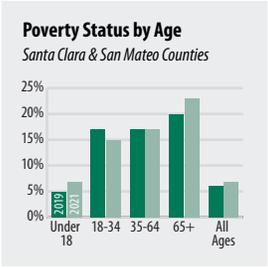


*2020 estimate from 1-year American Community Survey microdata with experimental weights
Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Until 2018, Silicon Valley's childhood poverty rate was consistently higher than that of the population overall (for decades); in 2021, the poverty rate for children was the same as the overall rate (6.8%).

Approximately one in 15 Santa Clara or San Mateo County children (under age 18) was living in poverty in 2021; this compares to one out of nine in San Francisco, and one out of six in California and the U.S. overall.

The share of older Silicon Valley residents (ages 65+) living below the poverty threshold increased between 2019 and 2021 by three percentage points to 23% (one out of five).



Share of Children Living in Poverty		
2021		
Santa Clara & San Mateo Counties	6.8%	1 in 15
San Francisco	10.6%	1 in 9
California	15.8%	1 in 6
United States	16.9%	1 in 6

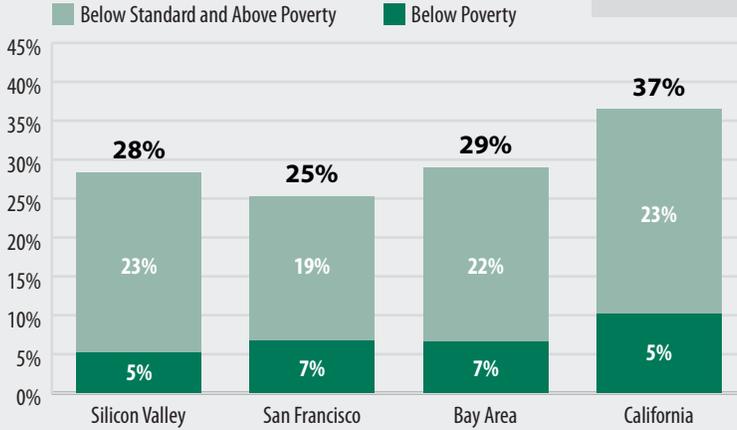
Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

SELF-SUFFICIENCY

Percentage of Households Living in Poverty and Below Self-Sufficiency Standards

Santa Clara & San Mateo Counties, San Francisco, California | 2022

The share of households living below Self-Sufficiency is slightly higher in Silicon Valley (28%) than in San Francisco (25%); statewide, a much larger share (37%) of households were below Self-Sufficiency Standards in 2022.



Among family households with children in Silicon Valley, 79% with four or more children had incomes below Self-Sufficiency; additionally, 72% of Hispanic or Latina single mothers were living below the Standard.

Despite a relatively low household poverty rate of 5% in 2022, nearly one-third (28%) of all Silicon Valley households did not earn enough money to meet their most basic needs without public or private/informal assistance.

Households with children are more likely to struggle to make ends meet in Silicon Valley, with 37% living below Self-Sufficiency (compared to 28% overall).

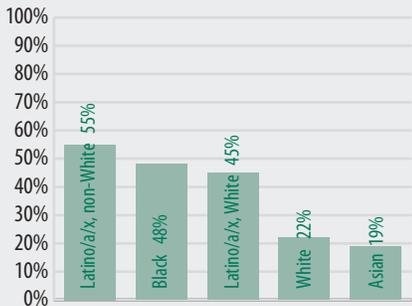
Note: The Self-Sufficiency Standard defines the amount of income necessary to meet basic needs without public subsidies or private/informal assistance. Asian/Pacific Islander, Black, White, and Other are non-Hispanic or Latino. | Data Source: Center for Women's Welfare, University of Washington | Analysis: Silicon Valley Institute for Regional Studies

SELF-SUFFICIENCY

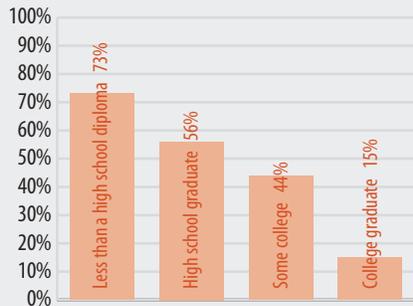
Share of Households Living Below the Self-Sufficiency Standard

Santa Clara & San Mateo Counties | 2022

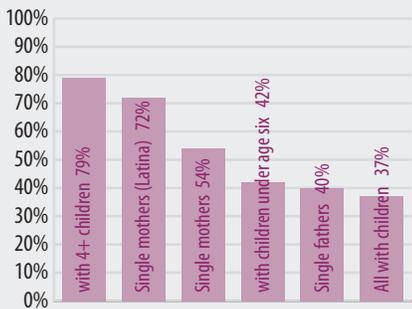
by Race & Ethnicity of Householder



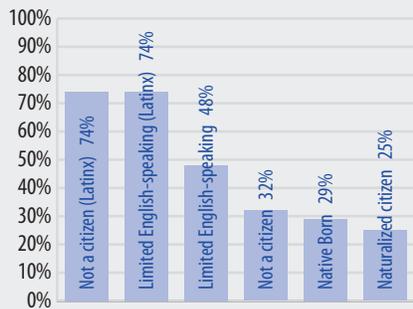
by Educational Attainment of Householder



for Households with Children



by Citizenship Status & English-Speaking Ability



The share of Silicon Valley households living below the Self-Sufficiency Standard (28%) was slightly lower in 2022 compared to pre-pandemic (30% in 2019); factors influencing this downtrend may include changes in domestic outmigration patterns in 2020 and 2021, as well as the distribution of pandemic stimulus payments,^a among others.

a. The pandemic stimulus payments – which lifted as many as 12 million people nationwide out of poverty in 2020 (Liana Fox & Kalee Burns, "The Supplemental Poverty Measure: 2020." United States Census Bureau, Report Number P60-275, September 14, 2021) – would have affected the demographic breakdown of the region applied to the Self-Sufficiency Standard for 2022 data.

In Santa Clara and San Mateo counties, more than four in ten children live in households with inadequate incomes given the local cost of living. The largest component of these costs – aside from taxes – is the cost of childcare. While the Standard accounts for some miscellaneous expenses such as diapers, personal hygiene products, and telephone service, it does not include any funds for family vacations, school supplies, extracurricular activities, or other items to enhance quality of life and enrichment for children.

Note: The Self-Sufficiency Standard defines the amount of income necessary to meet basic needs without public subsidies or private/informal assistance. Asian/Pacific Islander, Black, White, and Other are non-Hispanic or Latino. | Data Source: Center for Women's Welfare, University of Washington | Analysis: Silicon Valley Institute for Regional Studies

ECONOMY

Income & Wealth

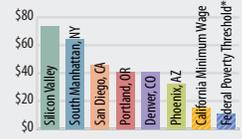
Self-Sufficiency wages in Silicon Valley are significantly higher than the California county average – about 1.7 times more on average across all family types; the family types with the largest differential are those with one single adult (1.9x), or one single adult with multiple children (1.8x).

It was impossible for anyone earning minimum wage to be above the Self-Sufficiency Standard in Silicon Valley in 2022 (\$15 per hour in California, and \$15.53 to \$17.10 per hour in 20 of Silicon Valley's 39 cities); even a dual-income family with no children would require a Self-Sufficiency wage of \$19.65 per hour to meet their most basic needs without assistance.^a

a. The 2022 California minimum wage of \$15.00 per hour was for employers of 26+ employees (State of California Department of Industrial Relations). Twenty out of 39 Silicon Valley cities had enacted their own minimum wage through ordinances, ranging from \$15.53 to \$17.10 per hour in December 2022.

Hourly Self-Sufficiency Wages, 2022

Single Adult + Preschooler & School-Aged Child

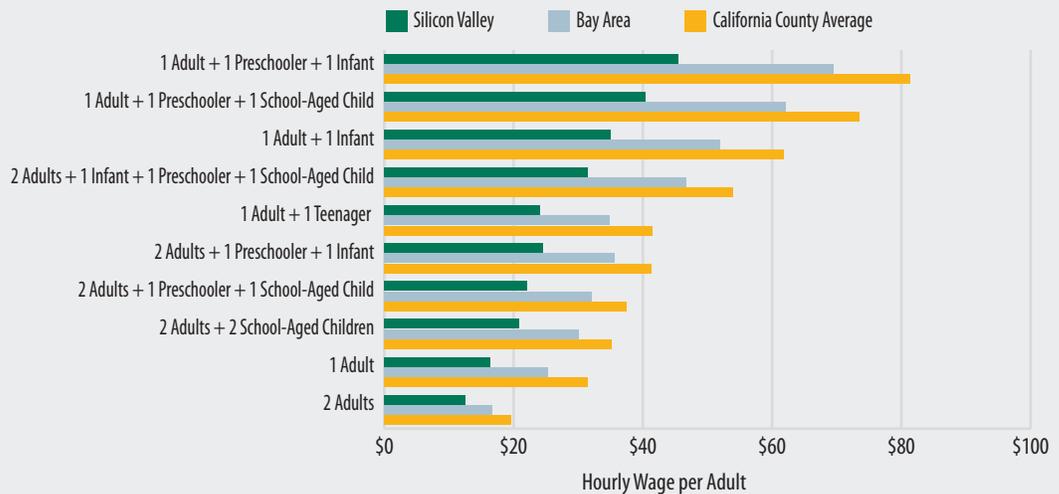


2022 Self-Sufficiency wages for a single adult with two young children (one preschooler and one school-aged child) were higher in Silicon Valley than in the state overall, in San Diego, and even in the most expensive part of New York City (South Manhattan); they were five times higher than the statewide minimum wage that year.

SELF-SUFFICIENCY

Hourly Self Sufficiency Wages Needed For Various Family Types

Santa Clara & San Mateo Counties, Bay Area, and California | 2022



*Assuming a 40 hour work week, year-round | Note: The Self-Sufficiency Standard defines the amount of income necessary to meet basic needs without public subsidies or private/informal assistance. California minimum wage is for Employers with 26 Employees or More in 2022; South Manhattan represents the highest Self-Sufficiency Wages for New York City in 2021. Data Source: Center for Women's Welfare, University of Washington | Analysis: Silicon Valley Institute for Regional Studies

In 2021, the estimated wages needed in order to meet a family's most basic needs without assistance in Silicon Valley ranged from \$19.65/hour for a two-adult household with no children to \$35.12/hour per adult in a family of four (with two adults and two school-aged children), and higher. A single adult with an infant and preschooler would need to make \$81.36 per hour (\$169,000 annually) in order to be self-sufficient.

Minimum wage is no longer a living wage^a in Silicon Valley. Even at the highest local minimum wage last year (\$17.10 per hour in Mountain View and Sunnyvale¹⁷), the least expensive household type — a two-adult household with no children — would be unable to meet their own basic needs without public or private assistance.

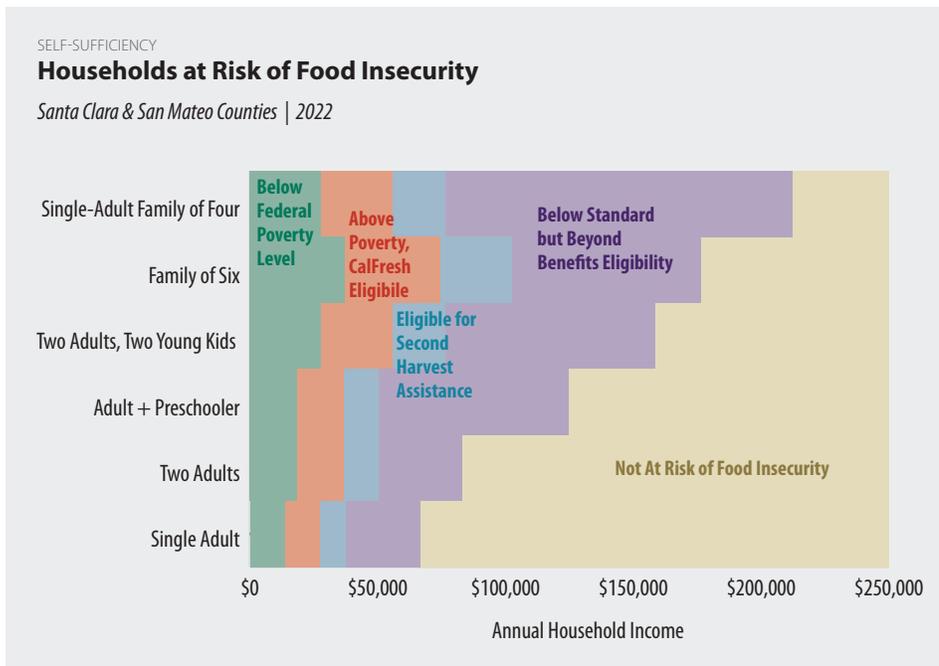
a. A living wage is defined as "sufficient to provide the necessities and comforts essential to an acceptable standard of living" and has been in use to mean "a subsistence wage" since 1817. (Merriam-Webster.com, 2023)

Self-Sufficiency wages increase significantly when there are fewer adults (earners) per household, or younger children that require costlier childcare (e.g., nearly twice as much for a preschooler compared to a school-aged child, and another +19% for an infant compared to a preschooler).

Silicon Valley's Self-Sufficiency wages — representing a no-frills, bare-bones minimum for affording basic human needs such as housing, childcare, food, transportation, and healthcare — were completely out of reach for the more than 302,000 workers in 2021 earning less than the statewide minimum wage of \$14 per hour.

A single adult with two young children in Silicon Valley could have earned nearly 700% of the Federal Poverty Limit in 2022, and still not have managed to comfortably afford rental housing at the minimum level of decency or purchase food on the USDA Low-Cost Food Plan. At seven times the definition of poverty, a Silicon Valley single-parent with one preschooler and one school-aged child would be unable to eat out at restaurants, go to the movie theater, take a family vacation, or save for retirement without seeking outside support or incurring debt.

Current estimates place as many as one in five Silicon Valley households among those at risk for food insecurity but beyond income eligibility limits for most public assistance programs.



Note: Includes six possible household compositions (see note in Appendix A for additional details). | Data Sources: Center for Women's Welfare, University of Washington; California Department of Social Services; U.S. Department of Health and Human Services | Analysis: Silicon Valley Institute for Regional Studies

42% of children in Santa Clara and San Mateo Counties live in households at-risk for food insecurity;^a this share rises to 45% of children in households with at least one preschooler present.

a. At-risk share includes those living in households with incomes below the Self-Sufficiency Standard in 2022.

% Adults & Children, by Risk for Food Insecurity
Santa Clara & San Mateo Counties | 2022

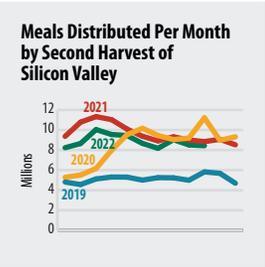
	Adults	Children	All
At-Risk, Benefits Eligible	6%	5%	5%
At Risk but Beyond Benefits*	19%	27%	21%
% At-Risk	28%	42%	31%
% Not At Risk	72%	58%	69%

There is a misalignment between the eligibility criteria for public assistance programs and the need for food assistance in Silicon Valley. In 2022, an estimated 19% of adults and 27% of children were at-risk for food insecurity but ineligible for benefits through the Supplemental Nutrition Assistance Program (SNAP, called CalFresh in California). While other specialized, smaller, and more recent public assistance programs exist — such as WIC (Women, Infants, and Children), Pandemic EBT, Great Plates, Farmers Market Nutrition Incentives, and the California Food Assistance Program — this gap illustrates the difficult choices facing residents whose income is inadequate to afford preferred and/or nutritionally-adequate food in addition to other basic needs such as housing, transportation, healthcare, and childcare.

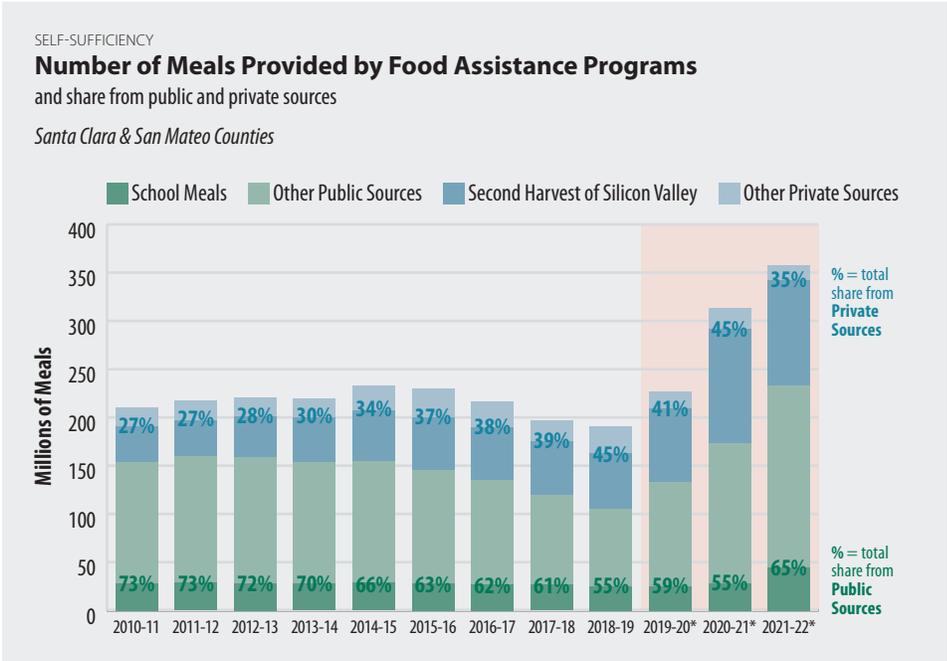
ECONOMY

Income & Wealth

Public food assistance provided to the regional community through the Supplemental Nutrition Assistance Program (SNAP, called CalFresh in California) increased significantly in 2021-22, up 31% year-over-year; likewise, continuation of the federal Pandemic Electronic Benefits Transfer (P-EBT) program — which provided families who would have typically received Free- and Reduced-Price School Meals with an EBT card and supplemental funding to purchase food at most grocery stores, farmer’s markets, or online to replace missed school meals — provided nearly double the benefits (+83%) compared to the prior year, serving 141,000 children and their families in 2021-22.



The system of food assistance provided in the United States overall, statewide, and in Silicon Valley includes a mix of government programs (e.g., SNAP/CalFresh, School Meals, Senior Nutrition) and additional sources such as food banks, as well as a large number of food providers, funding providers, and food distribution partners. Between 2011 and 2021, the region experienced a slow but consistent decline in the share provided by public (government-provided) sources, declining from 73% in FY 2011-12 to 55% in FY 2020-21. In FY 2021-22, however, due to large increases in meals/benefits provided by several public programs, this share rose to 65% regionally.



*includes estimates for Senior Nutrition and WIC. | Data Sources: California Department of Social Services; California Department of Education; Second Harvest of Silicon Valley | Analysis: Center for Food Innovation & Entrepreneurship, Santa Clara University; unBox; Silicon Valley Institute for Regional Studies

Second Harvest of Silicon Valley’s food distribution ramped up significantly in 2020 and early 2021 to meet the region’s increased need, reaching a height of more than 11.3 million meals provided in the month of March 2021. Over the past four years, the organization has distributed a total of more than 330 million meals — equivalent to approximately 220,000 tons of food.

Based on the number of meals provided by assistance programs in the last full fiscal year prior to the pandemic (FY 2018-19), an estimated 654,000 Silicon Valley residents (24%) were served that year. In FY 2021-22, that number jumped to an estimated range of 636,000 to 1.2 million residents — implying that either the share of residents in need rose as high as 47%, or the average number of meals required by each individual doubled.^a

a. Estimate based on the Feeding America findings (2018) of an average 5.6 meals per person per week, which — if the share of the population in need of assistance was held steady since — may have risen to as many as 10.8 meals per person per week.

The amount of food assistance provided to the community in Santa Clara and San Mateo Counties grew rapidly at the onset of the pandemic and into 2021, and remained elevated into the 2021-22 fiscal year. The rise in community need has likely been compounded by the increasing cost of food; at the end of 2022, the cost of Food at Home^a was 28% higher than pre-pandemic (2019).

a. The increase in the cost of Food at Home is from the U.S. Bureau of Labor Statistics, Bay Area Consumer Price Index by Expenditure Category. Food at Home includes: Cereals and bakery products; Meat, poultry, fish, and eggs; Dairy and related products; Nonalcoholic beverages; and Other food at home.

Public assistance programs that were expanded early in the pandemic continued into the 2021-22 fiscal year, resulting in a third year of double-digit growth in total meals provided in Santa Clara and San Mateo Counties.

Assistance provided by the federal pandemic P-EBT program rose precipitously in the 2021-22 fiscal year, serving approximately one-third (33%) of the region’s school-aged children and their families.^a

a. Estimation based on P-EBT Children Served by zip code in Santa Clara and San Mateo Counties, and the population of school-aged children (ages 5-17) from the 2021 U.S. Census Bureau, American Community Survey 1-Year Estimates.

Regional food assistance from private sources — particularly Second Harvest of Silicon Valley — has increased significantly since the onset of the pandemic (and consistently, though to a lesser degree, in the decade prior) in an effort to meet the needs of local communities in Santa Clara and San Mateo Counties. Such increased need may be due to a variety of factors, including a growing number of residents who do not qualify for public nutrition programs (with stringent income eligibility and immigrant documentation limits) but struggle to meet the regional cost of basic needs; likewise, this trend may be illustrative of an increase in need by a smaller number of individuals (who can only receive a limited amount from other programs).

ECONOMY

Innovation & Entrepreneurship

Pandemic-period stock market gains of nearly \$9 trillion among Silicon Valley and San Francisco public companies — and the wealth that generated — drove huge shifts in Silicon Valley's ecosystem, including record-breaking venture capital investment totals, the creation of new active Angel investors, and the subsequent rise in startup activity. With the highly volatile market and huge losses of 2022, IPO activity died down. Those companies that did go public through traditional IPOs ended the year with negative returns; venture funding was diminished, particularly in Mobile & Telecommunications, Industrial, Automotive & Transportation sectors, with less Angel/seed-stage activity as well.

Despite fewer VC dollars to go around last year, funding remained highly concentrated in large megadeals (with 50% of the \$49 billion that year going into 116 deals of >\$100 million each), and San Francisco remains home to a whopping 21 of the world's 54 Decacorns — private companies with valuations above \$10 billion each. Silicon Valley and San Francisco companies continued a trend toward more M&A activity within the

region, which presented an opportunity to acquire both technology and talent at a time when talent acquisition was challenged by an exceptionally low regional unemployment rate.

Why is this important?

Innovation, a driving force behind Silicon Valley's economy, is a vital source of regional competitive advantage. It transforms novel ideas into products, processes, and services that create and expand business opportunities. Entrepreneurship is an important element of Silicon Valley's innovation system. Entrepreneurs are the creative risk takers who create new

Patent registrations rose slightly in 2022 over the prior year (to approximately 20,400 from 18,900 in 2021); however, totals remained lower than the all-time record in 2020 of approximately 21,800 utility patents registered to Silicon Valley inventors (and another 3,700 to San Francisco inventors).

Silicon Valley's annual number of patent registrations fell precipitously in 2021 (-13% from approximately 21,800 to 18,900). While this may have been due to a change in inventor activity, it may also have been a result of increased turnaround times from the U.S. Patent and Trademark Office.⁹ In 2022, patent activity in the region recovered to some extent (+8% year-over-year).

a. "Average first action pendency" rose by more than two months in FY 2021-22 "due in large part to side effects of the COVID-19 pandemic on the agency, such as the provision of additional leave flexibilities to our employees for COVID-19 related situations and a decline in the use of overtime... which we anticipate will negatively affect average first action pendency during FY 2022." United States Patent and Trademark Office, Performance and Accountability Report (Fiscal Year 2021).

PATENT REGISTRATIONS

Total Number of Patent Registrations

Silicon Valley



- Construction & Building Materials
- Manufacturing, Assembling, & Treating
- Chemical & Organic Compounds/Materials
- Other
- Chemical Processing Technologies
- Measuring, Testing & Precision Instruments
- Health
- Electricity & Heating/Cooling
- Communications
- Computers, Data Processing & Information Storage

*estimate based on data through November | Note: 2019:22 data not available by technology area.
Data Source: United States Patent and Trademark Office | Analysis: Silicon Valley Institute for Regional Studies

Over the past three decades (since 1990), Silicon Valley's share of California and nationwide patent registrations has increased dramatically (from 25% to 46%, and from 4% to 13%, respectively), although most of the increase occurred in the 1990s.

value and new markets through the commercialization of novel and existing technology, products, and services. A region with a thriving innovation habitat supports a vibrant ecosystem to start and grow businesses.

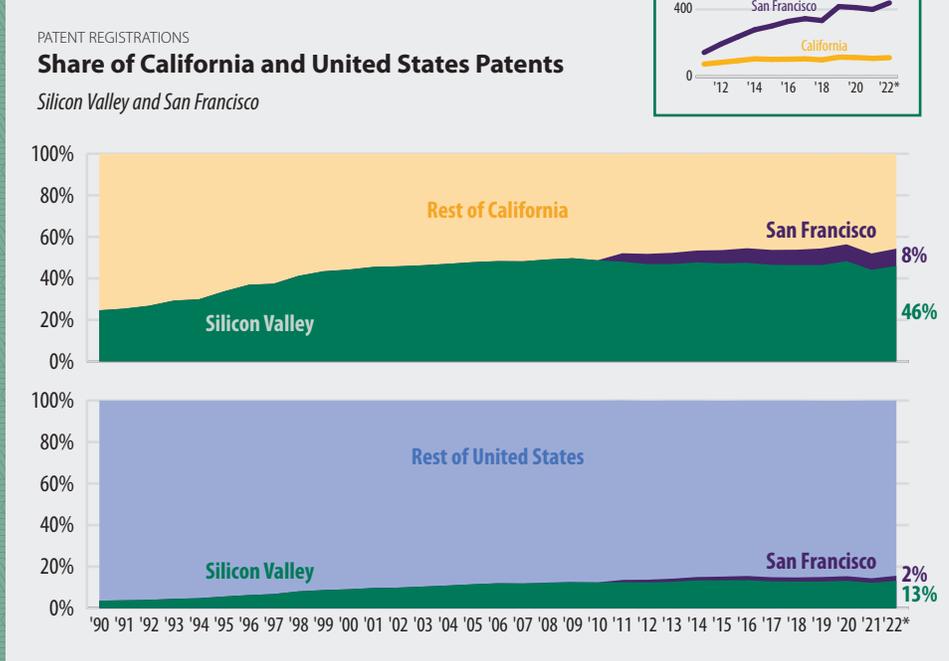
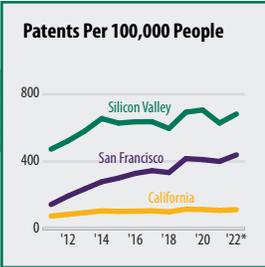
Entrepreneurship in both new and established businesses hinges on investment and

value generated by employees. Patent registrations track the generation of new ideas, as well as the ability to disseminate and commercialize those ideas. The activity of mergers and acquisitions (M&As) and initial public offerings (IPOs) indicate that a region is cultivating successful and potentially high-value companies.

Finally, tracking both the types of patents and areas of venture capital investment over time provides valuable insight into the region's longer-term direction of development and innovation in Silicon Valley.

In 2022, more than half (54%) of the new California patents were registered to Silicon Valley or San Francisco inventors, and San Jose ranked as the number one patent-generating city in both the state and nation.

Seven of California's top ten patent-generating cities in 2022 were in Silicon Valley, and San Francisco ranked third (down from second in 2021). San Jose also ranked first in the country, with nearly 3% of United States patents that year. While many of the same Silicon Valley cities topped the national list, cities beyond California that also made the top 15 list included Seattle and Austin (with 1.3% of United States utility patents each), Houston (1.0%), New York (1.0%), and Portland (0.8%).



Top 10 Patent Generating Cities in California

With United States Rank and Share, 2022*

	Count	Share	U.S. Rank (Share)
San Jose, CA	4,288	9.7%	1 (2.8%)
San Diego, CA	3,676	8.3%	2 (2.4%)
San Francisco, CA	3,374	7.6%	3 (2.2%)
Sunnyvale, CA	1,969	4.4%	6 (1.3%)
Mountain View, CA	1,623	3.7%	7 (1.1%)
Palo Alto, CA	1,478	3.3%	10 (1.0%)
Santa Clara, CA	1,321	3.0%	11 (0.9%)
Fremont, CA	1,114	2.5%	13 (0.7%)
Los Angeles, CA	1,073	2.4%	14 (0.7%)
Cupertino, CA	830	1.9%	16 (0.5%)

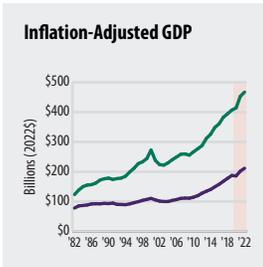
*data through November | Note: San Francisco data unavailable prior to 2011. Data Sources: United States Patent and Trademark Office; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

*data through November | Data Sources: United States Patent and Trademark Office; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

Per capita patent registrations in San Francisco increased by 14% between 2018 and 2022, while Silicon Valley per capita patent registrations rose by 31% over that same four-year period. Since 2011, however, per capita patent registrations have risen much more quickly in San Francisco (+205%) than Silicon Valley (+44%).

ECONOMY

Innovation & Entrepreneurship



Despite a 3.1% year-over-year increase in inflation-adjusted gross domestic product (GDP), Silicon Valley's labor productivity per employee declined slightly in 2022 due to a more rapid increase in regional employment levels.

The regional GDP of Santa Clara and San Mateo Counties combined rose by more than \$14 billion in 2022 (+3.1%) after inflation-adjustment; this compares to +4.8% in San Francisco, -0.8% statewide, and +1.0% nationally.

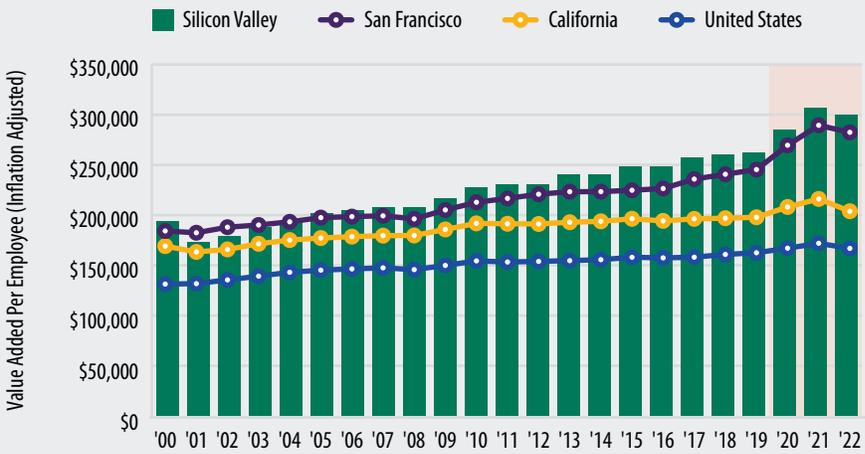
Silicon Valley labor productivity was \$299,200 per employee in 2022 (equivalent to approximately \$144 per hour, per employee). This compares to \$281,700 in San Francisco, \$203,700 in California, and \$166,900 throughout the United States.

Silicon Valley labor productivity declined slightly (after adjusting for inflation) to \$299,200 per employee in 2022, amounting to approximately \$144 per employee per hour — \$4 less than in 2021.

PRODUCTIVITY

Value Added Per Employee

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



Data Source: Moody's Economy.com | Analysis: Silicon Valley Institute for Regional Studies

Total VC funding to Silicon Valley companies last year (\$20.7 billion) exceeded the wealth of 59% of the region's households, combined.

Total venture capital funding to Silicon Valley and San Francisco companies in 2022 was significantly lower than the all-time high of 2021 (\$49.1 billion, compared to \$89.8 billion in 2021 after inflation-adjustment); however, the 2022 total was still greater than any other year since 2000.

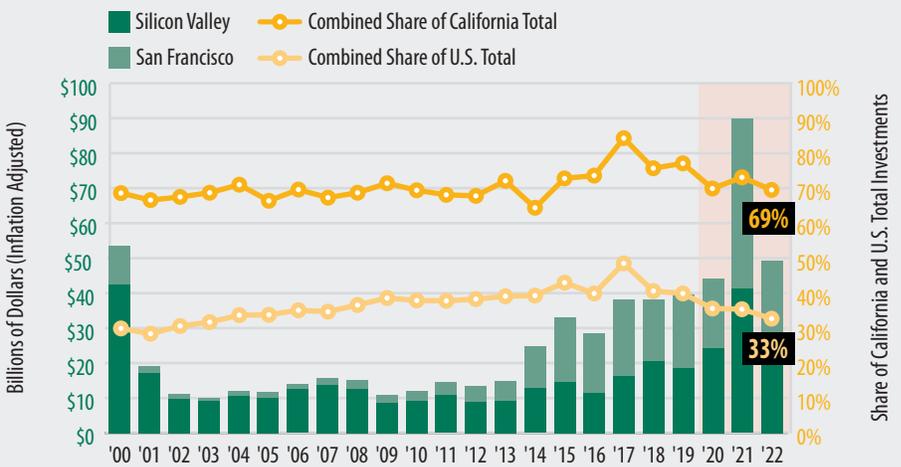
Silicon Valley and San Francisco venture capital investments skyrocketed in 2021, reaching an all-time high of nearly \$90 billion combined; this compares to \$53 billion at the height of the dot.com boom in 2000 (both in 2022 inflation-adjusted dollars).

Venture capital funding totals in 2022 were \$20.7 billion in Silicon Valley, \$28.5 billion in San Francisco, \$70.7 billion in California, and \$150.4 billion in the United States overall.

PRIVATE EQUITY

Venture Capital Investment

Silicon Valley and San Francisco



Data Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: CB Insights (Q4 2015-2016), Thomson Reuters (prior to Q4 2015); CB Insights (2017+) | Analysis: Silicon Valley Institute for Regional Studies

The largest greater Silicon Valley VC deals of 2022 included San Francisco-based Brex, a business charge card and financial management company valued at more than \$12 billion — one of San Francisco’s 21 Decacorn companies (as of December 2022, two months after announcing it would lay off 11% of its workforce).¹⁸

Several clean energy and sustainability-focused companies were among the recipients of the top Greater Silicon Valley VC deals of 2022, including TeraWatt (electric vehicle charging for fleets), Xpansiv (an exchange for renewable energy, carbon credits, and water), Plenty (indoor, vertical farming that is less land- and water-intensive than traditional methods), and Veev (a modular building solution that implements sustainability principles through materials, conservation, and transparency).

Top Venture Capital Deals of 2022

Silicon Valley				San Francisco		
Investee Company Name	City	Amount (millions)	Quarter	Investee Company Name	Amount (millions)	Quarter
Altos Labs	Redwood City	\$3,000	1	TeraWatt	\$1,000	3
Ultima Genomics	Newark	\$600	2	Flexport	\$935	1
SandboxAQ	Palo Alto	\$500	2	Anthropic	\$580	2
Weee!	Fremont	\$425	1	Faire	\$416	2
Plenty	South San Francisco	\$400	1	Miro	\$400	1
Uniphore	Palo Alto	\$400	1	Xpansiv	\$400	3
Veev	San Mateo	\$400	1	Bolt	\$355	1
Cyara	Redwood City	\$350	1	Remote	\$300	2
Branch	Palo Alto	\$300	1	SpotOn	\$300	2
Kriya Therapeutics	Redwood City	\$270	2	Brex	\$300	1

Data Sources: CB Insights | Analysis: Silicon Valley Institute for Regional Studies

The largest Silicon Valley Venture Capital deals of 2022 were spread across companies in a variety of industries. Three of the largest deals were to biotech companies (Altos Labs, Ultima Genomics, and Kriya Therapeutics); others included modular building company Veev, indoor/vertical farming company Plenty, and the Fremont-based grocery delivery company Weee!, which specializes in Asian and Hispanic foods.

The largest 2022 VC deals to San Francisco companies were also spread across industries such as supply chain management/logistics, and web-based collaboration, with slight focus on financial services and eCommerce. Among the largest deals were \$416 million to Faire (and online marketplace for wholesalers, retailers, and makers), \$400 million to Xpansiv (renewable energy, water, and carbon credit exchange), \$455 million to Bolt (business credit and financial management), and \$300 million to SpotOn (mobile payment/point-of-sale).

Altos Labs, a biotech company in Redwood City focused on cell therapy research, secured a \$3 billion deal in the first quarter of 2022 from Chicago-based ARCH Venture Partners and additional undisclosed investors; it had previously received Angel funding in late 2021 from Jeff Bezos, among others.

ECONOMY

Innovation & Entrepreneurship

Of the \$49 billion in total venture capital funding to Silicon Valley and San Francisco companies in 2022, \$24.7 billion of it (50%) was in the form of megadeals.

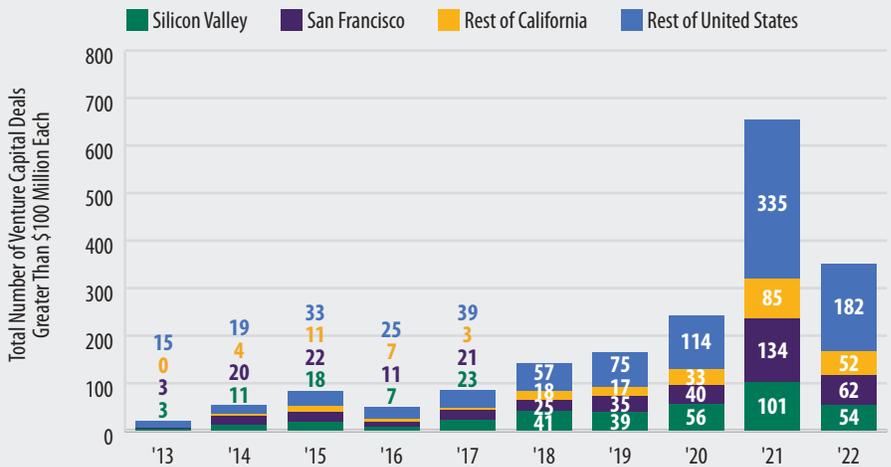
In 2022, there were a total of 54 megadeals to Silicon Valley companies, 62 to San Francisco Companies, and 52 throughout the entire rest of the state.

Half (50%) of all 2022 venture capital to Silicon Valley or San Francisco companies was in the form of megadeals, with \$24.7 billion among 116 megadeals combined; this compares to 47% in the rest of California, and 43% in the rest of the country.

The number of megadeals — a name given to venture capital deals over \$100 million — skyrocketed in 2021, hitting an all-time high with 1,225 worldwide and 655 in the United States. In 2022, the U.S. and worldwide totals declined, but remained at a high level relative to any other year on record.

PRIVATE EQUITY Megadeals

Silicon Valley, San Francisco, Rest of California, and Rest of United States



Data Sources: CB Insights; Thomson ONE | Analysis: Silicon Valley Institute for Regional Studies

At the end of 2022, there were 249 Silicon Valley and San Francisco Unicorns, and 21 San Francisco Decacorns (private companies valued at more than \$1 billion and \$10 billion, respectively).

San Francisco continued to dominate the Decacorn list in 2022, with 39% (21) of the 54 Decacorns worldwide and 68% of the 31 nationwide.

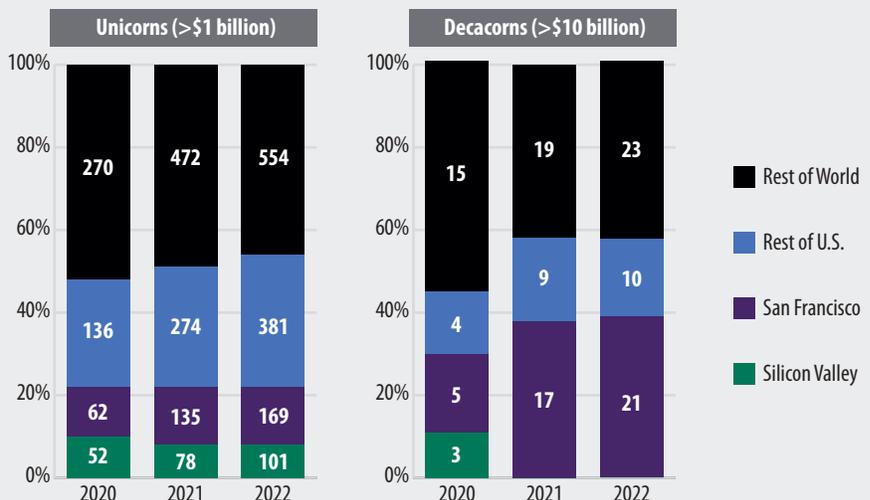
The valuations of San Francisco's 21 Decacorn companies alone (\$404 billion in December 2022) represented more than half of the city's 169 Unicorn valuations combined (\$742 billion).

Over the past two years, the number of Decacorn companies (valued at \$10 billion or more) worldwide has doubled (from 27 to 54).

While Silicon Valley had no Decacorns at the start of 2022, several private companies had valuations close to \$10 billion (including Palo Alto-based TripActions at \$9.2 billion, Mountain View-based Nuro at \$8.6 billion, and Fremont-based Pony.ai at \$8.5 billion).

PRIVATE EQUITY Unicorns & Decacorns

Private Companies with Valuations of \$1 billion & \$10 billion



Data Source: CB Insights | Analysis: Silicon Valley Institute for Regional Studies

In 2022, more than half of the Greater Silicon Valley Venture Capital funding went into Internet (52%) companies. This share has risen steadily over the years, up from just 12% in 2002.

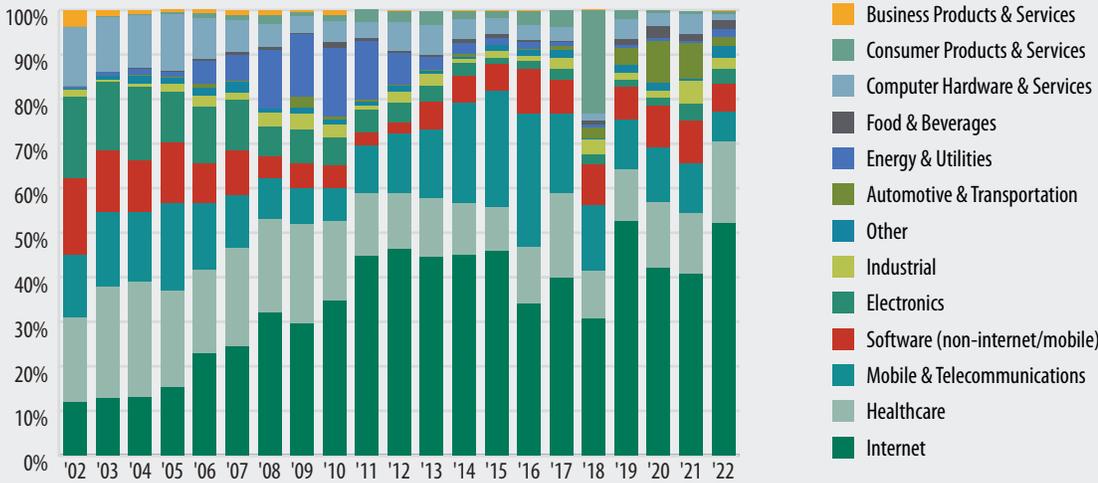
Greater Silicon Valley VC funding to Automotive and Transportation companies — which totaled nearly \$8.6 billion in 2020 and 2021 combined — came down in 2022 though still amounted to more than \$1.1 billion.

The share of Greater Silicon Valley VC dollars to Electronics companies was as high as 18% in 2002, but has dwindled in the two decades since. In 2022, VC funding to the region's Electronics companies represented a mere 3% (totaling \$1.9 billion).

PRIVATE EQUITY

Venture Capital by Industry

Greater Silicon Valley



Over the past decade, Energy & Utilities companies have received a steady range of one to two percent of total VC dollars to the region. In 2022, the nearly \$1.1 billion to the region's Energy & Utilities companies was dominated by cleantech companies including nine in Energy Storage, ten in Renewables (including solar, geothermal, and fuel cell), three in Energy Efficiency, and one in electric vehicle charging infrastructure.

Note: The category Other includes Agriculture, Environmental Services & Equipment, Finance, Leisure, traditional Media, Metals & Mining, non-internet/mobile Retail, and Risk & Security. Industry definitions are provided in Appendix A. | Data Sources: CB Insights; PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report, Data: CB Insights | Analysis: Silicon Valley Institute for Regional Studies

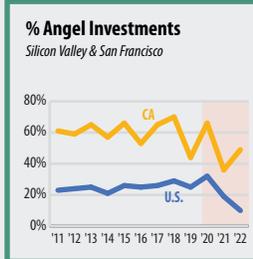
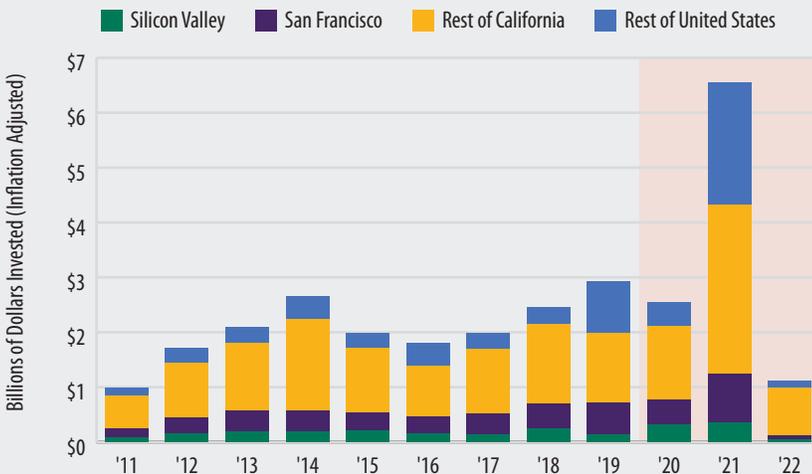
Angel investments skyrocketed in 2021, reaching nearly \$6.5 billion nationally (in inflation-adjusted 2022 dollars) and \$1.2 billion in San Francisco and Silicon Valley alone. There was also a sharp rise in the number of Angel investors actively engaging in deals that year (up 39% year-over-year to more than 1,000 in 2021).

As with the precipitous rise in Angel investments in 2021, the decline in 2022 was equally steep. Total Angel investments to Silicon Valley seed-stage companies declined by 90% year-over-year, from \$360 million to \$40 million.

PRIVATE EQUITY

Angel Investment

Silicon Valley, San Francisco, California, and the United States



Of the \$120 million in Angel funding to San Francisco and Silicon Valley companies last year, 29% (\$30 million) were in Angel-only deals; the rest were in seed-stage deals involving at least one Angel investor.

The share of nationwide Angel investments to Silicon Valley or San Francisco companies has declined significantly over the past decade, from 24% in 2012 to 10% in 2022.

Note: Include disclosed financing data for all Angel rounds and seed stage investments that included at least one Angel investor. Locations are by investee company location; share of California and U.S. investments are by total dollar amounts. | Data Source: CB Insights | Analysis: Silicon Valley Institute for Regional Studies

ECONOMY

Innovation & Entrepreneurship

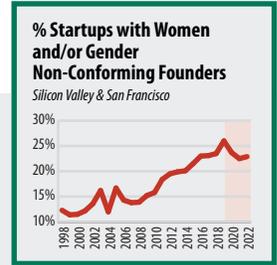
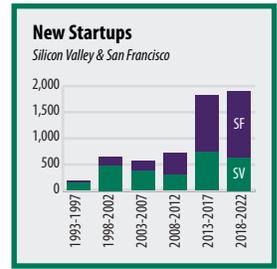
15% of new Silicon Valley startup companies in 2022 were founded by at least one woman or gender non-conforming founder — a share that has nearly tripled over the past two decades (from less than 8% in 2000 and 2001).

Silicon Valley has historically created more new startup companies than San Francisco, a trend has shifted around 2010. In 2022, San Francisco had 370 new startups (less than three years old) receive Angel, Seed, or early-stage (Series A) funding; Silicon Valley had 191.

The number of startup companies fell slightly in 2022, with approximately 561 newly-funded startups in Silicon Valley and San Francisco combined.

Regional startup activity over the past decade has been more heavily concentrated in San Francisco, with 66% of the region's new startups (compared to 15 to 20% in the early 2000s).

The share of Silicon Valley and San Francisco startup companies with at least one woman or gender non-conforming founder has steadily increased over the past quarter century, though it has yet to exceed 27% (at the recent peak in 2019).



STARTUPS

Number of Newly-Funded Startup Companies

Silicon Valley, San Francisco, and California



Data Source: CB Insights; Crunchbase | Analysis: Silicon Valley Institute for Regional Studies

Average IPO Return Rates

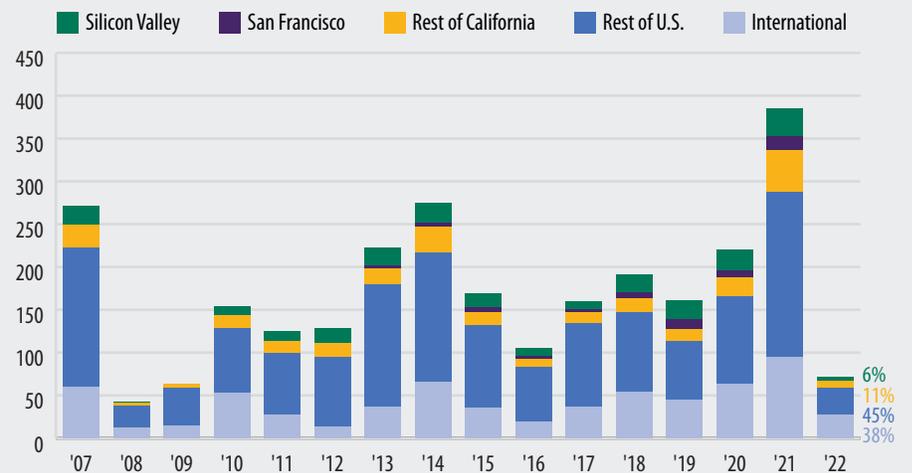
	2020	2021	2022
Silicon Valley	+117%	0%	-40%
San Francisco	+101%	+6%	n/a
United States	+80%	-9%	-20%

Among Silicon Valley's four IPOs in 2022, the average return rate — from the date of IPO through the end of the year — was -40%; this compares to -20% among all of the U.S. IPO pricings in 2022.

INITIAL PUBLIC OFFERINGS

Total Number of U.S. IPO Pricings

Silicon Valley, San Francisco, Rest of California, Rest of U.S., and International Companies

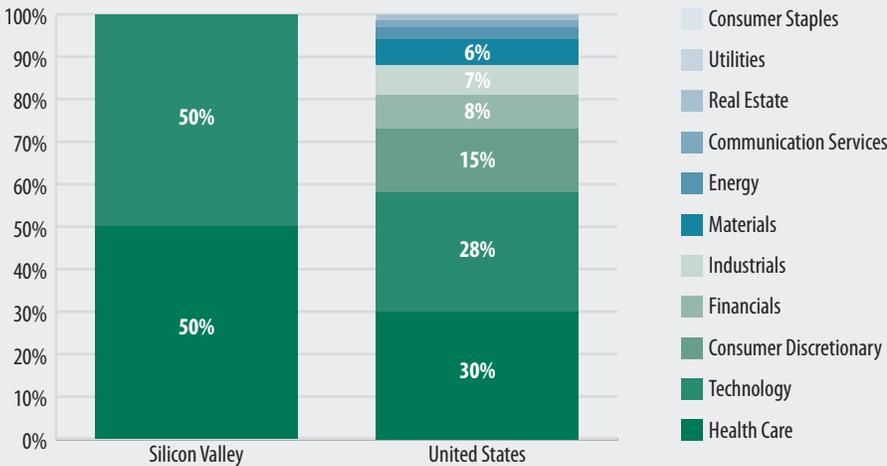


Data Source: Renaissance Capital | Analysis: Silicon Valley Institute for Regional Studies

INITIAL PUBLIC OFFERINGS

Initial Public Offerings, by Industry

Silicon Valley | 2022



Silicon Valley's four IPOs last year included San Jose-based Credo Technology, Menlo Park-based AN2 Therapeutics, Los Gatos-based Tenon Medical, and Actelis Networks in Fremont; two are Technology companies and two are in Health Care.

Note: Location based on corporate address provided by IPO ETF manager Renaissance Capital.
Data Source: Renaissance Capital | Analysis: Silicon Valley Institute for Regional Studies

There were no San Francisco IPOs in 2022, and only four of Silicon Valley companies (in the first half of the year). The latter represented 6% of those on U.S. markets that year, and 3% of the proceeds.

Silicon Valley had four IPOs in 2022, which raised a combined total of \$300 million in proceeds; this compares to the 31 traditional IPOs in 2021 that raised a combined total of \$12.5 billion.

INITIAL PUBLIC OFFERINGS

Initial Public Offerings, by Quarter

Silicon Valley



Data Source: Renaissance Capital | Analysis: Silicon Valley Institute for Regional Studies

ECONOMY

Innovation & Entrepreneurship

There was a shift in regional Merger & Acquisition (M&A) activity in 2020, with a sharp increase in the share of M&A deals with both a local target and local acquirer, persisting through 2022. This trend was likely due to a combination of factors, including the struggle facing some companies at the onset of the pandemic, in combination with massive market cap gains for the majority of the region’s public companies in the first two years of the pandemic — up 161% by nearly \$8.8 trillion.³ Acquiring local targets may also have been a means by which companies gained intellectual property, as well as additional headcount at a time when the unemployment rate was dropping to near full-employment. A notable example of absorbing local employees through M&A was Google’s acquisition of Fremont-based holographic/micro-LED display company, Raxium, for \$1 billion in May.^{19 20}

a. Market gains represent an aggregate amount including San Francisco and Silicon Valley’s public companies, from March 2020 to December 2021.

Percentage of Merger & Acquisition Deals, by Participation Type

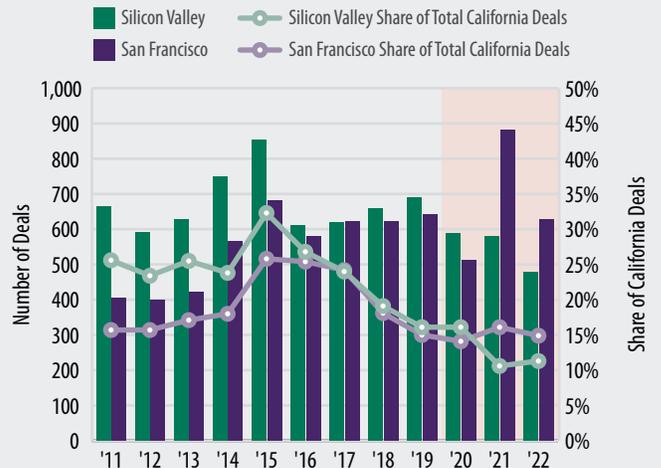
Silicon Valley



MERGERS & ACQUISITIONS

Number of Deals and Share of California Deals

Silicon Valley and San Francisco



Note: Deals include Acquirers and Targets.
Data Source: FactSet Research Systems, Inc. | Analysis: Silicon Valley Institute for Regional Studies

Other contributors to the recent surge in local acquirer/local target M&A deals were the use of Special Purpose Acquisition Company (SPAC) mergers as a means to go public without doing a traditional IPO (such as with San Francisco-based Social Finance, which went public via a SPAC merger in May 2021 – raising \$2.4 billion in cash proceeds),^a as well as a means of delisting/taking private (such as with the \$50 billion buyout of all outstanding Xilinx stock shares by Advanced Micro Devices in February 2022).²⁴

a. SoFi News (May 28, 2021), "SoFi, A Leading Next-Generation Financial Services Platform, to Become Publicly Traded following Business Combination with Social Capital Hedosophia V," (<https://investors.sofi.com>).

While Silicon Valley has historically represented a larger share of California M&A deals each year than San Francisco, that trend shifted in 2021 and persisted into 2022 (with 15% of California M&A deals involving at least one San Francisco company, and 11% of them involving a Silicon Valley company).

Silicon Valley and San Francisco's ten largest completed M&A deals of 2022 (with disclosed transaction values) alone totaled more than \$112.5 billion.

Among the largest M&A deals of 2022 that included both local acquirer and target companies was Adobe's (pending) acquisition of San Francisco-based collaborative design company, Figma, at a \$20 billion valuation;²¹ another was the Advanced Micro Devices \$1.9 billion acquisition of local distributed computing company, Pensando Systems, in April, a mere couple months after its acquisition of San Jose-based Xilinx.

The \$38.9 billion buyout of Twitter's stock shares by Elon Musk was the largest completed acquisition of 2022, taking the company private in October.²² This came after a year of successive acquisitions by Twitter; among the disclosed M&A deals in 2021 were ten, including that of four fellow San Francisco companies (including the Brief news app founded by two former Google employees in 2020²³), plus two in Sunnyvale, one in New York, and three abroad for undisclosed amounts.

ECONOMY

Commercial Space

With the rise and persistence of remote work, Silicon Valley commercial space dynamics have shifted, with office space emerging as the most notable element. Leasing activity remained strong throughout 2022, up two percent over the prior year, reaching 24.8 million square feet. Though most companies have largely solidified their workplace strategies in response to the pandemic, the backdrop of challenging macroeconomic factors and ensuing layoffs that bookended the year may be stifling.

Although commercial leasing volume retained momentum from the prior year and office leasing volumes rose in 2022 by 30% year-over-year, the average amount of space

per lease has sharply declined (reaching an average office lease of only 12,700 square feet). This shift is indicative of companies requiring a smaller office space footprint. In contrast, those requiring other commercial space types have not appeared to downsize, reflecting that the functionality of Flex/R&D, Lab, and Industrial spaces are inherently less able to be replicated off-site.

Rental rates rose in 2022 for all space types, although increases in Office rates did not outpace inflation like other space types; rental rates for Lab have continued to climb most rapidly. Vacancy rates declined slightly last year for Flex/R&D, Industrial, and Lab, whereas office space vacancy rates have

continued to rise. With the majority of Silicon Valley's premier technology companies announcing layoffs at the tail end of 2022, sublease space has started to appear in the market (including those by Meta and Netflix).

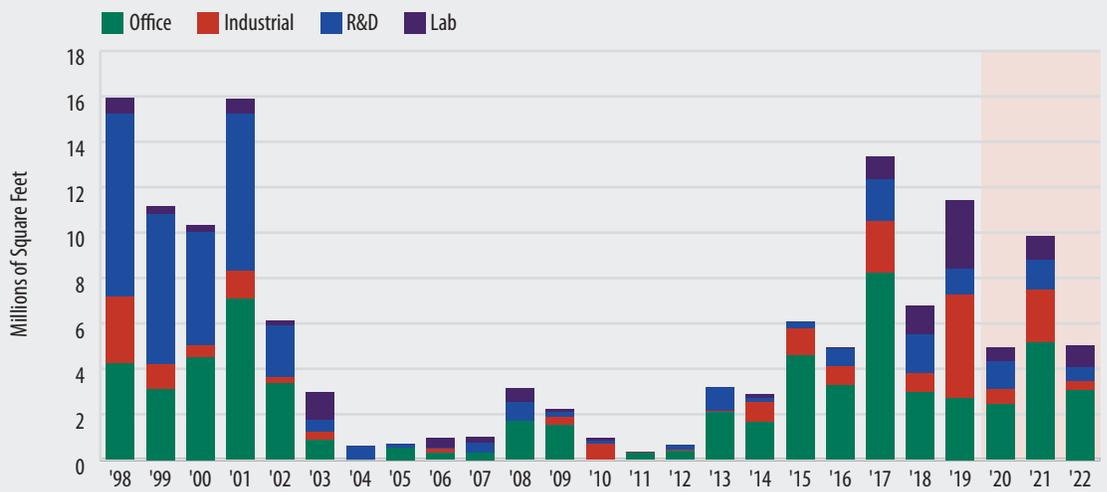
While commercial space completions were relatively light in 2022, a majority of space was either pre-leased or owned by their occupants. Google was a major contributor to this figure, as their campus completions in Mountain View accounted for nearly a third of the total (1.6 out of 5.0 million square feet). The commercial space development pipeline has also repopulated substantially, with lab space reaching a new high of 6.4 million square feet currently under development.

More than three million square feet of new commercial office space was delivered to the Silicon Valley market in 2022 — all of which was 100% pre-leased at the time of delivery.

A total of five million square feet of new Silicon Valley commercial space was completed in 2022 (61% Office, 10% Lab, 12% R&D, and 8% Industrial) — about half as much as was completed during the prior year (9.84 million square feet).

COMMERCIAL SPACE New Commercial Development Completions

Silicon Valley



Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

The region's two largest office developments completed in 2022 were Google's Bay View and Charleston East Campuses in Mountain View (both completed in Q2).

Why is this important?

Changes in the supply of commercial space, vacancy rates, and asking rents provide leading indicators of regional economic activity. A decline in available commercial space may suggest strengthening economic activity and tightening in the commercial real estate market. Increases in vacancy (the amount of space that is not physically occupied), as well as declines in rents, can reflect slowing demand relative to supply. Rents and vacancy rates near transit illustrate the value that prime locations provide to tenants and their employees. Changes in the real estate footprint of major tech

companies can be indicative of the prevalence of remote work, as well as either consolidation or expansion/contraction, with the latter thereby impacting regional employment levels. Leasing and tech company pre-leasing activity are also indicative of overall real estate demand and affect optimism toward speculative development.

Other notable commercial space developments completed in 2022 were the first phase of Kilroy Oyster Point — a three-building, 655,000 square-foot, predominantly lab-focused campus in South San Francisco — and a 410,000 square-foot, five-building Class A Industrial project in Morgan Hill (Butterfield 5 Technology Park).

Nearly half (46%) of Silicon Valley’s newly-constructed space in 2022 was accounted for by Google-owned development projects; about 68% (3.39 million square feet) of the total was completed in Q2. While the lion’s share of Google’s 2022 completions were at the Bay View and Charleston Campuses in Mountain View, Google also completed a four-building, 400,000 square-foot campus in Sunnyvale near the end of the year.

10 Largest Commercial Space Completions
Silicon Valley, 2022

Development Name/Location	Owner/Developer	Rentable Building Area (square feet)	Percent Leased at Time of Delivery & Tenant	Class & Type of Space	Quarter Completed
Google Bay View Campus 100 Bay View Drive, Mountain View	Google	1,100,000	100% (Google)	Class A Office	Q2
Google Charleston East 2000 North Shoreline Boulevard, Mountain View	Google	595,000	100% (Google)	Class A Office	Q2
Gateway of Pacific - Phase II 750 Gateway Boulevard, South San Francisco	BioMed Realty	441,000	100% (Amgen)	Class A Lab	Q2
Google Humboldt Campus 225-244 Humboldt Court, Sunnyvale	Google	400,188	100% (Google)	Class A Office	Q4
Kilroy Oyster Point I 350 Oyster Point Boulevard, South San Francisco	Kilroy Realty	234,892	100% (Cytokinetics)	Class A Lab	Q1
Kilroy Oyster Point I 370 Oyster Point Boulevard, South San Francisco	Kilroy Realty	221,000	100% (Stripe)	Class A Office	Q1
Bay Meadows Station 1 2750 South Delaware Street, San Mateo	Stockbridge Capital Group/Wilson Meany	219,831	100% (Roblox)	Class A Office	Q3
465 North Mary 465 North Mary Avenue, Sunnyvale	Jay Paul Company	194,850	100% (LinkedIn)	Class A Office	Q4
1265 Borregas Avenue	Google	182,500	100% (Google)	Class A Office	Q4
Fortinet Headquarters 901 Kifer Road	Fortinet/Sares Regis	172,000	100% (Fortinet)	Class A Office	Q1

Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

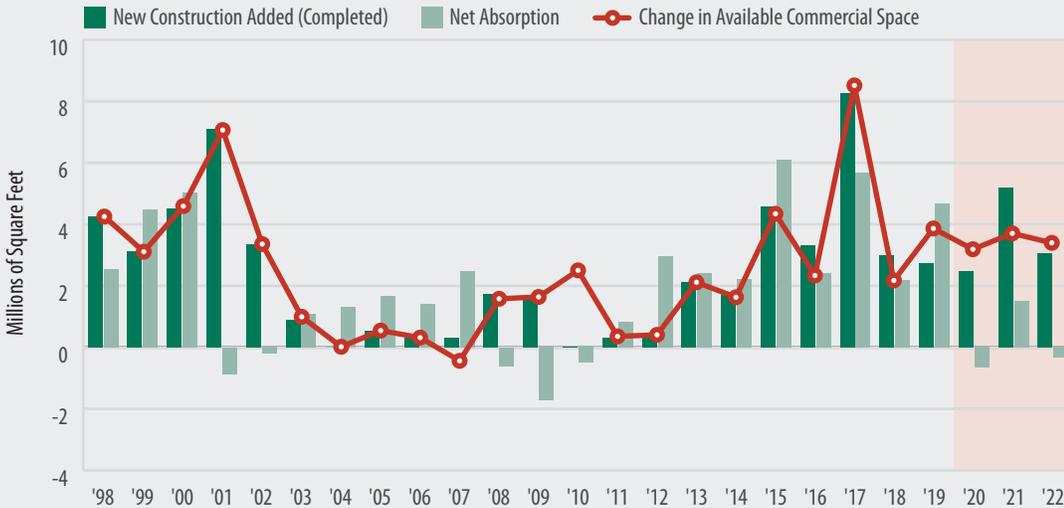
ECONOMY

Commercial Space

COMMERCIAL SPACE

Change in Supply of Office Space

Silicon Valley



After accounting for newly-completed developments, newly-occupied space, and vacancies, the total amount of available commercial office space in Silicon Valley grew by two million square feet in 2022.

In-progress commercial construction grew by 46% in 2022 (+4.9 million square feet), with more than a dozen new construction projects started in Q4.

Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

While the industrial space development pipeline had been light since mid-2021, key projects (including those by Ares Management in San Jose and Fremont, as well as a Trammell Crow, five-building industrial business park in Morgan Hill) broke ground in Q4, raising the construction totals to more than two million square feet.

The amount of commercial space under construction in Silicon Valley rose sharply during the second half of 2022, with an uptick observed across all space types.

Silicon Valley hit a record amount of lab space in-progress at the end of 2022, with 6.4 million square feet under construction — exceeding last year's record-breaking total of 3.8 million square feet Q4 2021.

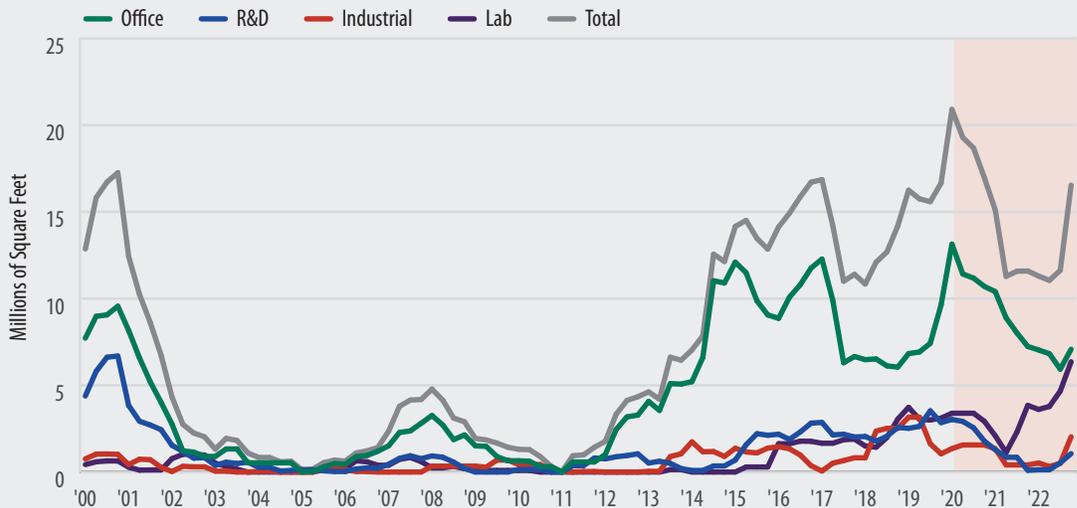
The amount of office development in the pipeline remains robust, indicating a continued desire of owners to expand their footprint, and optimism from developers. Major developments in the office pipeline include Adobe's North Tower completion and occupancy (expected in early 2023) and Platform 16 in San Jose (a recently restarted 1.1 million square-foot office development).²⁵

Of the 16.5 million square feet under construction at the end of the year, a large share (43%, or 7.1 million square feet) was Office, in addition to 6.4 million Lab, 2.0 million Industrial, and 1.1 million square feet of R&D space.

COMMERCIAL SPACE

Quarterly In-Progress Commercial Space Development

Silicon Valley



Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

As leasing totals retained momentum from the previous year, we observed additional moderately-sized sublease space became available (such as a pair of buildings previously occupied by Netflix in Los Gatos totaling 164,000 square feet, and Meta’s 113,000 square-foot building in Fremont).

There were 39 large Silicon Valley leases (>100,000 square feet) executed in 2022 — 18% more than the prior year. Office, Flex/R&D, and Industrial each accounted for nearly one-third of those large leases, while Lab only accounted for 8%.

New to Market leases (in which a tenant moves from outside Silicon Valley), and Relocation leases (where the tenant relocates from another Silicon Valley location) continued to recover in 2022, though they remained below 2019 totals by 44% and 26%, respectively, across all space types. Lease renewals also continue to rise following the sharp decline in 2020, up 24% in 2022 year-over-year (exceeding 2019 levels by 12%).

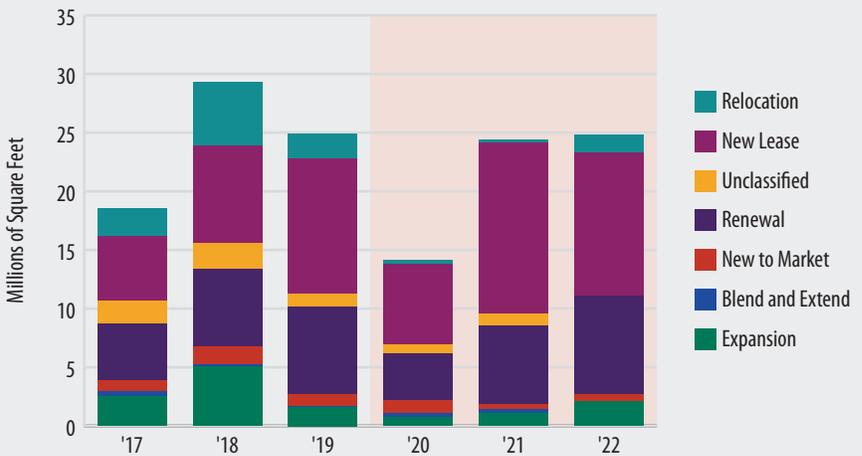
At the end of 2022, 6.4 million square feet of Lab development was underway, with major projects including the first phase of Southline in South San Francisco (700,000 of a three million square-foot project) and Elco Yards in Redwood City (535,000 square feet, which broke ground in the second half of 2022).

Major Silicon Valley commercial construction projects underway at the end of 2022 included several large owner-user developments — such as Intuitive Surgical’s 847,000 square-foot R&D building in Sunnyvale, Google’s 505,000 square-foot office project on Caribbean Drive in Sunnyvale, and another Google-owned development totaling 315,000 square feet in Mountain View.

COMMERCIAL SPACE

Square Footage of Commercial Leases, by Type

Silicon Valley



Note: Lease transactions include New to Market (tenant moves into a new market from another market), Relocation (tenant moves from one location to another in the same market), Renewal (tenant renews its existing lease at its current location), Expansion (when a tenant expands its current premises to include new premises outside of its currently leased premises), Blend-and-extend (tenant’s remaining lease term, usually one to three years, is extended and the current rental rate is “blended” with a newly negotiated one), and New Lease (when it is unclear if the tenant is new to market, relocating, expanding, or renewing, to indicate that a new lease transaction has taken place). | Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley’s commercial space leasing activity held steady in 2022. While overall leasing by square footage was up less than 2% year-over-year, Office leasing rose by nearly 30%.

ECONOMY

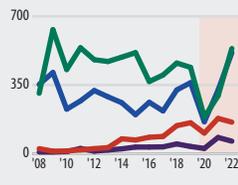
Commercial Space

Among Silicon Valley's largest commercial space leases executed in 2022 was a two-building portion of the Coleman Highline project in San Jose (658,000 square feet subleased by Verizon to Bytedance in September). Earlier in the year, Roblox had pre-leased two under-construction buildings at the Bay Meadows project in San Mateo totaling 438,000 square feet, and Apple had committed to an additional 359,000 square feet across the two-building Jay Paul office project in Sunnyvale.

Along with an increase in the square-footage of Silicon Valley Office and Flex/R&D leases in 2022 (+30% and +8% year-over-year, respectively), there was a significant rise in the number of commercial leases executed for each space type in 2022 (+82% and 59%, respectively).

In 2022, the total square footage of commercial space leases was 24.8 million square feet, 1.8% higher than the prior year (and nearly identical to 2019 levels).

Number of Leases, by Space Type

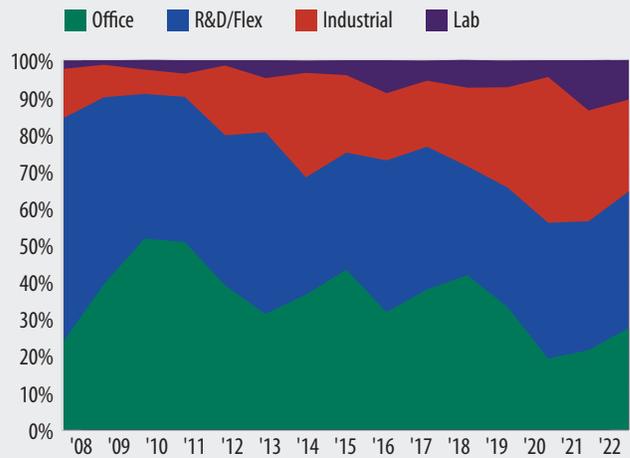


While there was a 45% increase in the number of commercial space lease agreements in 2022, the total square footage only ticked up slightly, indicating a significant reduction in the average amount of space leased by tenants.

COMMERCIAL SPACE

Share of Commercial Lease Square Footage, by Space Type

Silicon Valley

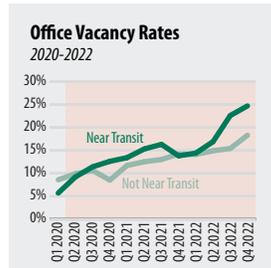
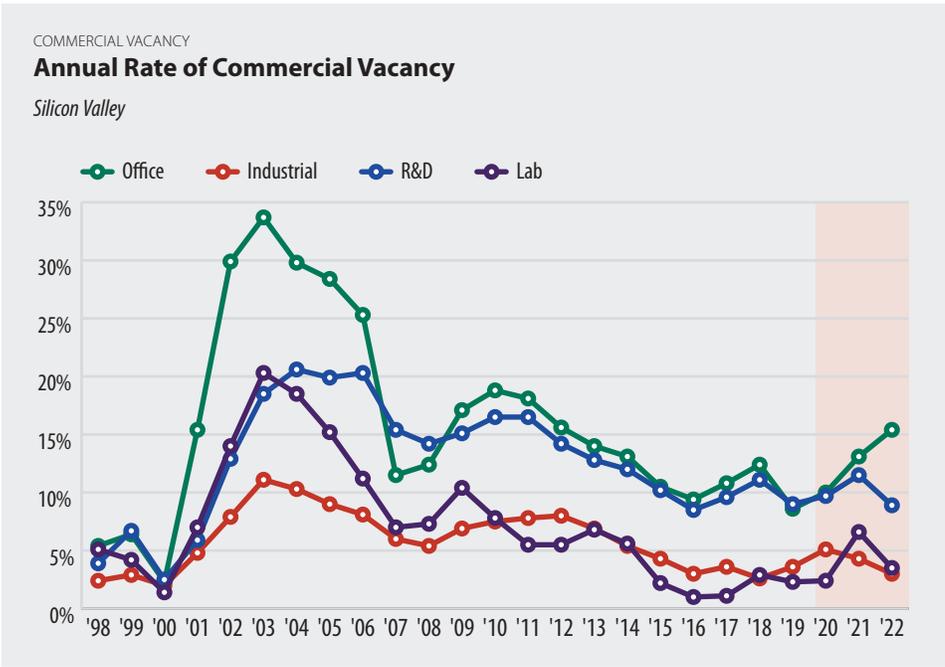


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Average vacancy rates for Silicon Valley commercial space were 15.4% for Office, 8.9% for R&D, 3.5% for Lab, and 3% for Industrial space in 2022. While these rates are higher than they were in 2019, they are still significantly lower than the Great Recession highs of 2010 (8-19%).

While Silicon Valley Industrial, R&D, and Lab vacancy rates fell slightly in 2022 — likely as a result of strong leasing activity in 2021 — Office vacancy rates have continued to increase, almost doubling since prior to the pandemic (86% in 2019).

Silicon Valley commercial vacancy rates fell in 2022 for all space types other than Office — most significantly for Lab (exclusive to San Mateo County, down 3.1 percentage points over 2021) and Flex/R&D space throughout the region (down 2.6 percentage points, year-over-year).



While leasing activity in 2022 exceeded the prior year's figures (which has caused vacancy rates to trend downward for the majority of commercial space types), it is unclear whether more companies will opt to shed space in the future, especially as significant layoffs in the tech sector continue into 2023.

Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley remains one of the tightest markets for Industrial space, with vacancy rates already below pre-pandemic levels. To date, inventory has not been able to keep up with demand given the current needs of the region and lack of adequate pre-existing space.

Office space vacancy rates continued to rise in 2022 as it became more clear that remote and hybrid work arrangements will persist. With the backdrop of significant layoffs among large tech companies, office space vacancy rates may remain high with softening demand.

Silicon Valley Office vacancy rates at locations within a 10-minute walk from public transit — which have traditionally been lower than elsewhere due to the ease of employee commutes — has ballooned in comparison to vacancy rates for Office not near transit (25% in Q4 2022, compared to 18% not near transit). As downtown amenities have now adjusted to the *new normal* in tandem with more rigorously defined public health and safety guidelines, vacancy rates have started to come down.

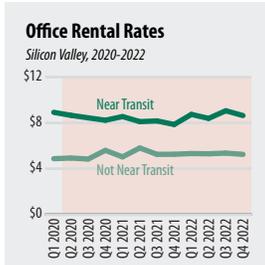
ECONOMY

Commercial Space

Silicon Valley's average commercial space rental rates were \$5.64 per square foot (full-service gross) for office space, \$7.32 for Lab, \$3.09 for R&D, and \$1.62 per square foot for Industrial in 2022.

Silicon Valley commercial space rental rates continued to rise in 2022, outpacing inflation for most space types.

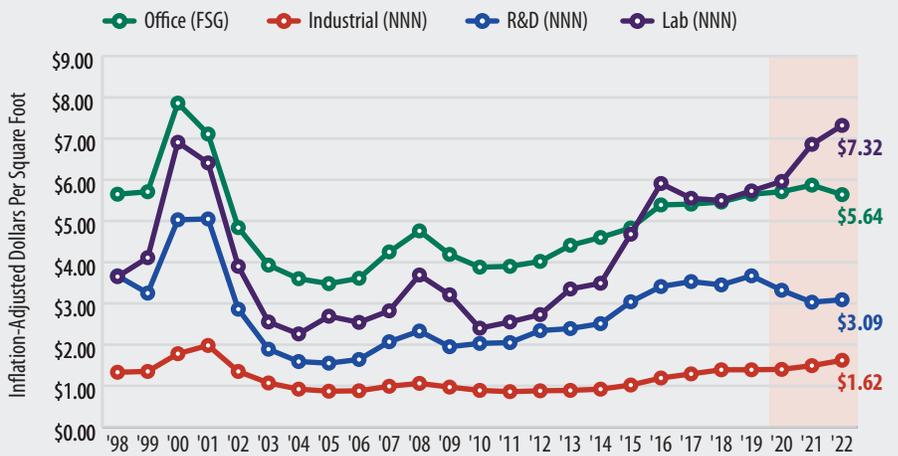
Rental rates for Lab continued to rise rapidly in 2022, reaching more than double the cost of other R&D space (\$7.32 per square foot, compared to \$3.09).



Average rental rates for Silicon Valley commercial space rose in 2022 for Lab (+7% year-over-year, after adjusting for inflation), Industrial (+9%), and R&D (+2%). In contrast, average rental rates for Silicon Valley office space declined by 4% year-over-year, indicating that a softening demand has outweighed landlords' abilities to significantly adjust rental rates.

COMMERCIAL RENTS Annual Average Asking Rents

Silicon Valley



Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

Rental rates for R&D space have increased over the past year, but have yet to exceed pre-pandemic levels.

Region	Average Rental Rate per Square Foot (FSG)	Year-Over-Year % Change
New York City	\$6.37	0.0%
Silicon Valley	\$5.70	+1.1%
Austin	\$4.33	+3.1%
Los Angeles	\$3.77	-0.5%
Seattle	\$3.99	+5.0%
Boston	\$3.92	-1.5%
Portland	\$2.75	-1.8%
Denver	\$2.72	+3.4%

At the end of 2022, Silicon Valley office space asking rents were approximately 65% higher at locations near public transit (within a 10-minute walk of a Caltrain, BART, or VTA station) than those not near transit.

Despite strong leasing activity in 2022, increases in Office rents did not exceed the regional inflation rate. The contrast between rents at locations near and not near public transit persisted through 2022, despite vacancy rising more rapidly for office locations near transit.

Office space rental rates in Silicon Valley barely increased between Q4 2021 and Q4 2022 (by +1%), while places like Denver, Seattle, and Austin experienced a rise in Office rental rates of 3-5%. Rental rates in New York City remained stagnant in 2022, while cities such as Los Angeles, Boston, and Portland experienced rental rate declines last year (of 1-2%).

Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

Tech companies dominate pre-leasing activity in Silicon Valley. Of the 6.3 million square feet of commercial office space under construction in Q4 2022, 3.1 million (49%) was entirely pre-leased to tech companies.

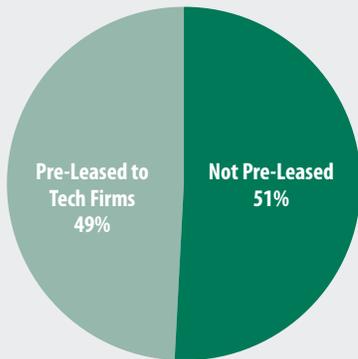
More than 10 new Silicon Valley Office developments in 2022 were 100% pre-leased at the time of delivery. As of the end of the year, about half of Silicon Valley's under-construction projects were pre-leased – slightly less than the share observed over the past five years (60-70%).

Silicon Valley office space was 81% tenant-occupied and 19% owner-occupied in Q4 2022.

COMMERCIAL OCCUPANCY

Commercial Office Space Under Construction and Share Pre-Leased to Tech Firms

Silicon Valley | Q4 2022

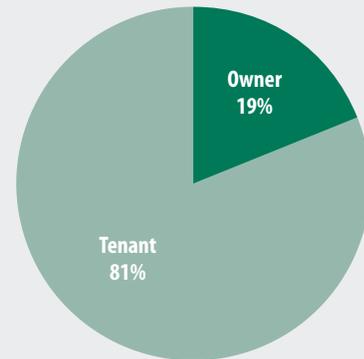


Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

COMMERCIAL OCCUPANCY

Inventory of Commercial Space, by Owner vs. Tenant Occupancy

Silicon Valley | Q4 2022



Data Source: JLL | Analysis: Silicon Valley Institute for Regional Studies

ECONOMY

Commercial Space

One in six new California hotels that opened in 2021 were either in Silicon Valley or San Francisco.

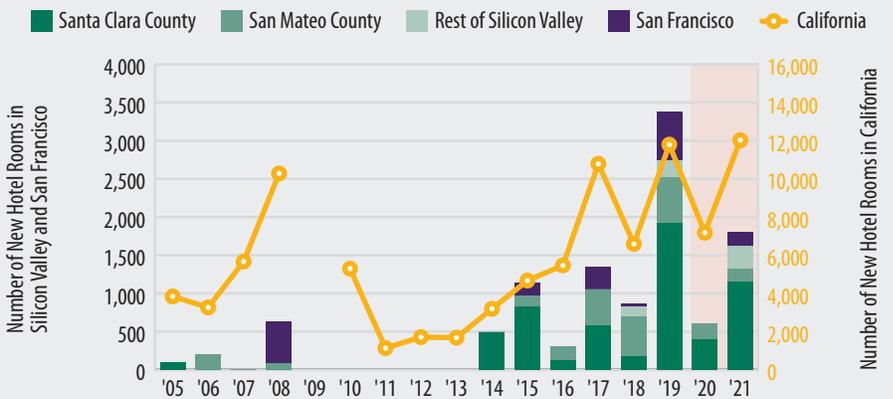
Among the largest hotels completed in 2021 were the Ameswell Hotel Mountain View (255 rooms), the Shashi Mountain View (200 rooms), and the CitizenM San Francisco Union Square (195 rooms).

Hotel development in Silicon Valley jumped up in 2021 following a slow year in 2020, although the pace of development remained lower than the record high of 3,372 rooms delivered in 2019.

HOTEL DEVELOPMENT

Number of New Hotel Rooms

Silicon Valley, San Francisco, and California



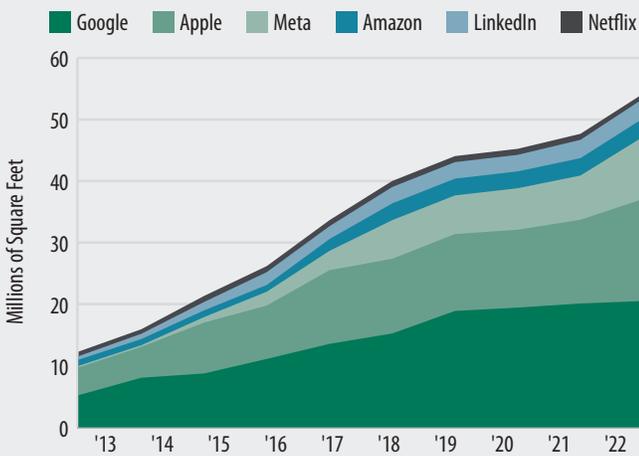
Note: County-level data for 2009-2013 and state level data for 2009 were unavailable (reports were not published due to lack of significant hotel development).
Data Source: Atlas Hospitality Group | Analysis: Silicon Valley Institute for Regional Studies

At the end of 2021, there were 12 hotels under construction in Santa Clara County, three in San Mateo County, and four in San Francisco.

TECH COMPANY PRESENCE

Amount of Commercial Space Occupied by Major Tech Tenants

Silicon Valley



Note: Includes Santa Clara County and the City of Fremont, plus Menlo Park. | Data Source: Colliers International Silicon Valley | Analysis: Colliers International Silicon Valley

Google, Apple, Meta, Amazon, LinkedIn, and Netflix combined occupy 54.2 million square feet of commercial space in Silicon Valley, including (primarily) office and R&D space. Of these six companies, Google occupies the most (approximately 20.5 million square feet in 2022).

Six of the region’s major tech companies (Google, Apple, Meta, Amazon, LinkedIn, and Netflix) occupy a combined 20% of all available Office/R&D space in Santa Clara County, Menlo Park, and Fremont.

SOCIETY

Preparing for Economic Success

The effects of the pandemic on Silicon Valley’s students were significant, varied, and in many ways unquantifiable. Of those measures that do exist — such as graduation and dropout rates, and achievement of standards for college entry — the most recent school year data showed many signs of improvement. In the 2021-22 school year, Silicon Valley’s high school dropout rate fell to its lowest level in a decade, and the graduation rate increased to its highest level since 2011 (to nearly 89%); these same positive trends were observed statewide.

Despite the gains in student success last year, disparities among racial and ethnic groups persisted. Asian students graduated at a rate (97%) 17 percentage points higher than Hispanic or Latino students (80%). The

share of Silicon Valley high school graduates meeting UC/CSU requirements continued to rise, following a decades-long incremental increase year after year (even through the pandemic). Other measures, such as the share of eighth-graders meeting math proficiency standards, are at their lowest (48%) since at least 2008. The pandemic brought to light the region’s long-standing digital divide, which disproportionately impacts low-income households (22% of which lack broadband access), Hispanic or Latino, and Black or African American households.

Why is this important?

The future success of Silicon Valley’s knowledge-based economy depends on the ability of younger generations to prepare for and

access higher education and to provide all residents with a fundamental requirement for 21st century life — robust, high-speed network connectivity.

High school graduation and dropout rates are important measures of how well our region prepares its youth for future success. Preparation for postsecondary education can be measured by the proportion of Silicon Valley youth that complete high school and meet entrance requirements for the University of California (UC) or California State University (CSU) systems. Educational achievement can also be measured by proficiency in math. Breaking down high school graduation rates and the share of those meeting UC/CSU entrance requirements by race and ethnicity sheds light on disparities in



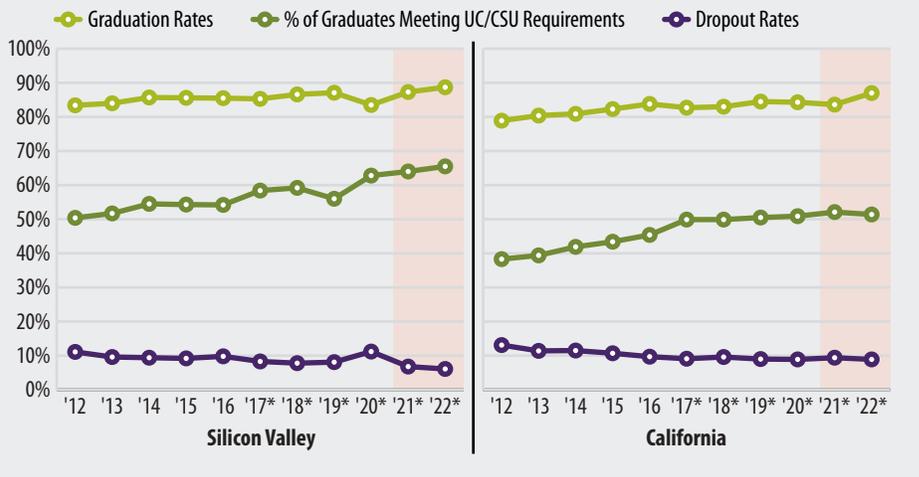
During the 2021-22 school year, Silicon Valley’s high school dropout rate declined to its lowest level in a decade, and the graduation rate increased to its highest level since 2011 (to nearly 89%).

Silicon Valley’s high school dropout rate — which shot up to 11.2% in 2019-20 — came back down in the 2020-21 school year (to 6.8%) and declined even further in 2021-22 (to 6.1%); however, both the early pandemic effects on dropout rates as well as their recovery varied significantly by race and ethnicity.

GRADUATION AND DROPOUT RATES

Rate of Graduation, Share of Graduates Who Meet UC/CSU Requirements, and Dropout Rate

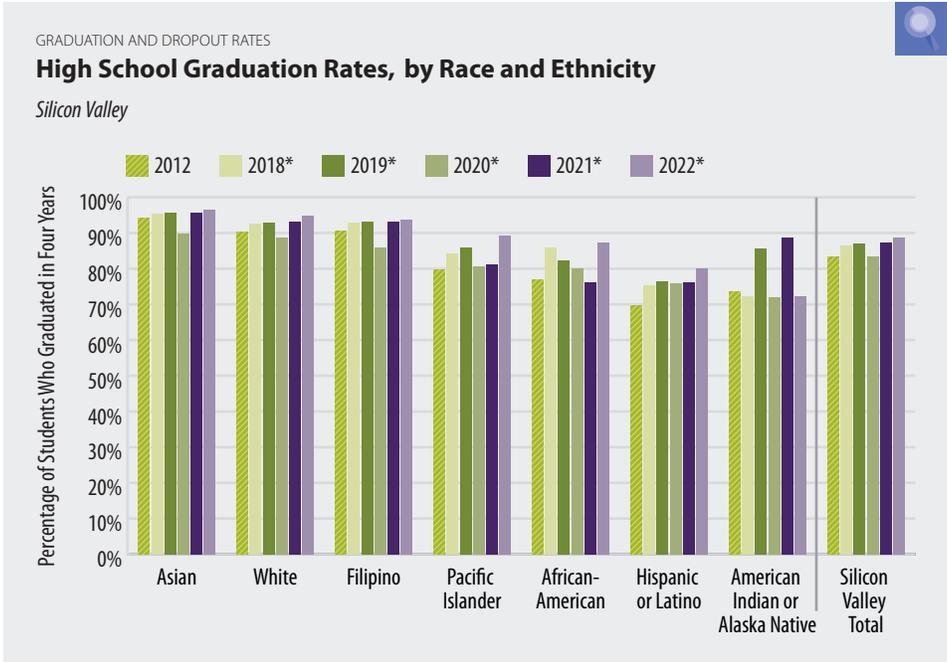
Silicon Valley and California



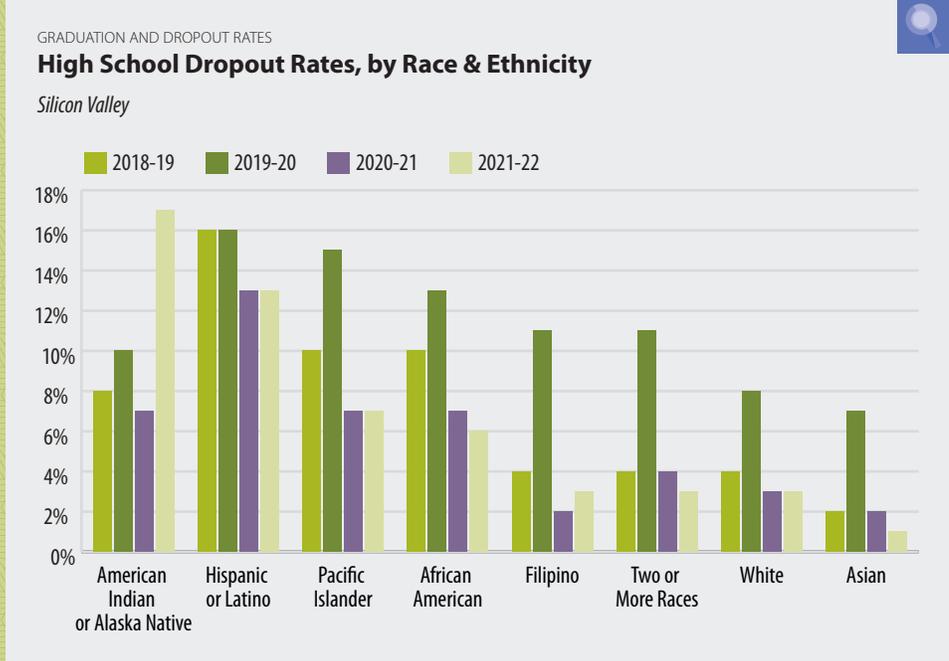
*Due to changes in the California Department of Education methodology for 2017 and subsequent years, caution should be used in comparing cohort outcome data to prior years. | Note: Graduation and dropout rates are four-year derived rates. | Data Source: California Department of Education | Analysis: Silicon Valley Institute for Regional Studies

educational achievement. And, whether the region's residents have access to a computer with broadband internet connectivity is indicative of their ability to engage in the community, look for jobs, do homework, manage finances, interact with government, access a wide variety of resources, and conduct the business of everyday life. The need for high-speed network connectivity (and lack thereof) was magnified during the pandemic, with the implementation of distance-learning and a sharp rise in remote work.

Silicon Valley's Asian high school students in the 2021-22 cohort graduated at a rate of 97% — 17 percentage points higher than Hispanic or Latino students (80%).



*Due to changes in the California Department of Education methodology for 2017 and subsequent years, caution should be used in comparing cohort outcome data to prior years. | Note: Graduation rates are four-year derived rates. All racial/ethnic groups aside from Hispanic or Latino are non-Hispanic. Data Source: California Department of Education | Analysis: Silicon Valley Institute for Regional Studies



Data Source: California Department of Education | Analysis: Silicon Valley Institute for Regional Studies

The dropout rate is at a decade low of 6.1%, a trend that started the previous school year and continued through 2021-22. Students who are socioeconomically disadvantaged account for 82% of all dropouts, followed by Hispanic or Latino students (75%), English-learners (55%), and students experiencing homelessness (28%).

Silicon Valley's high school graduation rate — which declined by nearly four percentage points in the 2019-20 school year — increased similarly in 2020-21 and reached a decade-high in 2021-22 (89%). These same trends were observed statewide.

The share of Silicon Valley high school graduates meeting UC/CSU requirements has risen steadily year-over-year for the past decade (from 47% in 2010-11 to 66% in 2021-22).

SOCIETY

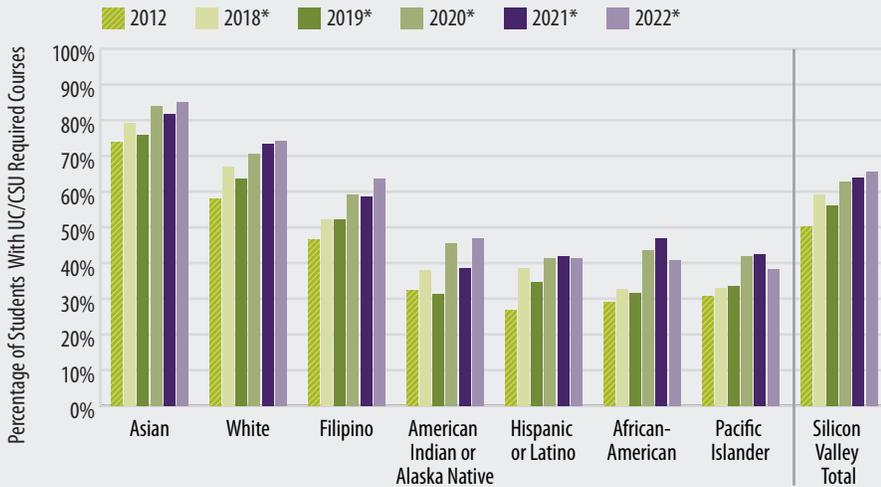
Preparing for Economic Success

Asian students have the highest rate of graduates meeting UC/CSU requirements among Silicon Valley's racial and ethnic groups reported, at 85% in 2021-22.

COLLEGE PREPARATION

Share of Graduates Who Meet UC/CSU Requirements, by Race and Ethnicity

Silicon Valley



The share of Silicon Valley high school graduates meeting UC/CSU requirements has increased by 16 percentage points over the past decade (from 50% in 2012 to 66% in 2022).

The share of Silicon Valley high school graduates meeting UC/CSU requirements has increased most dramatically since 2012 for Filipino, American Indian or Alaska Native, and Hispanic or Latino students (+17, +14, and +14 percentage points, respectively).

*Due to changes in the California Department of Education methodology for 2017 and subsequent years, caution should be used in comparing cohort outcome data to prior years. | Note: All racial/ethnic groups aside from Hispanic or Latino are non-Hispanic. | Data Source: California Department of Education | Analysis: Silicon Valley Institute for Regional Studies

Both Santa Clara and San Mateo counties saw a decline in the share of eighth-graders who met or exceeded the standard in math during the 2021-22 school year. Combined, the counties experienced a nine percentage point decline from the prior year.

Share Who Met or Exceeded the Standard in Math, by Race and Ethnicity

Eighth-Graders, 2021-22
(with percent change since 2018-19)

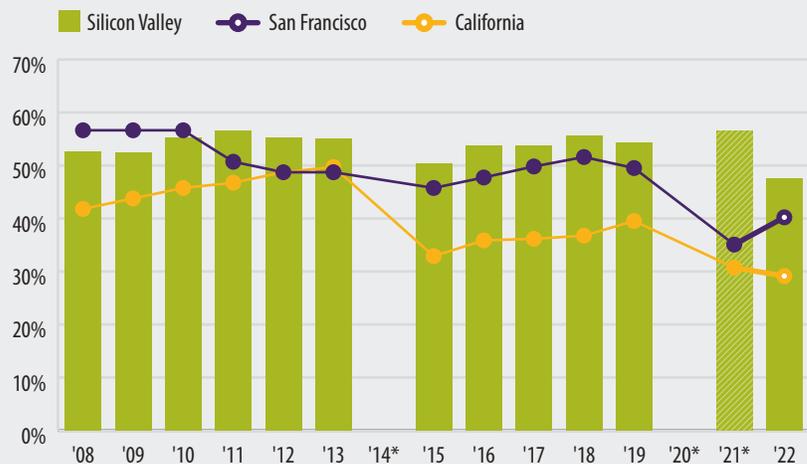
Santa Clara & San Mateo Counties

Asian	80% (-5%)
Two or More Races	63% (-7%)
White	62% (-7%)
Filipino	45% (-8%)
Black or African American	19% (-8%)
Hispanic or Latino	18% (-8%)
Native Hawaiian or Pacific Islander	15% (-11%)
Overall	48% (-7%)

MATH PROFICIENCY

Share of Eighth-Graders Who Met or Exceeded the Standard in Math

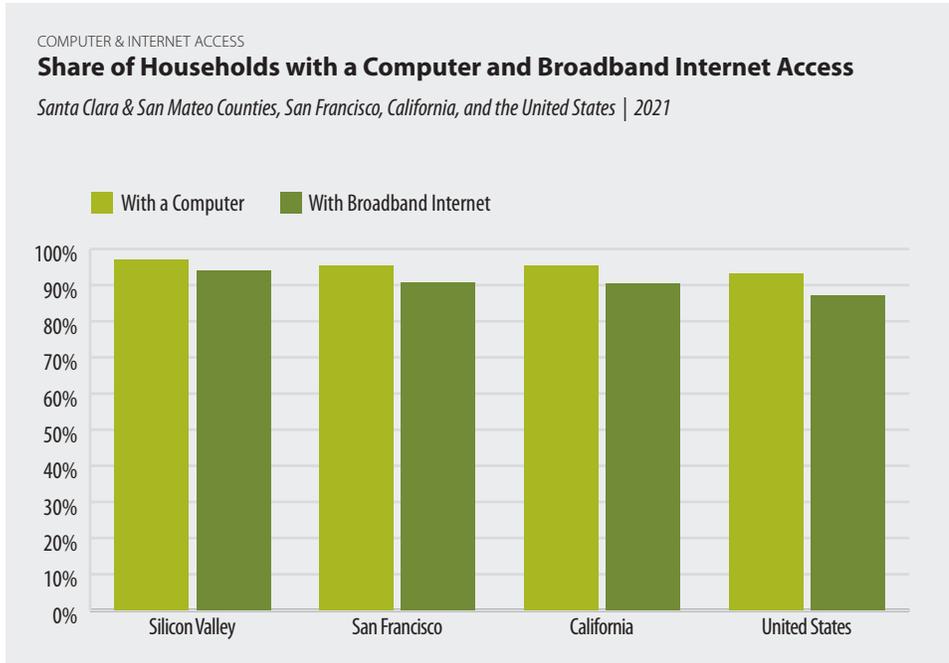
Santa Clara & San Mateo Counties, San Francisco, and California



*Math proficiency data are not available for 2014 or 2020; data for 2020-21 include a lower share of enrolled students with scores than typical. | Note: 2019-20 school year data unavailable due to the suspension of CAASPP testing as a result of the COVID-19 pandemic. Beginning with the 2013-14 school year, the California Assessment of Student Performance and Progress (CAASPP) became the new student assessment system in California, replacing the Standardized Testing and Reporting (STAR) system. | Data Source: California Department of Education | Analysis: Silicon Valley Institute for Regional Studies

Approximately 6% of all Silicon Valley households did not have broadband internet access during the five-year period from 2016 to 2021; this share is significantly higher (22%) for very low-income households (earning less than \$35,000 annually). Disparities also exist across racial and ethnic groups with more than 7% of Hispanic or Latino households and 8% of Black or African American households not having access to broadband internet.

More than one-third of Silicon Valley households (34%) with an annual income less than \$75,000 did not have internet access in 2021 (compared to 34% in California, and 41% in the United States).



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Share of Households Without Internet Access At Home, by Income Range

2021

	Low-Income	Moderate-Income	High-Income
Silicon Valley	22%	12%	3%
San Francisco	30%	12%	3%
California	24%	10%	3%
United States	29%	12%	4%

Silicon Valley has a greater share of households with computers (97%) and broadband internet access (94%) than San Francisco, California, or the United States overall.

Declines in math proficiency were experienced across all racial and ethnic groups in 2021-22, with the largest declines among Native Hawaiian or Pacific Islanders, Hispanic or Latino students, as well as Filipino and Black or African American students.

Approximately 48% of Silicon Valley eighth-graders were proficient in math during the 2021-22 school year (compared to only 29% in California overall). This represents a seven percentage point decrease since pre-pandemic (2018-19). The number of students with test scores was much higher than the prior year (by nearly 6,000 students), but remained lower than the pre-pandemic number (with 3,000 fewer students tested than during the 2018-19 school year).

The largest declines in eighth-grade math proficiency since pre-pandemic (2018-19 school year) were among Silicon Valley's Native Hawaiian and Pacific Islander students (15%, representing a nearly 11 percentage point decline), Hispanic or Latino (with 18% proficient in 2021-22, 8pp below pre-pandemic levels), and Black or African American (19% proficiency, an 8pp decline since 2018-19). Asian students have the highest rates of math proficiency at 80%, but also experienced a decline from pre-pandemic levels of 5pp.

Eighth-grade math proficiency remains higher in Silicon Valley (48% in 2021-22) compared to San Francisco (40%) and California overall (29%).

SOCIETY

Preparing for Economic Success

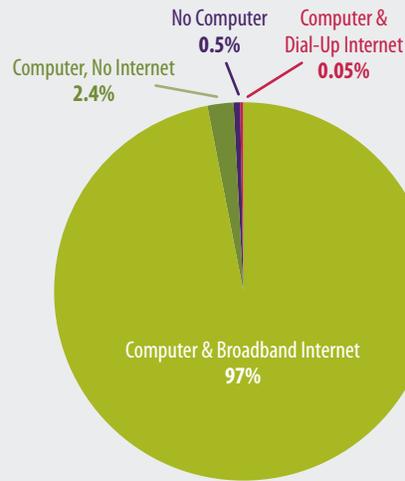
Among the region's children, almost all had a computer and broadband internet access at home in 2021; 2% (nearly 14,000 children) had a computer without an internet subscription, and a fraction of a percent (0.5%, or approximately 3,100 children) had no computer in their home at all.

While 2016-2021 data from the U.S. Census Bureau indicated that nearly all of the region's students had a computer and internet access at home, the pandemic revealed that the digital divide continues to persist in our region. In an effort to close the digital divide, since April 2020 the Santa Clara County Office of Education has provided 20,800 computer devices to students, 14,200 hotspots, and 16,000 students were provided internet service.²⁶ The County of San Mateo also is working to close the divide by expanding high-speed internet to students in rural and low-income communities.

COMPUTER & INTERNET ACCESS

Share of Children With Computers and Internet Access at Home

Santa Clara & San Mateo Counties | 2021



Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

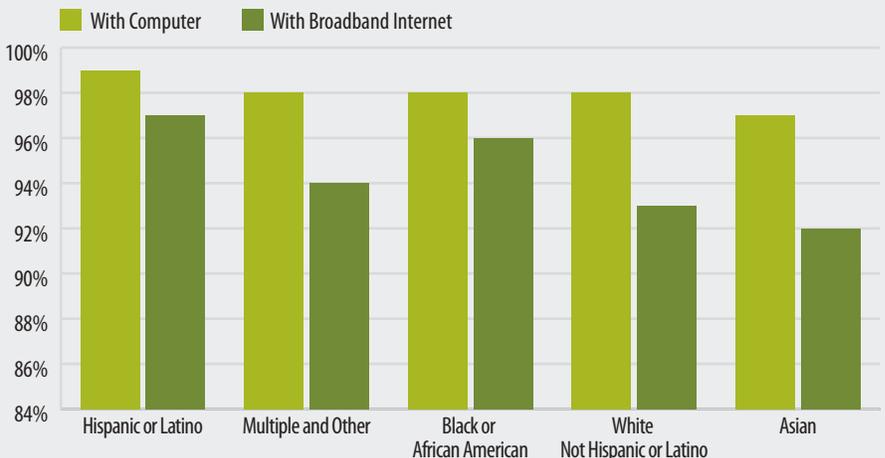
The share of Silicon Valley households with a computer is high across all racial and ethnic groups, with 99% of Asian households having a computer and 97-98% across all other groups.

The share of households with broadband internet varies among Silicon Valley's racial and ethnic groups; only 92% of Black or African American households, and 93% of Hispanic or Latino households have access, compared to 97% of Asian households.

COMPUTER & INTERNET ACCESS

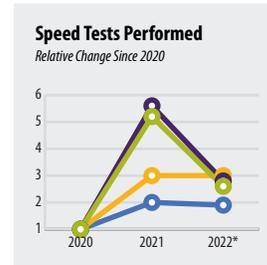
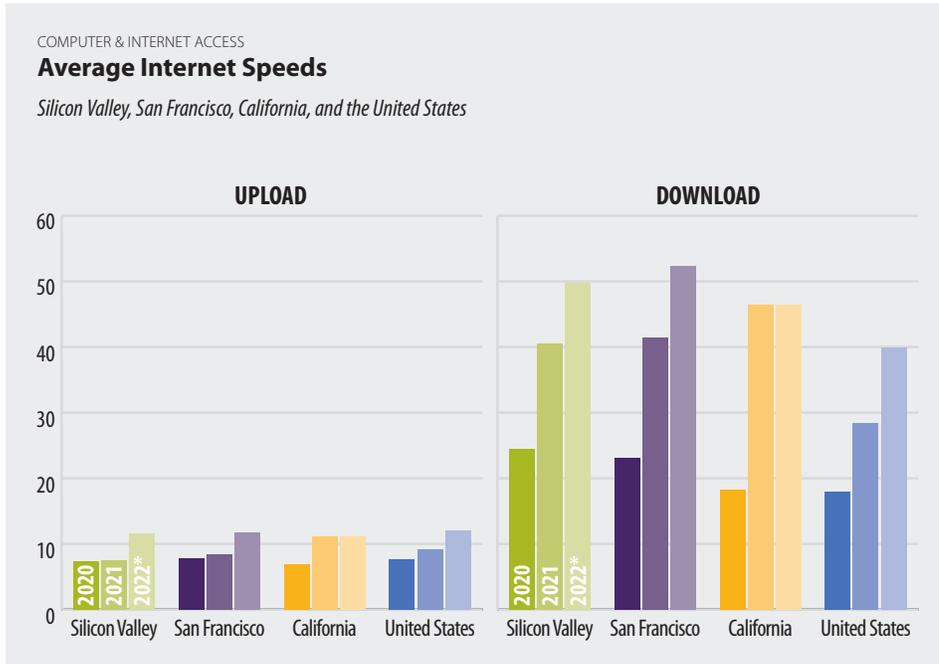
Share of Households with Computers and Internet Access, by Race & Ethnicity

Santa Clara & San Mateo Counties | 2021



Note: Multiple and Other includes American Indian and Native Alaskan, Native Hawaiian and Other Pacific Islander, Some Other Race and Two or More Races.
Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley’s average internet speeds increased in 2022 for both uploads (+53% to 12 Megabits per second) and downloads (+23% to nearly 50 Mbps); they have doubled since 2020.



*through December 7 | Data Source: M-Lab | Analysis: Silicon Valley Institute for Regional Studies

Demand for high-speed internet access increased precipitously in 2021, as indicated by more than a 5x increase in the number of speed tests performed over the prior year. This increase was more pronounced in Silicon Valley and San Francisco than either statewide or throughout the U.S. (2x and 3x increases, respectively).

Download speeds in Silicon Valley and San Francisco are higher than the state and nation as a whole; in contrast, upload speeds are similar. This may be partly due to the region’s high prevalence of home-based businesses and smart home devices — both of which tend to make heavy use of cloud storage and cloud computing (thereby putting heavy loads on upload capacity).

San Mateo County had the highest average download speeds in 2022 of all 58 California counties, at 69 Mbps; Santa Clara County download speeds ranked 19th.

Among Silicon Valley cities in 2022, Atherton had the highest average internet speeds (146 Mbps download / 48 Mbps upload), followed by Menlo Park (93 / 30 Mbps) and San Carlos (90 / 30 Mbps); the slowest average speeds were in Foster City (18 / 4 Mbps) and in parts of unincorporated San Mateo County (La Honda, Loma Mar, and Pescadero).

SOCIETY

Early Education & Care

The decline in preschool enrollment brought about by the pandemic persisted in 2021, with only around half of all three- and four-year-olds enrolled. This is in contrast to the decade prior, during which preschool enrollment increased steadily year after year. All of the enrollment gains between 2010 and 2019 (a seven percentage point increase) were wiped out by the pandemic, and remained well below pre-pandemic levels in 2021. Enrollment levels vary by race and ethnicity as well as by household income, with the latter most pronounced for households with three-year-olds. These observations illustrate the inability of Silicon Valley parents/guardians to keep up with the

steep and precipitous rise in childcare costs (which have nearly doubled at licensed facilities, including preschools, in Silicon Valley since 2010).

While transitional kindergarten — available at no cost to families — has expanded in both San Mateo County and Santa Clara County public schools, it is not yet open to all four-year-olds; that shift will happen, as mandated by state law, by the 2025-26 school year.^a The state is also considering significant (subsidy) reimbursement rate reform,²⁷ which to date has included an exploration into the impacts of systemic inequities on provider pay rates and the cost of care to families in affluent and lower-income neighborhoods.²⁸

In Silicon Valley, the sharp and unrelenting rise in childcare costs has been influenced by policies and other factors, including the growing income/wealth divide — creating a feedback mechanism by which the growing affluence boosts market rates, further stretching the budgets of working parents and widening the divide.

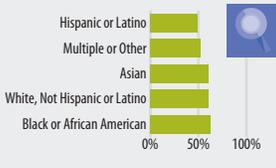
Why is this important?

Early childhood education provides a foundation for lifelong accomplishment. Research has shown that quality preschool-age education is vital to a child's long-term success, earnings, and social-emotional wellbeing. Enrollment at private versus public schools

a. In June of 2021, the state passed the California Budget Act of 2021 (Assembly Bill 128) which provides funding for the roll-out of a Transitional Kindergarten (TK) program beginning in the 2022-23 academic year, with plans to extend TK to the entire population of four-year-olds by 2025-26. AB 128 also provides expanded funding through the California State Preschool Program (CSPP) supporting early learning for three-year-olds. (California Legislative Information, <http://leginfo.ca.gov>).

Share of 3- and 4-Year-Olds Enrolled in School, by Race & Ethnicity

Santa Clara and San Mateo Counties | 2021



Data for three- and four-year-olds by race and ethnicity show some disparities in enrollment by race and ethnicity with 63% of Black or African American three- and four-year-olds enrolled in preschool compared to 61% White, not Hispanic or Latino, and 49% Hispanic or Latino.

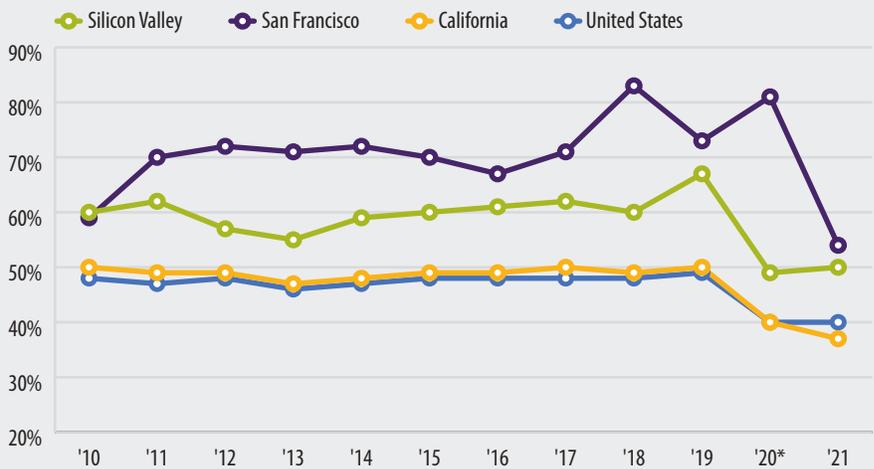
Data for 2021 suggest that the initial decrease in attendance levels caused by the onset of the pandemic persisted through 2021 with a decline in enrollment of 17pp from the 2019 levels. National-level research has indicated three main reasons why parents did not enroll their children in preschool, including lack of in-person options, concerns about the safety of in-person schooling, and cuts in preschool funding.²⁹

Silicon Valley and San Francisco preschool enrollment rates (50% and 54%, respectively in 2021) were higher than both California (37%) and the United States overall (40%). Silicon Valley, the state, and the nation all experienced significant year-over-year declines in enrollment from 2019 to 2020, which persisted through 2021.

PRESCHOOL ENROLLMENT

Share of the Population of 3- and 4-Year-Olds Enrolled in School

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



*2020 data for Santa Clara, San Mateo and San Francisco counties, and California are based on ACS-1 Year microdata with experimental weights. 2020 U.S. data are from the U.S. Census Bureau, Current Population Survey. | Note: Data includes enrollment at both public and private schools. | Data Source: United States Census Bureau, American Community Survey and Current Population Survey | Analysis: Silicon Valley Institute for Regional Studies

In 2021, slightly more than 30,100 three- and four-year-olds attended public and private preschools in Santa Clara and San Mateo Counties, amounting to half of the age group's total population, compared to 37% in California and 40% nationwide.

School enrollment varies by household income level although 82% of all three- and four-year-olds in Silicon Valley live in households that are considered higher income (defined as having household income of \$132,765 and above as calculated based on 501% and above of the federal poverty level for a family of four, which was \$26,500 in 2021).

provides context for issues related to access to quality early childhood education. Reading and writing abilities function as important indicators for a child's future, as they are strongly correlated with continued academic achievement, and are also critical enablers of participation in various enrichment activities.

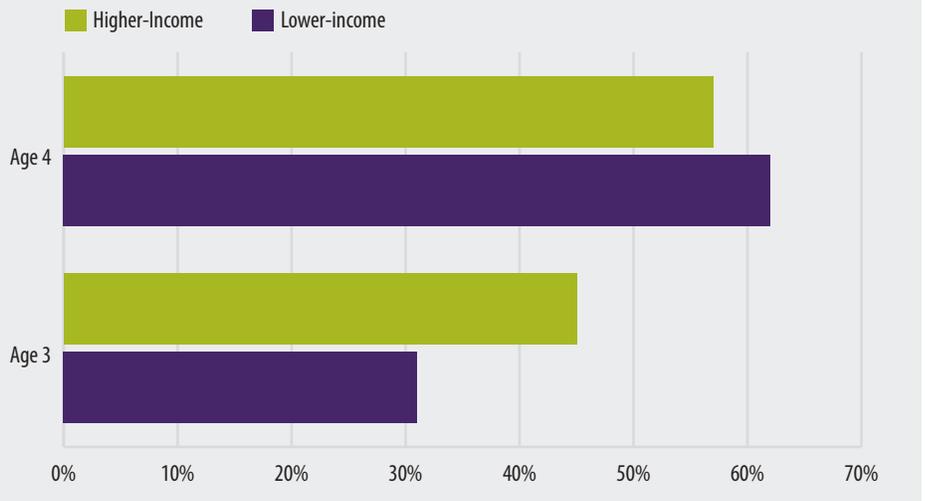
Childcare costs affect the pay rates of our region's valued caregivers (and their ability to afford housing near where they work). They also affect the ability of parents/guardians to access quality care for their children while they work, and whether that poses a financial burden that affects their ability to afford other necessary living expenses.

In 2021, 58% of four-year-olds were enrolled in school compared to 42% of three-year-olds. With the expansion of transitional kindergarten in both San Mateo and Santa Clara counties and in every school district throughout California, the share of four-year-olds is expected to increase as free universal transitional kindergarten is offered to all four-year-olds in California by 2025.^a

a. Assembly Bill 22 provides for free Universal Transitional Kindergarten California for all four-year-olds by 2025-26 school year. (<https://www.santaclarad.usd.org/Page/65>)

PRESCHOOL ENROLLMENT Share of 3- and 4-Year-Olds Enrolled in School, by Household Income Level

Santa Clara & San Mateo Counties | 2021



Note: Data includes enrollment at both public and private schools. | Data Source: United States Census Bureau, American Community Survey and Current Population Survey | Analysis: Silicon Valley Institute for Regional Studies

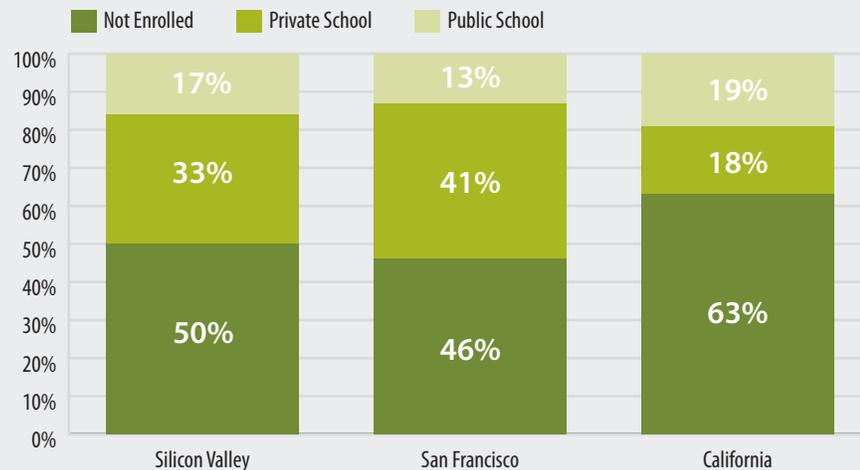
Of the lower-income households with three- or four-year-olds,^a 45% attend school, with higher enrollment at public schools compared to private. Of three-year-olds from lower-income households enrolled in school, 79% attended public school, compared to 22% of students from higher-income households. This same trend exists for enrolled four-year-olds with a slightly higher percentage (32%) of students from higher-income households enrolled in public school.

a. Defined as having household income within 200% of the Federal Poverty Level (FPL).

A greater share of Silicon Valley and San Francisco preschoolers attend private schools (34% and 41%, respectively, in 2021) than in the state (18%); nevertheless, the region's 2019 to 2021 preschool enrollment declines occurred in both public (-34%) and private schools (-19%); San Francisco experienced similar declines in both public (-36%) and private schools (-21%).

PRESCHOOL ENROLLMENT Percentage of the Population 3 to 4 Years of Age, by School Enrollment

Santa Clara & San Mateo Counties, San Francisco, and California | 2021



Note: Data includes enrollment at both public and private schools. | Data Source: United States Census Bureau, American Community Survey and Current Population Survey | Analysis: Silicon Valley Institute for Regional Studies

Percent Change in Enrolled 3- to 4-Year-Olds

2019-2021

	Silicon Valley	San Francisco	California
Share Enrolled	-25%	-25%	-27%
Public School	-34%	-36%	-35%
Private School	-19%	-21%	-14%
Not Enrolled	50%	68%	27%

SOCIETY

Early Education & Care

Third-grade English language arts proficiency in Silicon Valley varies significantly by race and ethnicity, with Asian students having the highest share (80%) meeting or exceeding the standard while only 29% of Hispanic or Latino students and 35% of Black or African American students meeting or exceeding the standard during the 2021-22 academic year.

Silicon Valley has a higher share of third-graders meeting or exceeding the English language arts standard (56% in 2021-22) than San Francisco (52%) or the state as a whole (42%). The share of third-graders meeting or exceeding standards in Silicon Valley is 4 pp lower in 2021-22 than pre-pandemic levels.

Share of Third-Graders Meeting or Exceeding the Standard in English Language Arts

	2019	2022
Silicon Valley	60%	56%
San Francisco	52%	52%
California	49%	42%

Share of Third Graders Meeting or Exceeding the English Language Arts Standard, by Race & Ethnicity and Economic Status

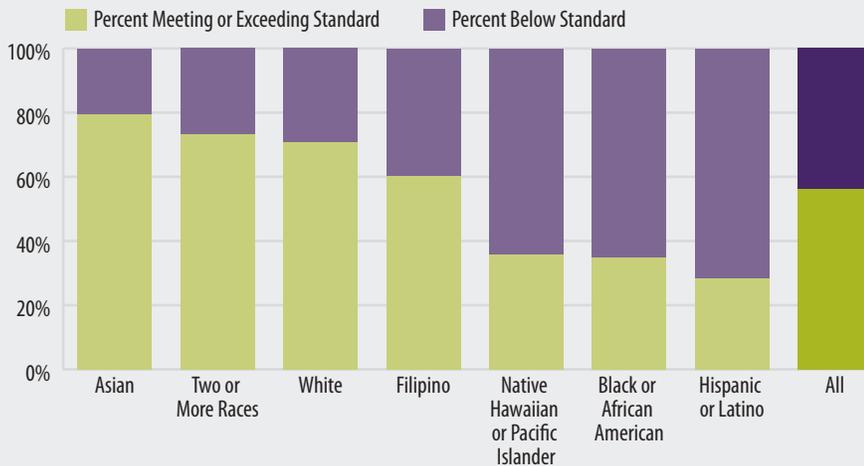
Santa Clara & San Mateo Counties | 2021-22

	Economically Disadvantaged	Not Economically Disadvantaged
Asian	59.0%	83.1%
Two or More Races	45.7%	77.6%
Filipino	45.0%	65.9%
White	42.6%	74.1%
Native Hawaiian or Pacific Islander	31.9%	40.9%
Black or African American	26.7%	45.5%
Hispanic or Latino	20.8%	42.8%
All	28.9%	70.7%

ENGLISH LANGUAGE ARTS PROFICIENCY

Third Grade English Language Arts Proficiency, by Race/Ethnicity

Santa Clara & San Mateo Counties | 2021-22



Note: Data for 2020-21 include a lower share of enrolled students with scores than is typical. | Data Source: California Department of Education, California Assessment of Student Performance and Progress (CAASPP) | Analysis: Silicon Valley Institute for Regional Studies

The share of third-graders meeting or exceeding the English Language Arts Standard is impacted significantly when economic status is taken into account (economically disadvantaged is defined as those qualifying for free or reduced-price school meals). Only 29% of economically disadvantaged students meet or exceed the standard compared to 71% of not economically disadvantaged students. The impact of economic status can be seen across race and ethnic groups.

Nannies in Silicon Valley earned an average of \$21 per hour in 2022; while this amount is well above that of even the highest local city minimum wage ordinance that year (Mountain View at \$17.10³⁰), in-home care providers are unlikely to receive medical coverage³ or other benefits of employment.

a. According to the Economic Policy Institute, 2021 Report "Setting higher wages for child care and home health care workers is long overdue" (data from the 2018-2020 U.S. Census Bureau, Current Population Survey Annual Social and Economic Supplement), less than 21% of childcare workers received employer-sponsored health insurance coverage compared to 52% of workers in the United States overall.

The average costs of an in-home childcare provider in Silicon Valley and San Francisco (\$3,600 and \$4,200 per month, respectively) are higher than the national average (\$3,210) and many other major U.S. cities such as San Antonio (\$2,640), Phoenix (\$3,030), and Portland (\$3,290).

The average annual cost of an in-home childcare provider in Silicon Valley rose by 3% year-over-year in 2022, reaching more than \$43,000 annually for one child (or approximately \$58,000 for two children) – not inclusive of additional employer costs such as household employment taxes, workers' compensation insurance, or tax and payroll services.

Infant care and preschool costs in Silicon Valley are higher in the region's more affluent areas (for both in-home and licensed center/home childcare providers).³¹ This bifurcation affects childcare access for low-income families, as well as compensation for childcare providers — with higher pay rates to those who live in (or are able to commute to) high-cost areas — and illustrates the propagation of systemic inequities through the region's layers of economic well-being.

The cost of full-time childcare at Silicon Valley's licensed preschools (centers) has nearly doubled since the beginning of the Great Recession economic recovery period in 2010 — rising from \$11,100 per year in 2010 to an estimated \$20,500 in 2022.

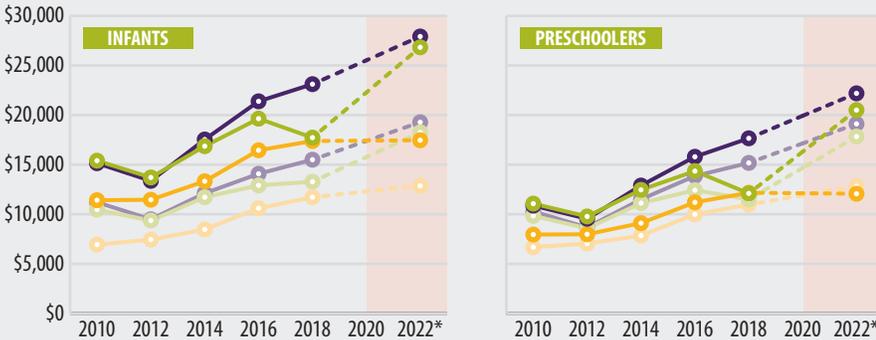
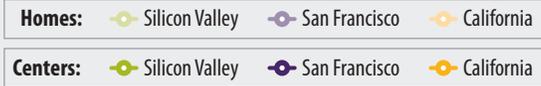
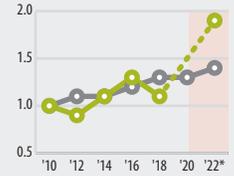
CHILDCARE COSTS

Average Annual Cost of Childcare
at childcare centers and licensed family childcare homes

Santa Clara & San Mateo Counties, San Francisco, and California

The cost of living is a more weighty concern for Bay Area parents and guardians of young children — those with at least one child under age five — than for adults overall, with 83% of survey respondents indicating it was an "extremely serious" problem (compared to 72% of adults overall).

Relative Change in Preschool Costs & Consumer Price Index



% Think the Cost of Living is a Serious Problem

Bay Area, 2022

	Serious	Extremely Serious
Parents of Young Children (<Age 5)	95%	83%
All Adults	92%	72%

Data Source: The Silicon Valley Poll (www.jointventure.org/svpoll)

*2022 based on 2021 market rate, inflation-adjusted to 2022 dollars. | Note: The 2020 Regional Market Rate Survey was delayed in 2020 due to COVID. Centers are licensed child care centers. Homes are licensed family child care homes. | Data Source: California Department of Social Services; California Department of Education; Kidsdata.org | Analysis: Silicon Valley Institute for Regional Studies

The cost of an in-home childcare provider for one child in Silicon Valley was more than twice as much as preschool in 2022 (\$43,200 per year, compared to \$20,500 for preschool at a licensed childcare center); furthermore, even when bundling one in-home provider to care for multiple children, it remains a more expensive option for both infants and preschoolers (even without taking into account potential sibling discounts at childcare centers).

Silicon Valley childcare costs have risen twice as quickly as the regional inflation rate since 2010 (+85% compared to +44% over that 12-year period).

Average childcare costs at licensed care facilities in Silicon Valley were an estimated \$26,830 per year for infants (\$2,236 per month) and \$20,500 per year for preschoolers (\$1,708 per month) in 2022.

Average In-Home Childcare Costs

Costs of Full-Time Care for One Child | 2022

Silicon Valley, San Francisco, California, the United States, and various U.S. cities

	Monthly	Annual
Silicon Valley	\$3,600	\$43,200
San Francisco	\$4,200	\$50,400
California	\$3,600	\$43,100
Portland, OR	\$3,300	\$39,500
Phoenix, AZ	\$3,000	\$36,400
San Antonio, TX	\$2,600	\$31,700
National Average	\$3,000	\$36,100

Data Source: Care.com
Analysis: Silicon Valley Institute for Regional Studies

In-Home Childcare Costs, for 10 Most/Least Expensive Areas

Annual Cost of Full-Time Care

Silicon Valley | 2022

	1 Child	2 Children
Most Expensive: Portola Valley, Atherton, San Gregorio, Woodside, Moss Beach, Los Altos Hills, San Carlos, Menlo Park, El Granada, Palo Alto	\$45,900	\$30,600
Least Expensive: San Martin, Gilroy, Union City, Morgan Hill, Fremont, Mount Hamilton, Newark, Scotts Valley, Milpitas, Coyote	\$40,400	\$26,900

Data Source: Care.com
Analysis: Silicon Valley Institute for Regional Studies

The cost of an in-home childcare provider for one child remains significantly higher in the ten most expensive Silicon Valley cities (\$47,000 annually in 2022) — including affluent places like Atherton, Woodside, and Los Altos Hills — than in the ten least expensive areas (\$39,000 annually). This indicates that the cost of care is dictated to a larger extent by what parents can afford than by the income needs of care providers.

Some savings are possible by hiring one in-home childcare provider to care for multiple children in one household (or participating in a nanny share), amounting to around a 33% multiple-child discount.

SOCIETY

Arts & Culture

Silicon Valley’s creative economy showed continuing growth over the past two years. Arts, Entertainment, and Recreation jobs increased more rapidly over the past year (+25%) compared to overall employment gains, but remained 2,000 jobs below pre-pandemic levels in mid-2022. Trends in Silicon Valley’s arts and culture industries exhibit a continuing pattern of entrepreneurship across many demographic groups, indicating an interest of the region’s population to participate in diverse forms

Arts and culture’s core and supporting industries, combined, contributed an estimated \$2.4 billion in local government (sub-county) tax revenues in 2021; this compares to \$2.0 billion in 2020 and \$1.9 billion in 2019. These totals illustrate how local government tax revenues are positively impacted by arts and culture industries, with labor-intense activities taking place locally (using local suppliers), and including spillover spending at hotels, restaurants, bars, parking, and on other local services.

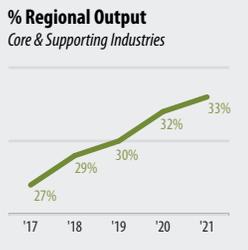
of cultural expressions and experiences. Interest in a multitude of creative and cultural activities is evident by the growth of nonprofit arts and culture organizations in Santa Clara and San Mateo Counties. The number of arts nonprofits has more than doubled over the past decade, eclipsing the total number in San Francisco. Consumer spending on

home-entertainment (such as books, gaming, and streaming services) hit a high point in late 2021, and — though it dropped quickly at the end of the region’s most

intense COVID case surge in early 2022 — remained above pre-pandemic levels at the end of last year.

Arts and culture industries have a direct impact on Silicon Valley’s economic activity in terms of employment and output, as well as relatively significant indirect (through business-to-business spending) and induced impacts (from household spending by employees within the supply chain) on employment, output, and local government tax revenues. Taken together, the impact of arts and culture’s core industries — in terms of direct, indirect, and induced impacts — contributed 5% of the region’s economic output, and \$458

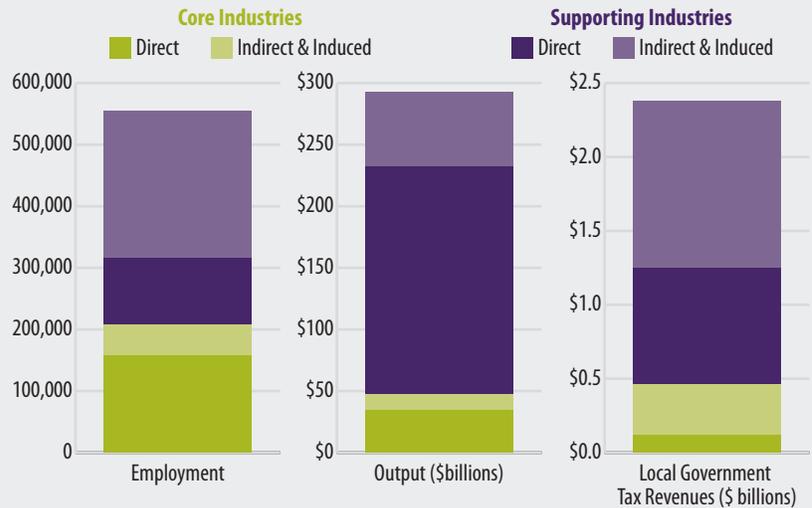
The contribution of arts and culture (core and supporting) industries on Santa Clara and San Mateo Counties’ total economic output rose slightly each year since 2017 (from 27% that year, to 33% in 2021).



ARTS & THE ECONOMY

Economic Impacts of Arts & Culture Industries

Santa Clara & San Mateo Counties, 2021



Note: Core and Supporting industries are listed in Appendix A. | Data Source: IMPLAN | Analysis: Silicon Valley Institute for Regional Studies; SV Creates

Arts and culture industries have a direct impact on Silicon Valley’s economic activity in terms of employment and output, as well as relatively significant indirect (through business-to-business spending) and induced impacts (from household spending by employees within the supply chain) on employment, output, and local government tax revenues.

While the direct impact of core arts and culture industries on the regional economy is relatively small (4% of regional output in 2021), this share rises significantly when including supporting industries (to 25%) and even more when taking into account the indirect and induced economic effects (to 33%).

Core arts and culture industries, in combination with supporting industries (such as musical instrument manufacturing, art support services, and sound recording industries), together contribute \$219 billion to Silicon Valley’s direct economic output; including indirect and induced (through household spending) impacts related to arts and culture’s core and supporting industries, this total rises to an estimated \$292 billion — representing 33% of total regional output.

million in local government tax revenues in 2021. Taken together with the supporting industries, Silicon Valley’s creative economy contributed one third of the region’s economic output (\$292 billion), and \$2.4 billion in local government tax revenues.

Why is this important?

Arts and culture industries play an integral role in Silicon Valley’s economic, social, and civic health. They bring the community together for both enjoyment and enrichment, and contribute significantly to creative thinking, social activity, and quality of life overall. As both producers and employers, nonprofit arts and cultural

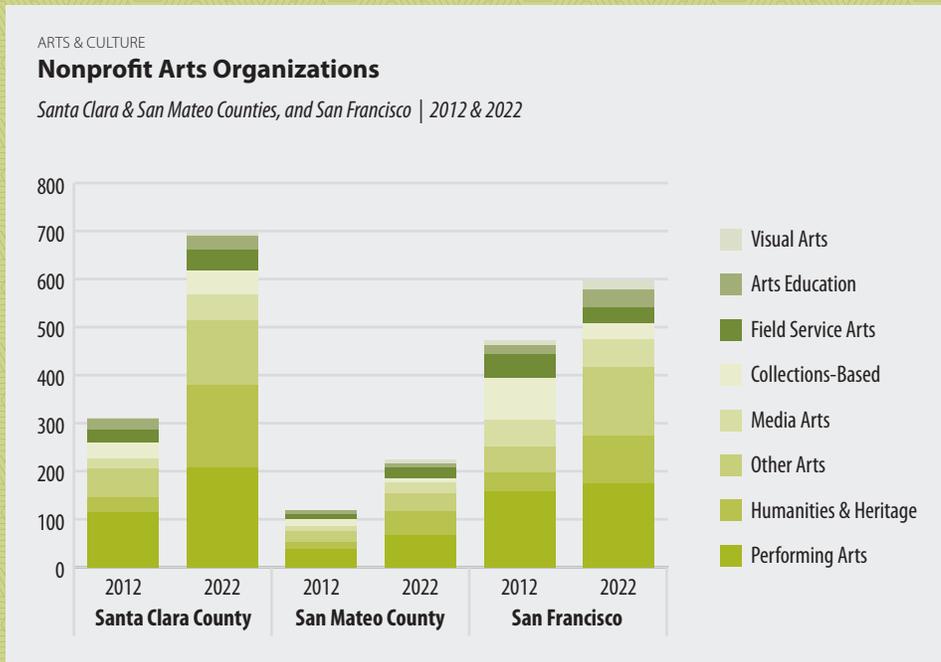
organizations reflect regional interests and diversity. Unique cultural activities help attract and retain residents, as well as support businesses and promote civic connections throughout the community.

The region’s growing number and mix of arts nonprofits are indicative of its ability to organize and generate cultural and creative activities for its increasingly diverse community. Event attendance and spending on arts and cultural activities reflect the public’s interests; they help sustain the organizations and their employees, and indirectly support local retail, hotel, restaurant, and other economic activity within downtowns and neighborhood centers.

Artists and creative workers were among those most severely affected by pandemic-related unemployment and income losses, which exhibited large disparities by race and ethnicity on the national level.^a Tracking spending on arts, entertainment, and recreation as well as industry employment levels provide information about the recovery of this sector.

Whereas in 2012 there were significantly more nonprofit arts organizations in San Francisco than either Santa Clara or San Mateo Counties (472, compared to 312 and 119, respectively), by 2019 that was no longer the case. This shift was largely due to an increase in Humanities & Heritage organizations in Santa Clara County, as well as newly-founded organizations in Performing and Other Arts.

a. According to the Americans for the Arts, COVID-19 Impact Survey for Artists and Creative Workers, Black, Indigenous, (and) People of Color (BIPOC) organizations reported more financial difficulties with returning to in-person activities than non-BIPOC organizations.



The number of Arts & Culture nonprofits in Santa Clara and San Mateo Counties have more than doubled over the past decade, from 431 in 2012 to 921 in 2022 (+114%); this compares to a growth in the number of San Francisco Arts & Culture nonprofits of +26% over that same period. Santa Clara County alone continues to eclipse San Francisco in total number of arts nonprofits by more than 100 organizations.

Data Source: Americans for the Arts; National Center for Charitable Statistics; Internal Revenue Service
Analysis: SV Creates; Silicon Valley Institute for Regional Studies

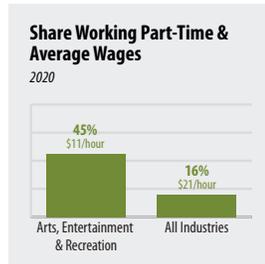
The impacts of arts and culture on Silicon Valley’s economy are categorized into core and supporting industries. The core industries – such as performing arts companies, independent artists/writers/performers, museums, and zoos – accounted for 28% of total arts employment, \$46 billion in economic value (output), and \$458 million in local government tax revenues.

Among the 921 Santa Clara and San Mateo County nonprofit arts and culture organizations in 2022, there were 55 with annual revenues over \$1 million. This represents a 28% increase over the prior year; however, pre-pandemic totals were nearly double that number (103 in 2019). Among the nonprofits with the highest revenues were Minority Television Project (owner of the education television station, KMTP), San Jose Museum of Art, The Tech Interactive, the School of Arts and Culture at the Mexican Heritage Plaza, the Computer History Museum, Theatretworks Silicon Valley, the Children’s Discovery Museum of San Jose, and CuriOdyssey (children’s museum and zoo).

SOCIETY

Arts & Culture

Silicon Valley employment in Arts, Entertainment & Recreation registered a loss of 10,710 jobs in 2020, but by mid-2022 had regained 81% of those losses.



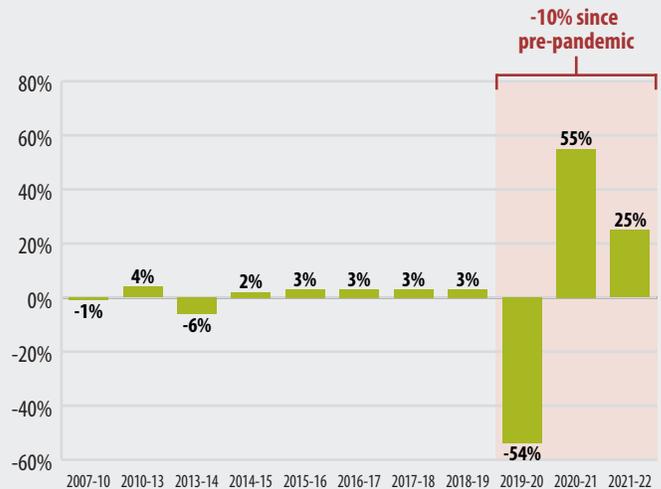
A much larger share of Silicon Valley's Arts, Entertainment, and Recreation jobs are filled by part-time employees (46%) than across all industries (16%). Most of these part-time employees work very limited hours (an average of 15 per week), and their pay rates are lower (\$11.50/hour, compared to \$20.20 across all industries in Santa Clara and San Mateo Counties).^a

a. Based on data from the U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates.

ARTS & CULTURE

Percent Change in Arts, Entertainment & Recreation Employment

Silicon Valley

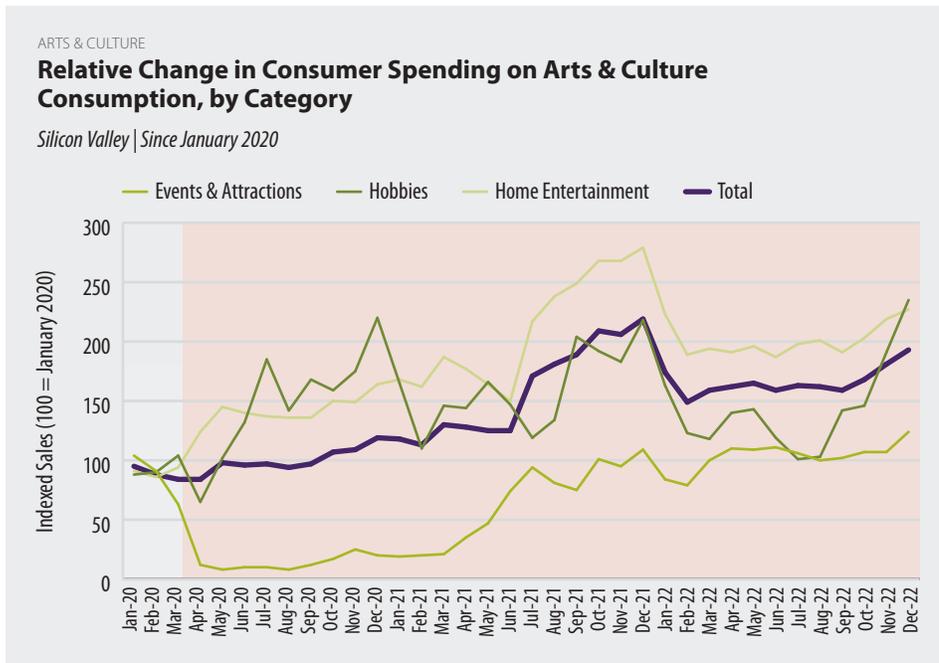


Note: Includes jobs in arts, entertainment, and recreation. | Data Sources: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages; JobsEQ; United States Census Bureau, American Community Survey PUMS | Analysis: BW Research; Silicon Valley Institute for Regional Studies

By June 2022, Silicon Valley's arts and culture employment reached nearly 18,000, remaining 2,000 jobs short of pre-pandemic (2019) levels.

Arts, Entertainment & Recreation jobs in Silicon Valley grew by 25% year-over-year, reaching nearly 18,000 in mid-2022; this compares to a growth of 5% in Silicon Valley overall, across all industries.

Spending on in-person events and attractions — which had risen precipitously in 2021 over the low 2020 figures — continued to rise in 2022 (up 52% year-over-year).



Note: Hobbies include arts and crafts, and music. | Data Source: Earnest Research | Analysis: Silicon Valley Institute for Regional Studies

Percent Change in Arts & Culture Spending 2020-2022	
Silicon Valley	+65%
California	+54%
United States	+35%

Silicon Valley experienced a notable “bump” in consumer spending on arts and culture items in the summer and fall of 2021, driven primarily by spending on home entertainment. This rise coincided with two subsequent waves of COVID outbreaks, and ended when cases came back down.

Spending on Home Entertainment such as music, books, gaming, video streaming services, news, and print media — which was strong throughout 2021 — fell slightly in 2022 but remained higher than pre-/early-pandemic levels (2020).

Silicon Valley consumer spending on events and attractions (such as movie theaters, theme parks, and stadiums/arenas) nearly quadrupled since 2020 lows, outpacing gains throughout the state (3.3x) and nation (2.6x) overall.

SOCIETY

Arts & Culture

The number and diversity of newly-formed arts organizations in Silicon Valley representing BIPOC^a communities continued to grow faster than those with Western European art forms as their primary focus; the growing diversity of these organizations is becoming more reflective of the region's highly diverse population.

a. Black, Indigenous and People of Color (BIPOC). Cultural categories considered BIPOC include all categories with the exception of Eastern and Western European, Religious, and LGBTQ+ groups.

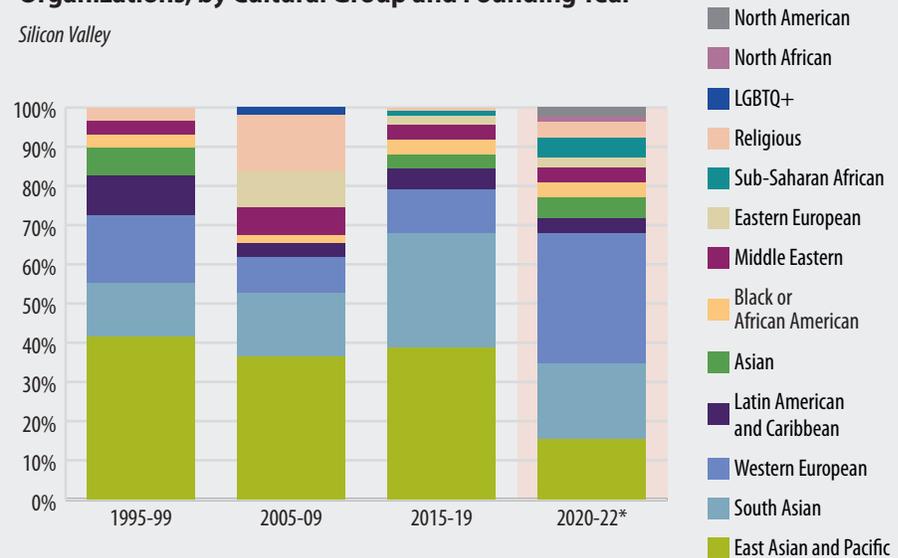
Interest in a multitude of creative and cultural activities is evidenced by the growth of nonprofit Arts, Culture, and Humanities (arts) organizations. Santa Clara county continues to eclipse San Francisco in total number of arts nonprofits by more than 100 organizations.

Silicon Valley is experiencing a growing number of small, voluntary community arts organizations.

ARTS & CULTURE

Organizations, by Cultural Group and Founding Year

Silicon Valley



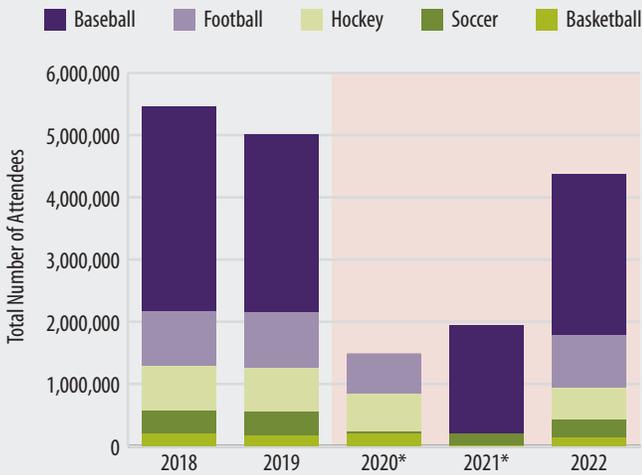
*limited sample size (n=78) | Note: Organizations by year founded. | Data Source: SV Creates | SV Creates; Analysis: Silicon Valley Institute for Regional Studies

The San Jose Sharks rebounded from pandemic limitations on spectators, with more than 500,000 home-game attendees in the 2021-22 season. While this represented a large year-over-year increase, it was still 23% below 2018-19 season attendance.

During the 2021-22 season, attendance totaled 4.4 million at home games for Silicon Valley's major collegiate and professional sports teams.

ARTS & CULTURE
Sporting Event Home Game Attendance

Major Silicon Valley Collegiate and Professional Teams



% Change in Home Game Attendance

2021-22, from 2018-19 season

Collegiate	-59%
Professional	-12%

The San Francisco 49ers home game attendance neared pre-pandemic levels last season, reaching more than 533,000 (compared to more than 553,000 during the 2019 season).

Collegiate sports gained attendance at home games over the prior year, but remained at less than half of pre-pandemic levels.

As is typical among Silicon Valley's major collegiate and professional sports, the lion's share of home-game attendance was at baseball games (59%) during the 2022 season – primarily the San Francisco Giants, which attracted nearly 2.5 million attendees that year.

*attendance numbers not reported for all teams in the 2020-21 seasons due to severely limited attendance/capacity requirements during the pandemic. | Data Sources: National Collegiate Athletic Association (NCAA); ESPN; WorldFootball.net; The Baseball Cube; San Jose Sharks; StatBroadcast; San Jose State Spartans; Baseball Reference | Analysis: Silicon Valley Institute for Regional Studies

SOCIETY

Quality of Health

For COVID-19 Metrics, see pages 10 and 11.

Health disparities among Silicon Valley residents by race and ethnicity are evident with respect to COVID-19, and also across a variety of health outcomes. Black women in Santa Clara and San Mateo counties are at a higher risk of dying from pregnancy-related complications (4.5 times more likely than those of other races), having an infant die before their first birthday (3.5 times more likely than White women and nearly three times the overall rate), and 36 percent more likely to deliver a first baby via C-Section despite low risk-factors.

Socioeconomic factors have measurable impacts on health as well, such as the share of adults at a healthy weight for their

height — 45% at a health Body Mass Index for moderate- to high-income adults (with incomes exceeding 300% of the poverty level) compared to 39% of those at or below the poverty level.

Mental health continues to be a struggle for the region's residents. Nearly one-third of Silicon Valley's middle- and high-school students reported experiencing chronic sadness and/or hopelessness, and the share who report having considered suicide is alarmingly high, particularly for female students (16%), those who do not identify as heterosexual (36%), and the region's approximately 500 transgender/transgender-questioning youth (38%). One in five Bay

Area residents experience anxiety and/or depression most days of the week, with rates particularly high among young adults (ages 19-29), non-Hispanic Black, and Hispanic or Latino residents; rates are the highest for those who struggle financially.

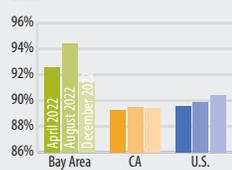
COVID-19 continues to be a leading cause of death in Silicon Valley, ranking 6th in 2022 behind cancer, heart disease, strokes, Alzheimer's, and accidents (down from the third leading cause in 2021).

Why is this important?

Early and continued access to quality, affordable health care is important to ensure that Silicon Valley's residents are thriving. Given

Health insurance coverage for the working age population has increased significantly since 2013, influenced by the availability of coverage through the Affordable Care Act. In Silicon Valley, the share of 18- to 64-year-olds with health insurance rose from 86% in 2013 to 94% in 2016, and increased to an estimated 95% in 2021. For unemployed workers, the increase in health insurance coverage rates has been even more dramatic, with a 24 percentage point increase between 2013 and 2021.

% Adults with Health Insurance Coverage
2022

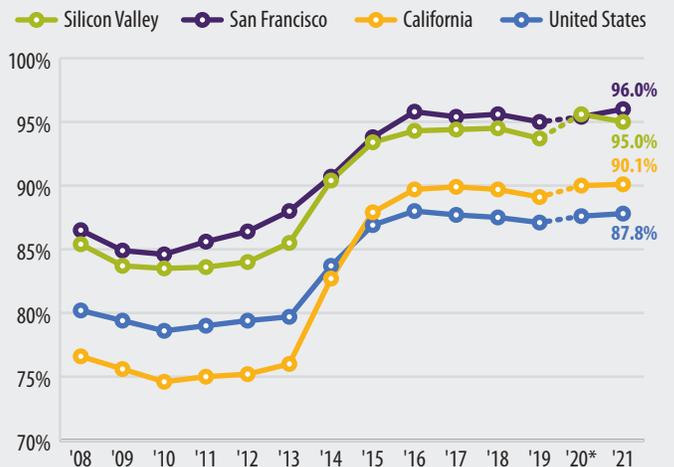


Little change was observed in the health insurance coverage status of the working age population (ages 18-64) overall in 2021 compared to the prior year, with less than a 1% change in Silicon Valley, San Francisco, California, and the United States overall. However, coverage rates varied year-over-year by employment status, with a two percentage point decline from 2019 to 2021 for unemployed residents in Santa Clara & San Mateo Counties.

HEALTHCARE

Share of the Population Ages 18-64 with Health Insurance Coverage

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



*2020 estimate from 1-year American Community Survey microdata with experimental weights.
Data Source: United States Census Bureau, American Community Survey & Household Pulse Survey | Analysis: Silicon Valley Institute for Regional Studies

the high cost of healthcare, individuals with health insurance are more likely to seek routine medical care and preventive health screenings.

Being at an unhealthy weight increases the risk of many diseases and health conditions, including Type 2 diabetes, hypertension, coronary heart disease, stroke, and some types of cancers — all of which are among Silicon Valley’s leading causes of death. These conditions decrease residents’ ability to participate in their communities, may increase medical expenses, and have significant economic impacts on the nation’s healthcare system as well as the overall economy.

Hypertension, in particular, is responsible for one out of every three deaths in

California and is a risk factor for a number of other diseases. Additionally, the prevalence of hypertension has been closely tied to inequities in access to healthcare throughout the state.³²

Improving the wellbeing of mothers, infants, and children is an important public health goal for any region. Maternal and infant health statistics provide information about how well we are preparing the next generation of healthy young residents, and shed light on outcomes linked to systemic racism.³³ Timely childhood immunizations promote long-term health, save lives, prevent significant disability, and reduce medical costs. Cesarean Sections (C-Sections) are a necessary intervention that can be life-saving, in

many cases; overuse of non-medically indicated C-Sections, however, have been documented in wealthy communities around the world and have not been linked to added health benefits to mothers or babies.³⁴

Mental and emotional health of individuals is essential to community wellbeing; the circumstances of the pandemic — such as financial hardships, loneliness and isolation, among many other challenges — may have contributed to the share of people experiencing symptoms of anxiety and/or depression.

In 2021, an estimated 95% of Silicon Valley’s 18- to 64-year-olds were covered by health insurance (compared to 96% in San Francisco, 90% in California, and 88% in the U.S. as a whole).

Percentage of Individuals Ages 18+ with Health Insurance, by Employment Status
2021

	Unemployed	Employed	Not In Labor Force
Silicon Valley	89%	94%	93%
San Francisco	88%	97%	93%
California	84%	91%	88%

Change in the Percentage of Individuals Ages 18+ with Health Insurance, by Employment Status
Santa Clara & San Mateo Counties | 2019-2021

Unemployed	-2%
Employed	0%
Not in Labor Force	+2%

Seventy-nine percent of respondents to the 2022 Silicon Valley Poll believe the cost of healthcare is a serious problem.

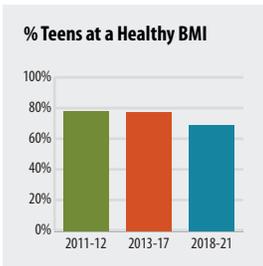
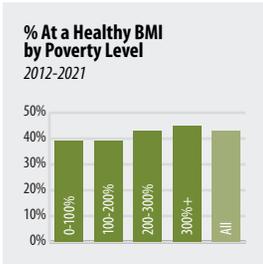
California, and national data show a slight increase in health insurance coverage for adults in 2022 in the range of less than 1% year-over-year, whereas the Bay Area experienced a 1% decline in coverage rates in 2022. This change is consistent with the early-release data from the National Center for Health Statistics³⁵ for July 2021 to September 2022, which indicated no significant difference in coverage over that 15-month period.

The percent of unemployed individuals ages 18 and over with health insurance decreased by 2pp from 2019 (91%) to 2021 (89%) in Silicon Valley, while the percentage of employed with health insurance stayed constant at 94%, and those not in the workforce increased by 2pp to 93%.

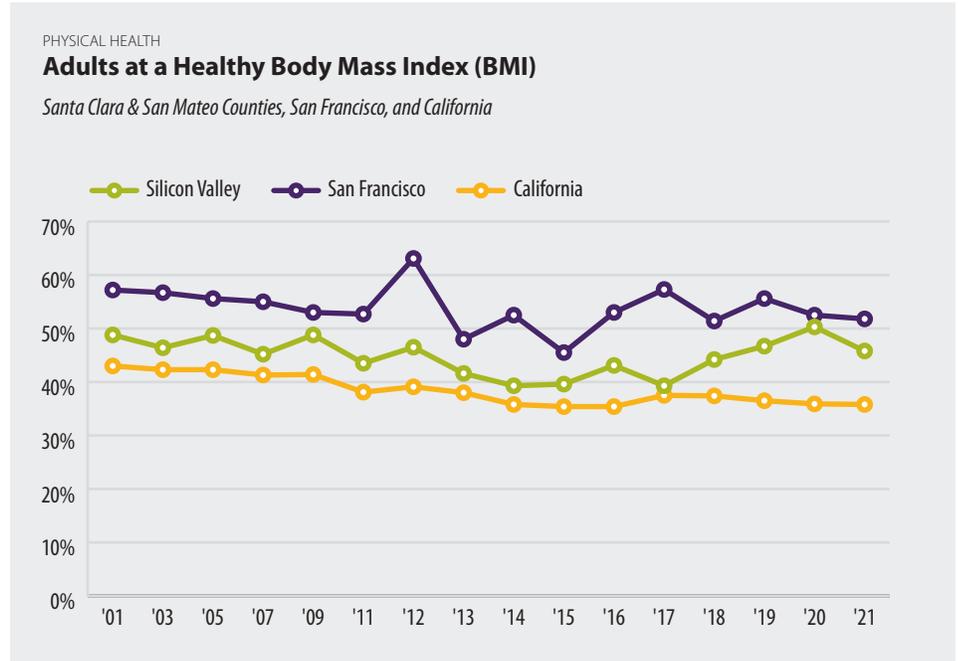
SOCIETY

Quality of Health

A healthy Body Mass Index (BMI) is more common among those at higher income levels in Silicon Valley. Nearly half (45%) of all adults with incomes greater than three times the poverty rate are at what is considered a healthy BMI, compared to 39% of those at or below the poverty level.



Silicon Valley adults seem to have improved their physical health *en masse* during the pandemic, with a noticeable bump in the share of adults at a healthy BMI (from 39% in 2017 to more than 50% in 2020).



Data Source: California Health Interview Survey | Analysis: Silicon Valley Institute for Regional Studies

A smaller share of Silicon Valley teens are at a healthy BMI than prior to the pandemic — down approximately nine percentage points to 69% in 2018-21.

The majority of Silicon Valley teens were at a healthy BMI in 2018-21 (69%), although the share was significantly lower than it was over the prior seven academic years (78%).

The share of adults at what is considered a healthy Body Mass Index (BMI) was higher in San Francisco (52%) than in Silicon Valley (46%) or statewide (36%) in 2021.

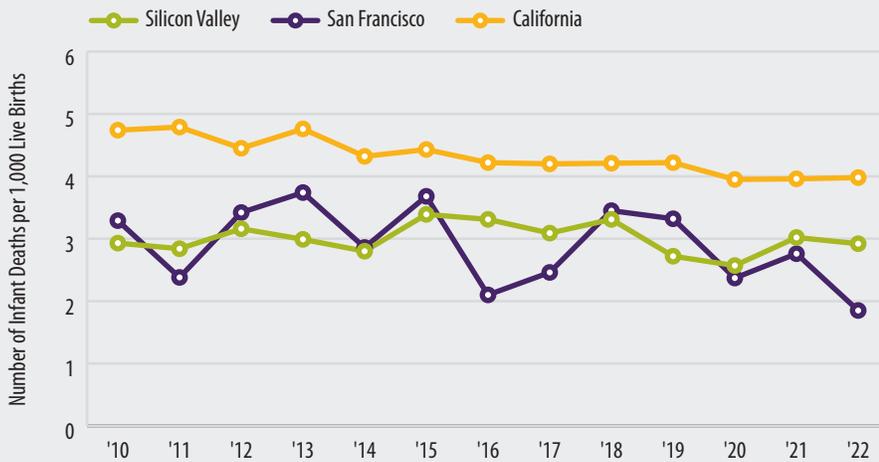
At the national level, Black or African American women were more than three times as likely to die in childbirth with a rate of 44 per 100,000 in 2019. During the pandemic, Black women had the highest maternal mortality rates across racial and ethnic groups and experienced the largest increase from 2019 levels (55.3 per 100,000 in 2020 and 68.9 per 100,000 in 2021), primarily attributed to COVID-19 infections.³⁷

Over the 13-year period between 2007 and 2020, Black or African American women in Silicon Valley were three times more likely than White women (and nearly three times the overall rate) to have an infant die before the infant's first birthday.

MATERNAL, INFANT, AND CHILDREN'S HEALTH

Infant Mortality Rate

Santa Clara & San Mateo Counties, San Francisco, and California



Note: Unless specified as Hispanic or Latino, all sub-populations are not Hispanic or Latino. | Data Sources: U.S. Department of Health and Human Services, Centers of Disease Control and Prevention (CDC); California Department of Public Health | Analysis: Silicon Valley Institute for Regional Studies

Compared to regional averages, Silicon Valley's Black or African American women are four times more likely to die of pregnancy-related complications, three times as likely to have an infant die before his or her first birthday, and 36% more likely to deliver their baby via C-Section despite low-risk factors.

Black or African American women in the greater Silicon Valley region die of pregnancy-related complications at significantly higher rates than women of other races/ethnicities (58 per 100,000 live births, compared to 13 per 100,000 for non-Black or African American women); this disparity is slightly more pronounced in Silicon Valley than in the state overall. National statistics reveal similar racial disparities in maternal health. A recent Kaiser Family Foundation study found that broad social and economic factors, in addition to access to health insurance coverage and care, and structural and systemic racism are primary drivers for maternal and infant health.³⁶

Infant Mortality Rate by Race & Ethnicity

Number of Infant Deaths per 1,000 Live Births
Santa Clara & San Mateo Counties | 2017-2020

Black or African American	8.2
Multiple, Other or Unknown	5.0
Hispanic	3.0
White	2.3
Asian	2.2
Overall	2.9

Maternal Mortality by Race & Ethnicity

Number of Deaths Related to Pregnancy, Childbirth, and the Postpartum Period Per 100,000 Live Births (1999-2020)
Greater Silicon Valley*

Black or African American	58
Hispanic or Latino	14
Asian or Pacific Islander	14
White	11
Overall	15

*Santa Clara and San Mateo Counties, Alameda County, and San Francisco

Silicon Valley's infant mortality rate (2.92 per 1,000 live births) was higher than in San Francisco (1.85 per 1,000) and lower than California overall (3.98 per 1,000) in 2022. These rates are all lower than the 2021 United States average of 5.4 per 1,000 live births, and significantly lower than the world average that year of 28.4 per 1,000 live births (ranging from the World Bank Lower Income Economies at 47.4 per 1,000 live births to the World Bank High Income Economies at 4.1 per 1,000 live births).³⁸

In 2021, the C-Section rate in Silicon Valley (26.3%) declined to its lowest level since 2005 (ranging from 13.6% to 31.1% at the region's individual hospitals^a). This compares to 22.8% (the lowest since before 2003) in San Francisco, and 27.8% statewide (the lowest rate since 2003). On the national level, in 2022 the cesarean rate was 32.2%,⁴⁰ significantly more than the federal Healthy People 2020 goal of 23.9% for low-risk deliveries.

a. Including 12 birthing centers throughout the city-defined Silicon Valley region, according to data compiled by The Leapfrog Group (www.hospitalsafetygrade.org) for Fall 2022 as part of The Leapfrog Hospital Safety Grade public service effort to drive "quality, safety, and transparency in the U.S. health system.

MATERNAL, INFANT, AND CHILDREN'S HEALTH

Cesarean Section Rate

Santa Clara & San Mateo Counties, San Francisco, and California



Note: C-Section data by primary (first) and repeat were not available prior to 2016. | Data Source: U.S. Department of Health and Human Services, Centers of Disease Control and Prevention (CDC) | Analysis: Silicon Valley Institute for Regional Studies

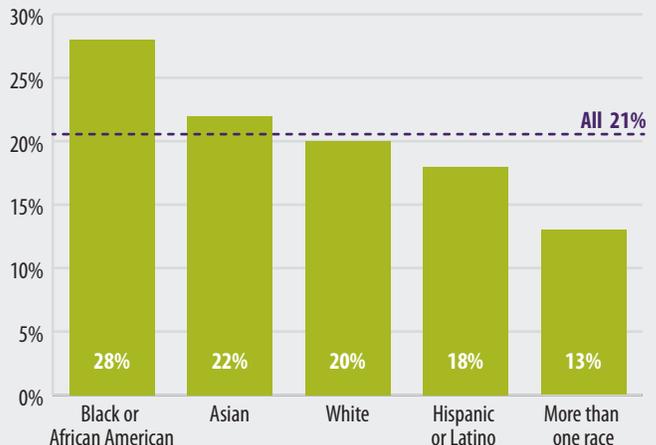
Black or African American women delivering their first at-term baby in Silicon Valley experience C-Sections at a rate (28%) that is significantly higher than women of other races and ethnicities (18-21%), despite low-risk factors. These findings are similar to those of a statewide study, which indicated a C-Section rate of 27.8% for Black women, compared to 24.4% for Asian/Pacific Islanders, 22.8% for Latina and White women for low-risk first-births.³⁹

MATERNAL, INFANT, AND CHILDREN'S HEALTH

Cesarean Section Rate, by Race and Ethnicity

First Birth, Low-Risk, at Term

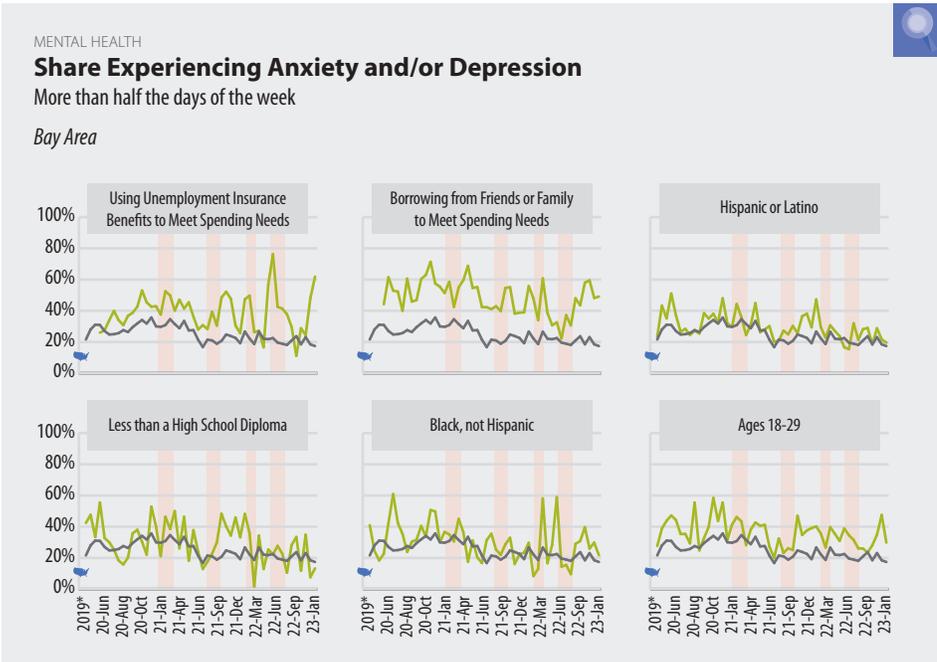
Santa Clara & San Mateo Counties | 2016-2021



Data Source: U.S. Department of Health and Human Services, Centers of Disease Control and Prevention (CDC) | Analysis: Silicon Valley Institute for Regional Studies

The prevalence of anxiety and/or depression among the Bay Area population overall leveled off around April 2021, and has remained within +/- five percentage points since then. In comparison, 2020 and early 2021 spikes reached as high as +10 percentage points from the 2022 average (21%).

On average in 2022, one in five Bay Area residents experienced anxiety and/or depression most days of the week, with symptoms ranging from feeling nervous or on edge, not being able to stop or control worrying, having little interest or pleasure in doing things, and feeling down, depressed, or hopeless. This share was down from 24% in 2021, and 30% in the second half of 2020.



*United States (2019) from Terlizzi EP, Schiller JS. Estimates of mental health symptomatology, by month of interview: United States, 2019. National Center for Health Statistics. March 2021. | Note: Shaded areas indicated local surges in COVID-19 case rates. Bay Area includes San Francisco, Alameda, Marin, Contra Costa, and San Mateo Counties. | Bay Area includes San Francisco, Alameda, Marin, Contra Costa, and San Mateo Counties. | Data Sources: U.S. Census Bureau, Household Pulse Survey; National Center for Health Statistics | Analysis: Silicon Valley Institute for Regional Studies

Bay Area residents who borrow money from friends and/or family to address immediate spending needs have exhibited chronically elevated rates of anxiety and/or depression.

Rates of anxiety and depression have spiked as high as 58% of the Bay Area's young adults (ages 18-29) September 2020, which coincided with the early part of a new school year for many of them; September of the following year saw a spike in anxiety/depression levels as well, but to a lesser extent (40%).

Relieving near-term financial burdens facing Bay Area residents may alleviate mental health issues to a large degree. This is supported by the increasing rates of self-sufficiency (and decline in poverty) due to the pandemic stimulus payments alone, and the high rates of anxiety and depression among Bay Area residents relying on public or private financial assistance to meet transient, short-term needs.

Rates of anxiety and/or depression since the early months of the pandemic have been noticeably elevated for young adults (ages 19-29), non-Hispanic Black, and Hispanic or Latino residents. The highest rates, however, were noted among those who required sources of income or savings for immediate spending needs, including those using unemployment insurance benefits (spiked as high as 76% in April 2022 – right at the beginning of a months-long COVID surge).

SOCIETY

Quality of Health

One in eight students in middle or high school reports that they have considered suicide;^a this share is higher for female students (16%, compared to 7% of males), those who identify as Not Straight-Gay/Lesbian/Bisexual (36%, compared to 8% for Straight/Heterosexual students), and the region's approximately 500 transgender/transgender-questioning youth (38% overall, and as high as 57% for one subgroup).

a. Santa Clara County includes nontraditional schools only (public school data were not available). San Mateo County data include grades 7, 9, and 11, as well as nontraditional schools for the 2020-21 school year.

The share of middle and high school students who have considered suicide is alarmingly high, rising in each biannual survey and reaching 16% immediately prior to the pandemic (driven up primarily by 9th and 11th grade students); the pandemic-period testing, however, revealed a slight decrease in this share, which was just below 12% in 2019 through 2021.

Suicides by Santa Clara and San Mateo County residents ages 15-24 increased in 2021 and again in 2022 (reaching a total of 30 suicides in the first 11 months of the year alone).

Suicides by Silicon Valley's youngest residents (under age 15) are rare, with only suppressed values in the combined 43-year dataset. However, there were a total of 30 suicides by children ages 5 to 14 between 1999 and 2020, and 34 in the 20 years prior to that.^a In 2021 and 2022, data indicated at least one suicide in that age group during each year, but the exact number was suppressed (shown as <11).

a. Data back to 1979 accessed through the Centers for Disease Control and Prevention, National Center for Health Statistics, Underlying Cause of Death data (CDC WONDER).

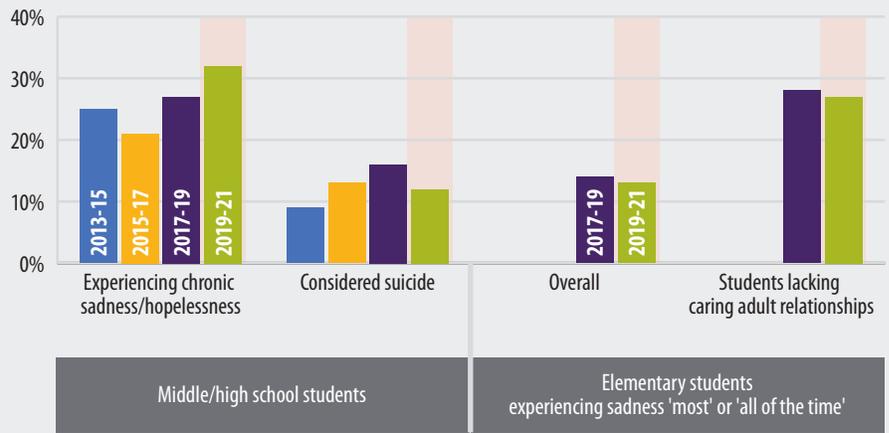
Nearly one-third of the region's students (32%) in 2019-21 experienced chronic sadness and/or hopelessness that lasted for periods of two or more weeks at a time, and disrupted their ability to do usual activities.

Whether or not a student has caring adult relations appears to be a major factor in determining their levels of sadness on a regular basis. In the 2019-21 testing period, the share of all students experiencing sadness most or all of the time was 13%, but increased to 27% for the more than 2,400 students who indicated that caring adult relationships were only present in their life some of the time or less.

MENTAL HEALTH

Students' Mental Health

Santa Clara & San Mateo Counties

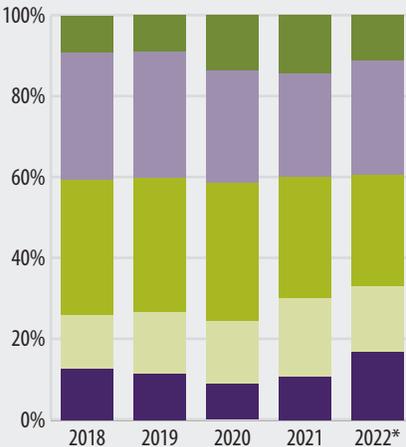


Data Source: CalSCHLS | Analysis: Silicon Valley Institute for Regional Studies

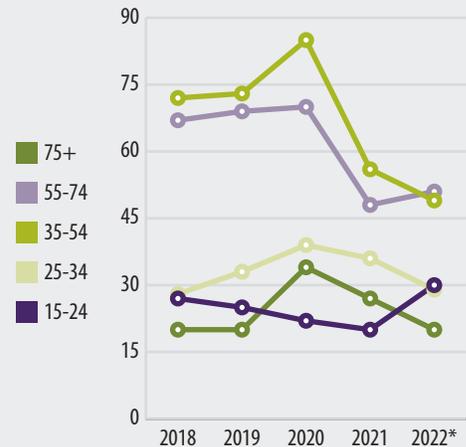
MENTAL HEALTH

Deaths by Suicide, by Age Group

Santa Clara & San Mateo Counties



The two age groups for which there was an increase in suicides in 2020 were in the core working-age group (ages 35-54) and the oldest group (ages 75+).



*data through November 2022 | Data Source: California Department of Public Health | Analysis: Silicon Valley Institute for Regional Studies

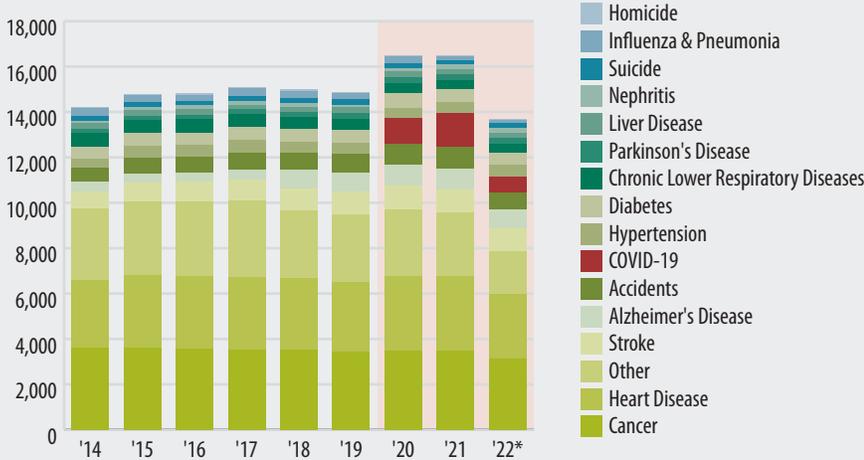
Silicon Valley's Black or African-American residents are not only more likely than other racial and ethnic groups to die of hypertension, they have significantly higher rates of accidents, diabetes, suicide, and cancer-related deaths; they are also nineteen times more likely to die of homicide than Asian residents, eight times more likely than White residents, and three times more likely than Hispanic residents.

COVID-19 was the sixth leading cause of death in Silicon Valley last year — down from the third leading cause in 2021.

Over the past nine years, nearly a quarter (23%) of all Santa Clara and San Mateo county residents' deaths have been cancer-related.

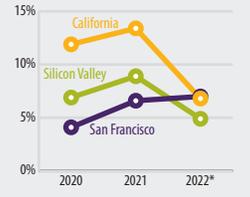
DEATHS
Deaths, by Cause

Santa Clara & San Mateo Counties



The share of Santa Clara and San Mateo County deaths attributed to cancer and heart disease dipped slightly (by one to two percentage points) in 2020 and 2021, then came back up in 2022; this is likely due to comorbidities with COVID listed as the primary cause of death.

% Deaths from COVID



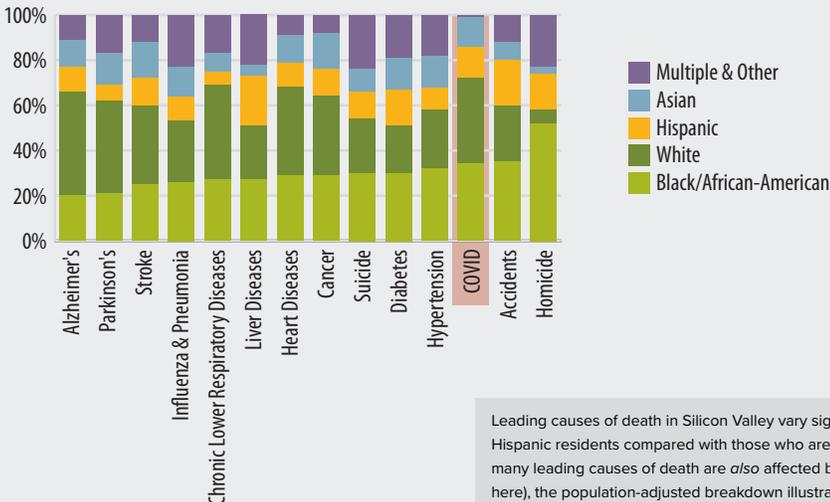
Accidents were the cause of more Santa Clara and San Mateo County deaths in 2020 and 2021 than during a typical year, with more than 900 deaths during each of those years (compared to an average of just over 700 during each of the six years prior). In 2022, there were 735 accident-related deaths of Santa Clara or San Mateo County residents.

The leading causes of death for Silicon Valley residents of all ages in 2022 were — in order of prevalence — cancer, heart disease, strokes, Alzheimer's, accidents, and COVID-19.

*data through November 2022 | Data Sources: California Department of Public Health; California Health and Human Services Agency | Analysis: Silicon Valley Institute for Regional Studies

DEATHS
Population-Adjusted Share of Deaths by Leading Causes, Race & Ethnicity

*Santa Clara & San Mateo Counties | 2020-2022**



The crude rate of deaths caused by hypertension or hypertensive renal disorders in Silicon Valley had more than quadrupled between 2000 and 2017 (to 20 per 100,000) and remained at approximately 20 per 100,000 in 2022. Hypertension deaths are disproportionately higher among Silicon Valley's Black or African-American population; over the three-year period between 2020 and late 2022, Black or African-American residents accounted for nearly one-third (32%) of regional population-adjusted^a per hypertension deaths.

a. Population-adjustment takes into account the population of each racial or ethnic group within the region, and then produces a breakdown of deaths by cause if those racial/ethnic groups had been evenly distributed.

Leading causes of death in Silicon Valley vary significantly by racial and ethnic group, with lower death rates overall for Asian and Hispanic residents compared with those who are non-Hispanic White, Black or African American, and Multiple & Other races. While many leading causes of death are also affected by age profiles within each racial and ethnic group's local population (not reflected here), the population-adjusted breakdown illustrates the relative likelihood of deaths by cause for each group.

*data through November 2022 | Note: White, Asian, Black/African-American, and Multiple & Other are Non-Hispanic. | Data Sources: California Department of Public Health; California Health and Human Services Agency | Analysis: Silicon Valley Institute for Regional Studies

SOCIETY

Safety

Over the past nine years alone, more than 36 people have been killed in 20 mass shooting events in Silicon Valley; another 55 people were injured. The year 2019 was the most fatal on record for mass shootings in Silicon Valley, with nine people killed and 21 injured. In the first month of 2023 alone, seven individuals were killed (and one injured) in a local mass shooting event.

The share of adults feeling safe in their neighborhood declines as incomes approach the Federal Poverty Level. In 2021, there were 25 incidents of police

use-of-force in Santa Clara and San Mateo Counties; rates (and resulting injuries) have been consistently higher for incidents involving Black and Hispanic Santa Clara and San Mateo County civilians than for White, Asian or Pacific Islander civilians.

Silicon Valley's overall violent crime rate declined significantly (by 34%) since 1995, but rose by 11% over the past year; reported rapes rose by 19% in 2021. A large majority (87%) of reported crimes are property crimes, such as car and bicycle left.

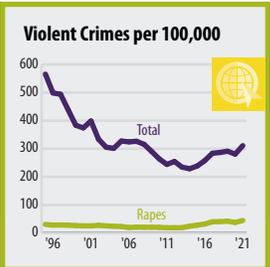
The total number of public safety officers fell slightly

(by 202 officers) between mid-2021 and mid-2022 for a total of approximately 4,900 sworn full-time and reserve public safety officers employed throughout the region.

Why is this important?

Public safety is an important indicator of societal health. Crime erodes our sense of community by creating fear and instability and poses an economic burden as well. Gun violence, such as mass shooting incidents, are particularly horrific and frightening, and have unfortunately become more common. The number of Silicon Valley

Silicon Valley's rate of reported rapes rose sharply in 2021 — up 19% over 2020; in comparison, the rate statewide also increased but to a lesser degree (+8% year-over-year).



The rate of violent crimes in both Silicon Valley and statewide increased in 2021 (up 11% and 6%, respectively, year-over-year).

While the overall violent crime rate in Silicon Valley has declined significantly over the past 26 years (down 34% since 1995), the rate of reported rapes has increased by 46% over that period.

There were nearly 76,800 crimes reported within the region in 2021, 87% of which were property crimes (mostly from or of motor vehicles); 12% were violent crimes.

% Think Crime is a Serious Problem Bay Area, 2022	
Republicans	88%
Rate Bay Area economy "poor"	82%
Ages 50+	79%
Hispanic or Latino/a/x	77%
Asian / Pacific Islander	77%
Black or African American	76%
Household income \$35-100k	75%
Spent youth in Bay Area/California	75%
Overall	74%
White / Caucasian	69%
Democrats	67%
Household income \$500k+	67%
Spent youth elsewhere in the U.S.	65%
Ages 18 to 34	62%
Rate Bay Area economy "excellent"	56%

Data Source: The Silicon Valley Poll (www.jointventure.org/svpoll)



Data Sources: California Department of Justice; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

public safety officers provides a unique window into the changing infrastructure of our city and county governments, and affects the public's perception of safety. Police use-of-force has been a central topic of discussions about institutional racism in America,⁴¹ so must be examined in the context of race and ethnicity.

Silicon Valley's juvenile and adult felony arrest rates remain far below that of the state (at 194 and 738 per 100,000, respectively, compared to 218 and 968 per 100,000 throughout the state).

Silicon Valley's juvenile felony arrest rate declined significantly in 2020 (by 37% year-over-year) and again in 2021 (-31%). The adult felony arrest rate increased slightly in 2021 (by 2%).

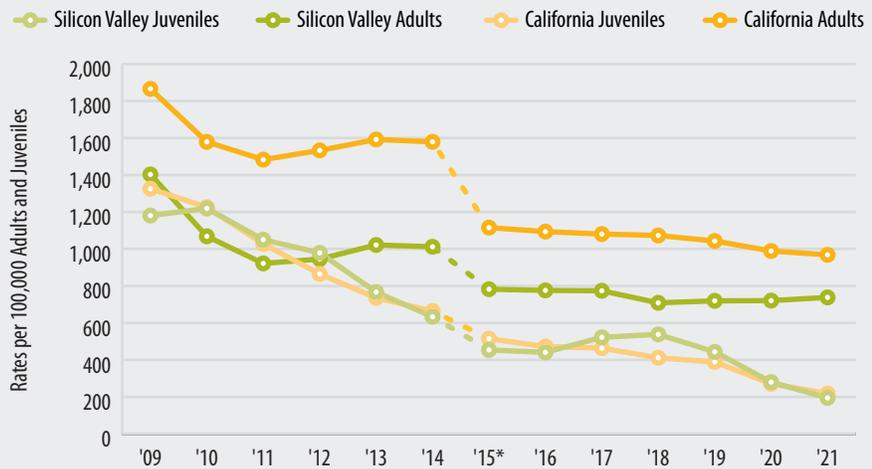
More than 13,400 motor vehicles and 2,700 bicycles were reported stolen in Silicon Valley in 2021, as well as 332 wallets/purses, indicating that approximately one in every 183 residents had one or another stolen during that calendar year.

Silicon Valley's violent crime rate (311 per 100,000) remained well below that of the state (467 per 100,000) in 2021.

ARRESTS

Felony Offenses

Santa Clara & San Mateo Counties, and California

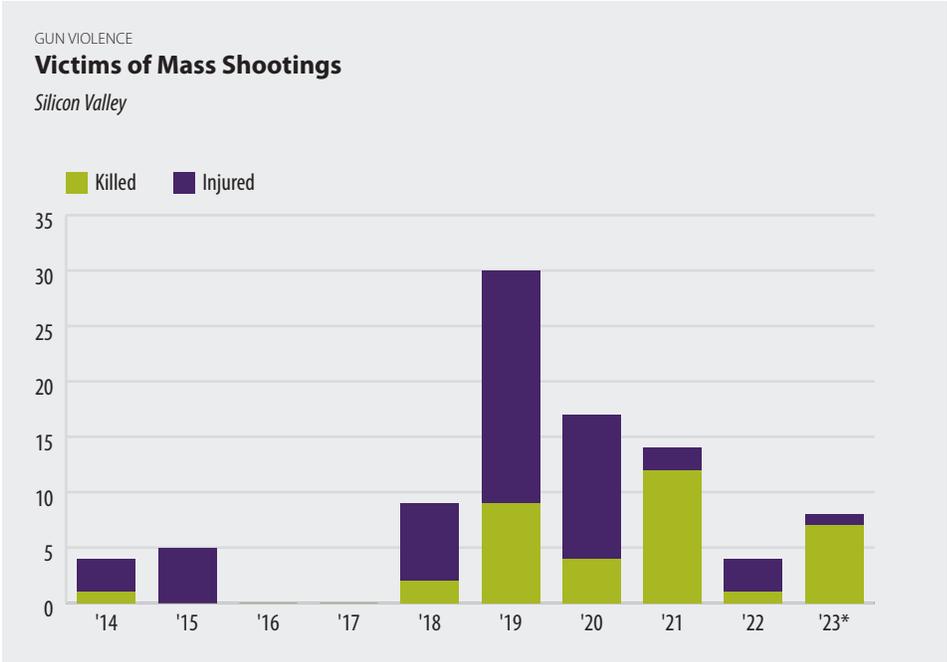


*The felony arrest rates for 2015 and subsequent years were affected by the passage of Propositions 47 and 64, so caution is advised in comparing to previous years. Data Sources: California Department of Justice; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

2019 marked the highest number of mass shooting victims on record in Silicon Valley, with nine people killed and 21 injured.

Over the past nine years alone, more than 36 people have been killed among 20 mass shooting events in Silicon Valley; another 55 people were injured.

In the first month of 2023 alone, seven individuals were killed (and one injured) in a local mass shooting event.



*through January 29 | Data Source: Gun Violence Archive | Analysis: Silicon Valley Institute for Regional Studies

The share of Silicon Valley adults feeling safe in their neighborhoods declines as income approaches the Federal Poverty Level. Black or African American, Native Hawaiian or Pacific Islander, and American Indian or Alaska Native residents have the lowest levels of feeling safe.^a

a. Data for Black or African American, Native Hawaiian or Pacific Islander, and American Indian or Alaska Native residents are grouped together due to small individual sample sizes.

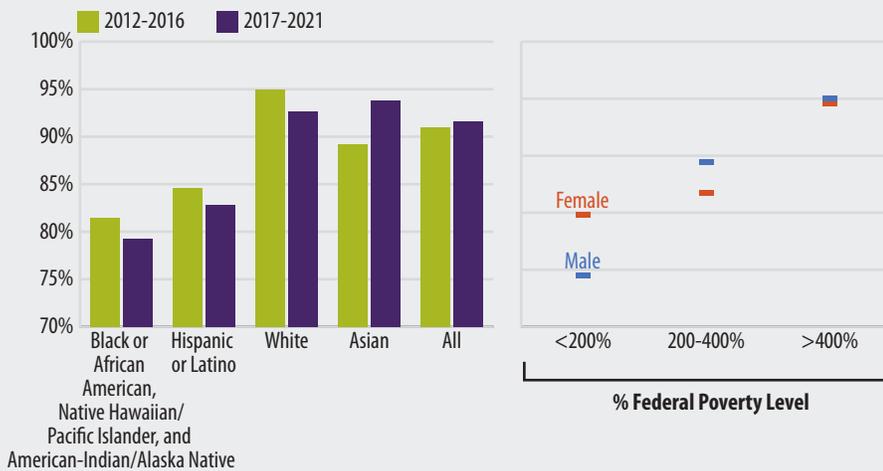
While more than nine out of ten White residents feel safe in their Silicon Valley neighborhoods, that number is closer to eight out of ten for all other races and ethnicities; declines in the share feeling safe since 2007 have been most pronounced for those groups as well.

FEELING SAFE

Share of Adults Feeling Safe in their Neighborhood

by Gender, Poverty Level, Race & Ethnicity

Santa Clara & San Mateo Counties



Data Sources: California Health Interview Survey (CHIS) | Analysis: Silicon Valley Institute for Regional Studies

% Think Crime Is a Serious Problem

Bay Area, 2022

Republicans	88%
Adults Ages 50-64	82%
Asian / Pacific Islander	78%
Black	76%
Women	74%
Overall	74%
Men	74%
Democrats	67%
Women Ages 18-34	59%
LGBTQ+	56%

Data Source: The Silicon Valley Poll (www.jointventure.org/svpoll)

The share of adults feeling safe in their neighborhoods decreases more precipitously for men than for women with declining income levels. This may be related to higher crime rates per capita in higher-poverty areas of the region. In 2020, the violent crime rate was three times higher in the region's six cities with the highest-poverty-rate than for the six lowest. The homicide rate was nine times higher, and the robbery rate was four times higher; the rate of reported rapes, aggravated assaults, and property crimes were twice as high.

The gap in perceptions of personal safety among men and women is largest for low-income residents, with a higher share of women feeling safe in their neighborhoods (86%, compared to 80% of males). In contrast, there is no gap in perceptions of safety at incomes four times the poverty level (approximately 96% for both males and females).

Responses to the 2022 Silicon Valley Poll revealed that 74% of respondents think crime is a serious problem in the region.

SOCIETY

Safety

Silicon Valley had approximately 4,900 sworn full-time and reserve public safety officers employed throughout the region in 2022.

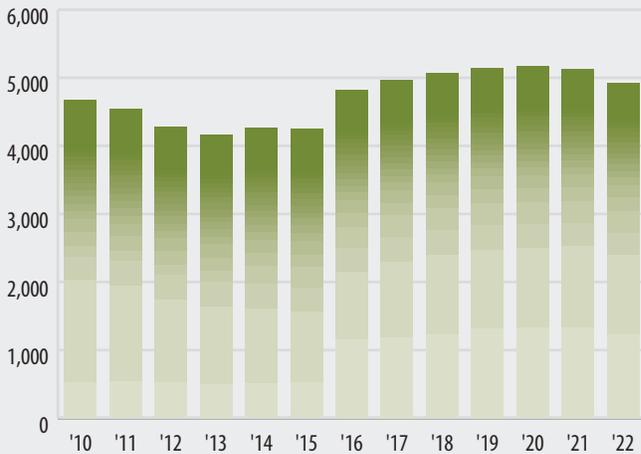
The total number of public safety officers in Silicon Valley fell slightly (by 202 officers) between mid-2021 and mid-2022.

Nearly half (49%) of Silicon Valley's public safety officers are employed by just two of the region's 42 agencies — the San Jose Police Department and the Santa Clara County Sheriff's Office.

PUBLIC SAFETY OFFICERS

Total Number of Public Safety Officers, by Agency

Silicon Valley



- Other (24) Agencies
- Newark PD
- Campbell PD
- Gilroy PD
- Union City PD
- Santa Clara Co DA
- Palo Alto PD
- South San Francisco PD
- Redwood City PD
- Milpitas PD
- Daly City PD
- Mountain View PD
- San Mateo PD
- Fremont PD
- Sunnyvale DPS
- Santa Clara PD
- San Mateo Co SD
- San Jose PD
- Santa Clara Co SD

Data Sources: California Commission on Peace Officer Standards and Training | Analysis: Silicon Valley Institute for Regional Studies

The rates per capita of police use of force incidents and resulting injuries between 2017 and 2021 have been consistently higher for Black and Hispanic Santa Clara and San Mateo County civilians than those for White, Asian or Pacific Islander, or Other racial/ethnic groups.

In 2021, there were 25 incidents of police use of force in Santa Clara and San Mateo Counties, resulting in 20 civilian injuries, five civilian deaths, and 10 officer injuries.

Between 2017 and 2019, the rate of “police use of force” incidents with civilians was similar in Santa Clara and San Mateo Counties to that of the nine-county Bay Area;^a however, rates varied significantly by race and ethnicity of the civilians involved (as high as nine incidents per 100,000 Black residents in 2019, compared to 1.2 per 100,000 overall).

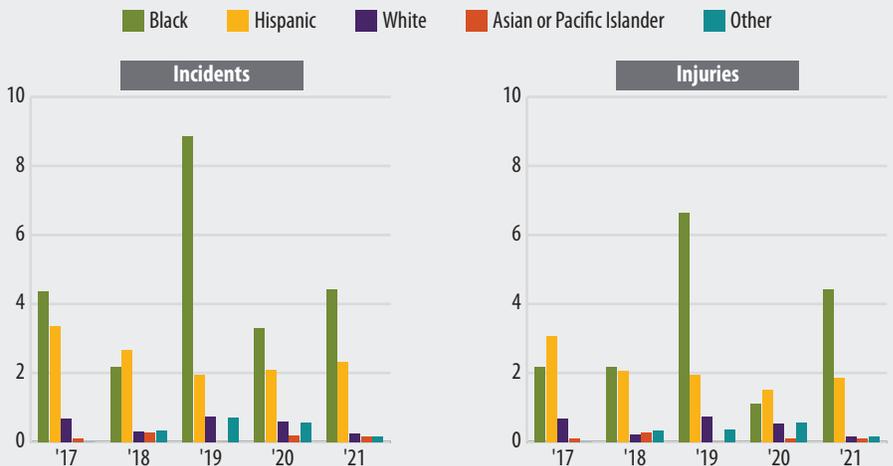
a. Bay Area comparison is from the Bay Area Equity Atlas (using data from the California Department of Justice).

PUBLIC SAFETY OFFICERS

Police Use of Force, by Civilian Race & Ethnicity

Incidents & Injuries per 100,000

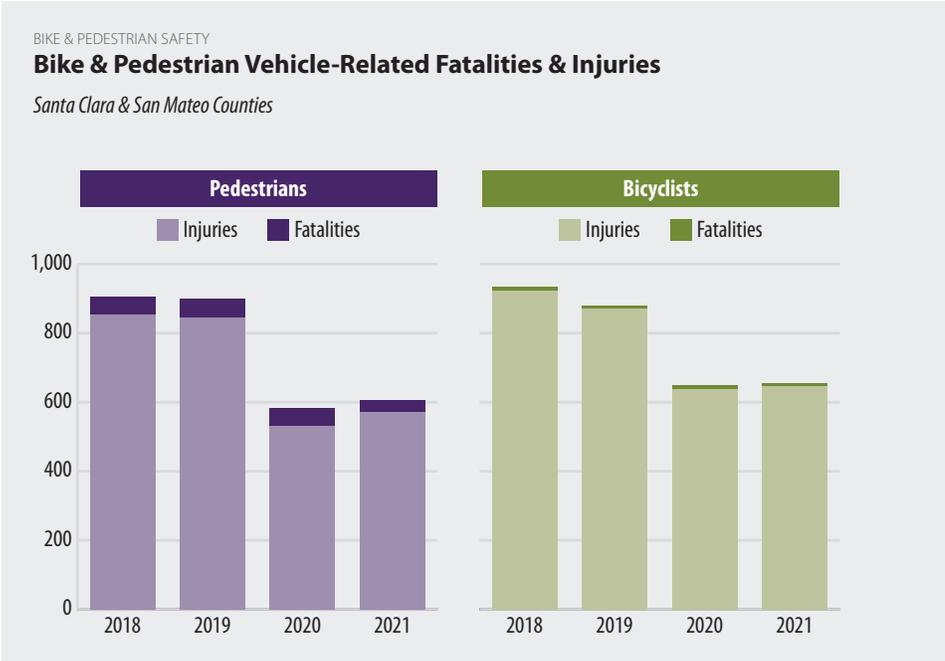
Santa Clara & San Mateo Counties



Note: Racial and ethnic groups are alone or in combination with another.

Data Source: California Department of Justice | Analysis: Silicon Valley Institute for Regional Studies

The number of vehicle-related crashes resulting in pedestrian or bicyclist injuries declined by 32% in 2020 year-over-year in Santa Clara & San Mateo Counties combined; this decline was likely related to the drop in vehicle miles traveled (a measure of collision exposure) that year.



In 2021, more than 1,200 bicyclists and pedestrians were injured in vehicle-related collisions in Santa Clara and San Mateo Counties combined; 40 were killed.

Data Sources: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS)
 Analysis: Silicon Valley Institute for Regional Studies

SOCIETY

Philanthropy

Silicon Valley is home to 16% of active grant-making foundations throughout the state, comprising nearly a third (\$53 billion) of their collective assets. Four of the region's largest foundations alone have net assets totaling more than \$35 billion. A large share (69%) of local foundation grants go to Santa Clara or San Mateo County community-based nonprofits, while only 3% of local nonprofit grants come from outside the region.

Silicon Valley Community Foundation – the largest in the nation – plays a major role, with \$97 million in donor-advised funds (DAF), \$7.9 million in discretionary, and \$6.9 million in corporate-advised grants in 2021 going directly to organizations within the two-county region alone. Silicon Valley's top

50 corporate philanthropists gave a total of \$198 million to local organizations that year, with Sobrato Philanthropies topping the list for nine out of the past ten years.

More than a quarter of the charitable contributions deducted on California individual tax returns in 2020 came from Silicon Valley filers (from eight out of ten who itemized that year). A total of more than \$9 billion was deducted on those tax returns, although some contributions were

in the form of transfers to donor-advised funds (which may be disbursed that year or in subsequent years).

While the region has more than 7,500 nonprofit 501(c)(3) organizations – those to which donations are generally tax exempt – the majority of them are small, with annual revenues below \$100,000. The 2,100 larger nonprofits range from human services and education organizations (representing the largest shares) to

81% of Silicon Valley filers who itemize deductions on their federal tax returns donate to charity – a share that decreased by two percentage points between 2019 and 2020. In comparison, a slightly larger share (82%) of California itemizers deducted some amount of charitable giving.

The total amount of charitable contribution deductions increased by \$6 billion between 2019 and 2020 statewide, with 27% coming from Silicon Valley.

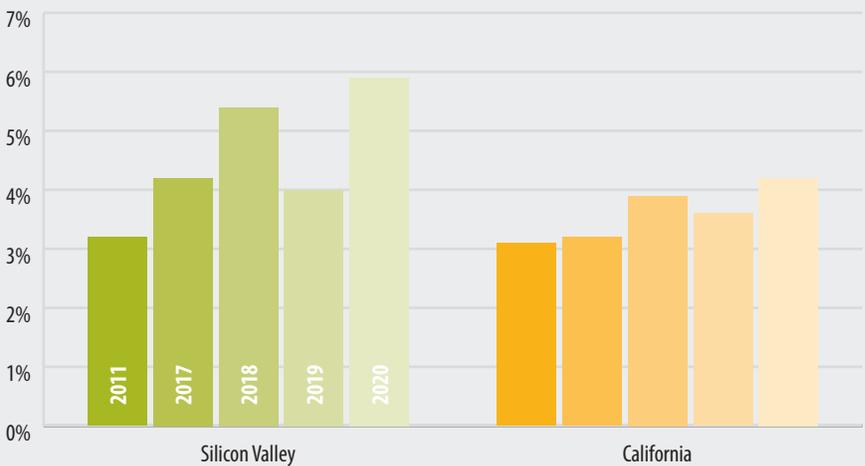
In 2020, 27% of all charitable giving deducted on individual tax returns throughout California (and 5% on all those in the United States) came from Silicon Valley filers; this share has risen from 19% in 2019.

While only a fraction of individual tax returns in Santa Clara and San Mateo Counties were itemized in 2020 (23% and 21%, respectively), donations to charity were deducted on eight out of ten of them. Among itemizers with an adjusted gross income of \$200,000 or more – those less likely to take advantage of the increased standard deduction (since 2018) – 84% deducted some amount of charitable contributions.

INDIVIDUAL GIVING

Share of Individual Taxable Income Donated to Charity

Santa Clara & San Mateo Counties, and California



Note: Data is by tax return (includes single and joint filers); only includes returns with itemized deductions. Data Source: United States Internal Revenue Service | Analysis: Silicon Valley Institute for Regional Studies

A total of \$9.27 billion in charitable contributions was deducted on the 2020 tax returns of Santa Clara County and San Mateo County filers (up from \$5.28 billion in 2019). These deductions include transfers to donor-advised funds, which may be disbursed that year or in subsequent years.

those specifically-focused on issues such as health and the environment. Of those 2,100 organizations, just four of them account for 68% of their total annual revenues; the top 20 account for 80%.

Why is this important?

A region’s community-based nonprofit organizations serve a vital role by providing needed services and resources across a wide variety of sectors such as social and human services, arts and culture, education, health, and the environment. These organizations rely on local philanthropy in addition to other revenue and sources outside the region, and many struggle to fund their work.⁴²

Local philanthropy — particularly in a region with as much wealth as Silicon Valley — is therefore a critical component in sustaining the work of these nonprofits and hence the vitality of the community.

Nationally there has been a decline in the propensity to give to charities since the Great Recession, attributed to behavioral changes from economic uncertainty and changing attitudes about giving (rather than a lack of wealth or income).⁴³ Additionally, recent tax reform has had a significant impact on giving behavior, resulting in large shifts in the number of individuals itemizing tax returns (and thus able to deduct charitable giving). While national trends may be reflected on the

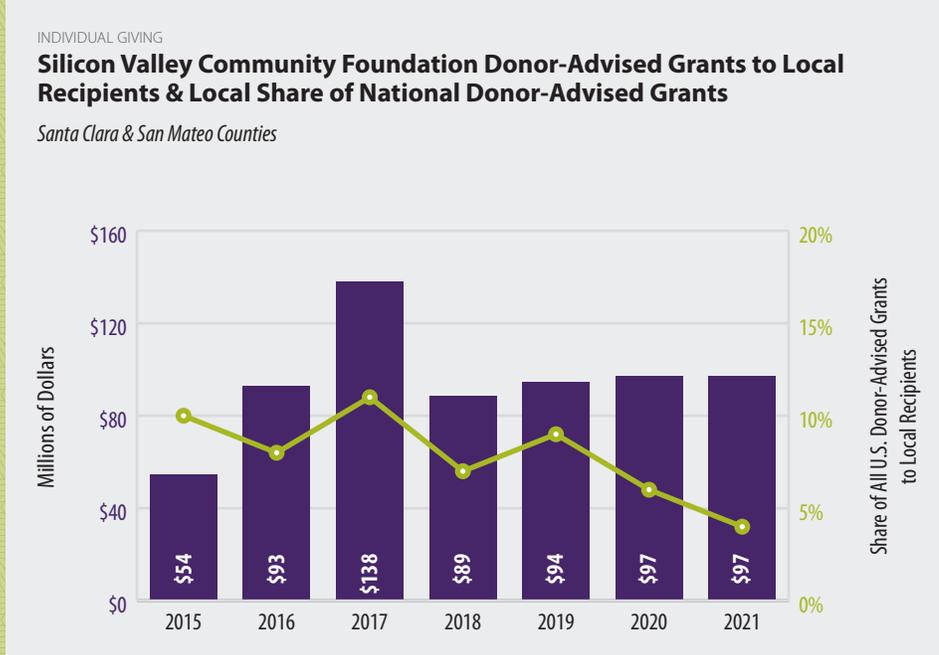
regional level, tracking local philanthropy provides a clearer picture of support for Silicon Valley’s community-based nonprofit organizations, as well as their ability to grow over time and through fluctuations in the economy.

In 2021, \$9 billion in donor-advised fund (DAF) grants were reported by the more than 600 community foundations nationwide (with \$63 billion in charitable assets), and \$32 billion in DAF grants were reported by national charities (accounting for 88% of all DAF accounts, with \$151 billion in charitable assets). Additionally, DAFs at single-issue charities — such as those with a religious or other specific focus area — granted \$4 billion (with nearly \$21 billion in charitable assets) that year.⁴⁵

Donor-advised grants through the Silicon Valley Community Foundation to local Santa Clara County or San Mateo County community-based organizations totaled \$97 million in 2021,^a representing 4% of the value of donor-advised grants made in the U.S. through the Foundation that year (and 21% of the number of grants).

a. Local donor-advised grants through the Silicon Valley Community Foundation totaled \$145 million in 2021 (as provided by the Silicon Valley Community Foundation on January 12, 2023). The \$97 million to community-based organizations in 2021 excludes grants to Stanford University, Santa Clara College, Stanford Health Care, a \$25 million grant to the Give Foundation, and various grants to community foundations.

National-level data shows record-breaking growth in grantmaking through DAFs, both in terms of the number of grants made and in total dollar amounts. In 2021, there were \$10 billion more in grants than the previous year, for a total of \$45.7 billion to qualified charities.⁴⁴



Note: Data includes all donor-advised grants through the Silicon Valley Community Foundation, with the exception of a \$550 million grant in 2016 to the Chan Zuckerberg Biohub, Inc, as well as grants to Stanford University and Santa Clara College, and grants to community foundations. In 2021, a \$25 million grant to the Give Foundation was excluded. Local organizations include those in Santa Clara and San Mateo Counties.
Data Source: Silicon Valley Community Foundation | Analysis: Silicon Valley Institute for Regional Studies

SOCIETY

Philanthropy

The top 15 corporate philanthropists in 2021, based on local giving (and those that chose to self-report), included companies from a variety of sectors such as sports, banking, tech, real estate, and healthcare.

The largest local donor among Silicon Valley's top 50 corporate philanthropists for FY 2020-21 was Sobrato Philanthropies (\$54.7 million), which has topped the corporate donor list during nine years out of the past decade with more than \$630 million dollars donated worldwide (68% locally) over that time.

Top 15 Corporate Philanthropists

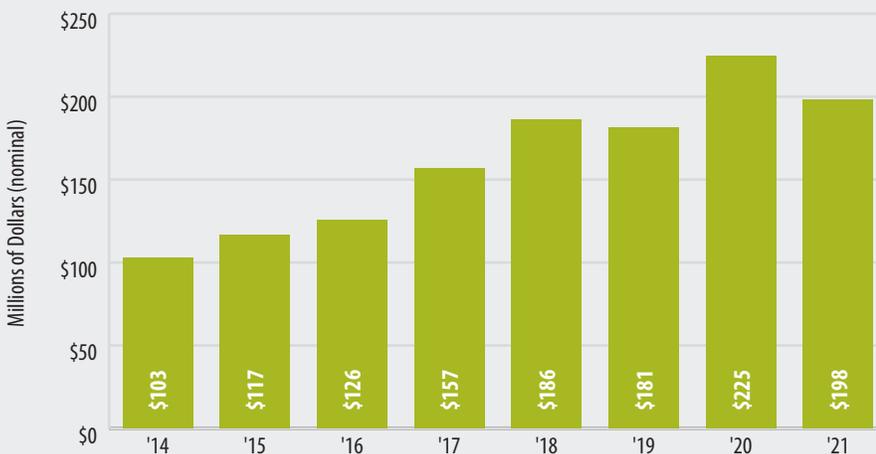
Local Giving | 2021

	Amount (millions)
Sobrato Philanthropies	\$54.7
Alphabet/Google LLC	\$37.5
Cisco Systems	\$26.2
Wells Fargo Bank N.A.	\$14.3
Intel Corp.	\$9.3
SAP	\$8.3
Applied Materials Inc.	\$6.8
Adobe Inc.	\$4.4
Nvidia	\$4.0
Bank of America N.A.	\$3.7
KLA Corporation	\$3.3
NetApp Inc.	\$2.6
Gilead Sciences Inc.	\$2.1
Oracle Corp.	\$1.9
San Francisco 49ers	\$1.8

CORPORATE PHILANTHROPY

Local Giving by Top 50 Corporate Philanthropists

Silicon Valley

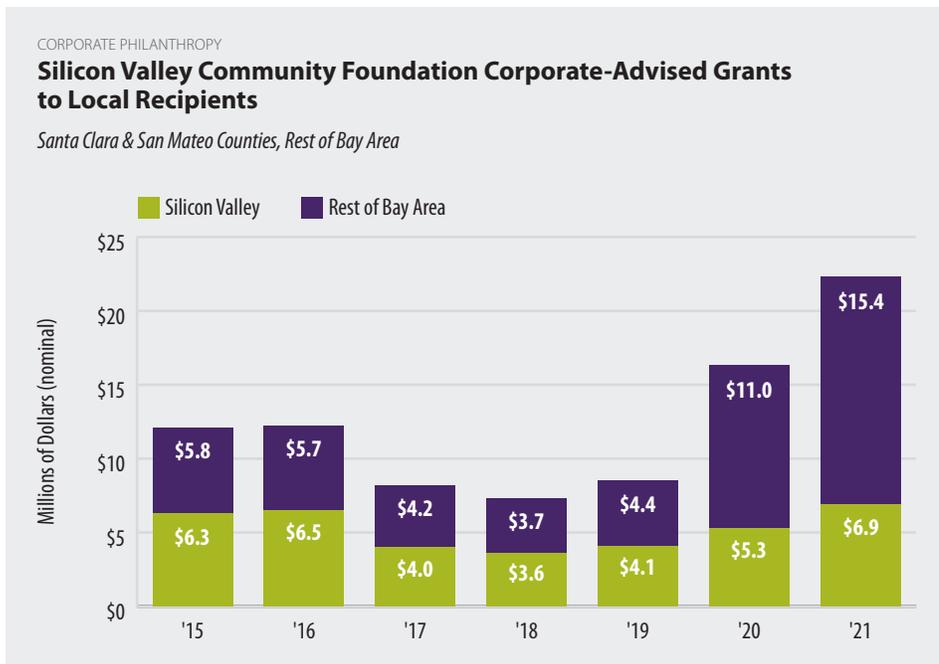


Note: Data are for the fiscal year; amounts are self-reported and only include companies that chose to participate.
Data Source: *Silicon Valley Business Journal*, Book of Lists | Analysis: Silicon Valley Institute for Regional Studies

Among the top 50 corporate philanthropists alone, \$198 million was donated to local organizations in the 2020-21 fiscal year.^a While this represents a \$27 million (-12%) drop from the previous year, it was 9% higher than prior to the pandemic — during which time the donations from the top 50 corporate philanthropists hit record-setting levels, with a +24% increase in donations to the local community to address immediate needs and recovery efforts.

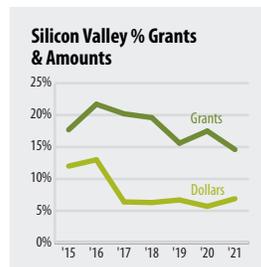
a. From self-reported data, which may or may not include things such as in-kind donations of products or services, employee volunteer time, and/or employee donation matching.

Corporate-advised grants through the Silicon Valley Community Foundation to Bay Area organizations increased by 37 percent between 2020 and 2021, following a nearly doubling of corporate-advised grants in 2020.



Data Source: Silicon Valley Community Foundation | Analysis: Silicon Valley Institute for Regional Studies

Santa Clara or San Mateo County recipients represented 15% of all Silicon Valley Community Foundation Corporate-Advised grants in 2021, but only 7% of the grant dollars; an additional 15% of total grant dollars went to organizations located in the rest of the Bay Area, and 78% went outside the region (compared to 83% in 2020).



The total dollar amount of corporate-advised grants through the Silicon Valley Community Foundation totaled \$6.9 million to Silicon Valley organizations and an additional \$15.4 million to those in the rest of the Bay Area in 2021, representing a 29% and 40% increase year-over-year, respectively. While this is a significant amount of money, it likely represents a relatively small share of total regional corporate philanthropy (as many of the larger corporate donors tend to donate directly to nonprofit organizations).

Silicon Valley is home to more than 500 foundations that were actively distributing grants in 2020-2022, representing 16% of California's active grantmaking foundations and 27% of foundation assets statewide (over that same period).

An estimated minimum of \$2.7 billion would have been expected to be distributed in 2022 by Silicon Valley foundations, based on \$53 billion in total assets and the 5% minimum distribution rule.^a

a. By federal law, private non-operating foundations are required to distribute 5% of their previous years' net investment assets. Loren Renz, *Understanding and Benchmarking Foundation Payout* (The Foundation Center, 2012).

Four of Silicon Valley's largest foundations (by total net assets) include the William & Flora Hewlett Foundation, the Silicon Valley Community Foundation, David & Lucile Packard Foundation, and the Gordon & Betty Moore Foundation; collectively, these four alone have net assets totaling more than \$35 billion.

Number of Foundations & Total Assets

Santa Clara & San Mateo Counties with active grantmaking from 2020-2022

	Number	Total Assets (billions)
Santa Clara County	381	\$38.14
San Mateo County	130	\$15.25
Total	511	\$53.40

Data Source: Foundation Directory Online | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley foundations were highly successful at raising and distributing funds in 2020, with nearly \$854 million in total grants that year. A notable share of these grants were through the region's 19 major regional response funds for pandemic relief, which collectively distributed more than \$95 million to individuals, business, and nonprofit organizations.^a

a. Joint Venture Silicon Valley, *2021 Silicon Valley Index*.

Of the 2020-2021 foundation grants to local organizations, 97% came from within the region; 3% came from foundations outside of Santa Clara and San Mateo Counties.

Silicon Valley's community-based nonprofit organizations received the vast majority (approximately 97%) of their foundation grants from local foundations in 2020 and 2021. At the same time, those local foundations gave 14% of their grant dollars to organizations elsewhere.

Based on available data for 2020 and 2021, the total value of grants made by Santa Clara and San Mateo County foundations that year reached \$389 million, 69% of which went to Silicon Valley community-based nonprofit organizations (\$323 million).^a

a. Candid is an online database of foundations and grant information. While the database is detailed and extensive, search query features are limited and the data may be missing some information, so grant totals should be considered minimum estimated amounts. Totals exclude large grants to colleges/universities and hospitals, whenever possible.

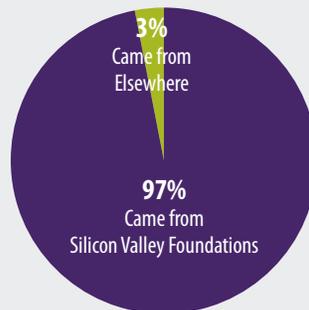
In 2020-2021, Silicon Valley community-based organizations received foundation grants totaling \$333 million (excluding those to colleges/universities, and hospitals). Of that total, approximately \$322 million came from foundations located within Santa Clara or San Mateo Counties.

FOUNDATION GRANTS

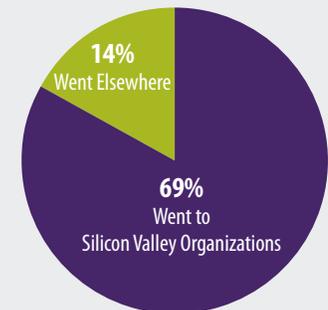
Share of Foundation Grant Dollars, by Foundation and Recipient Location

2020-2021

Grants TO Silicon Valley Organizations



Grants FROM Silicon Valley Foundations



Data Source: Candid | Analysis: Silicon Valley Institute for Regional Studies

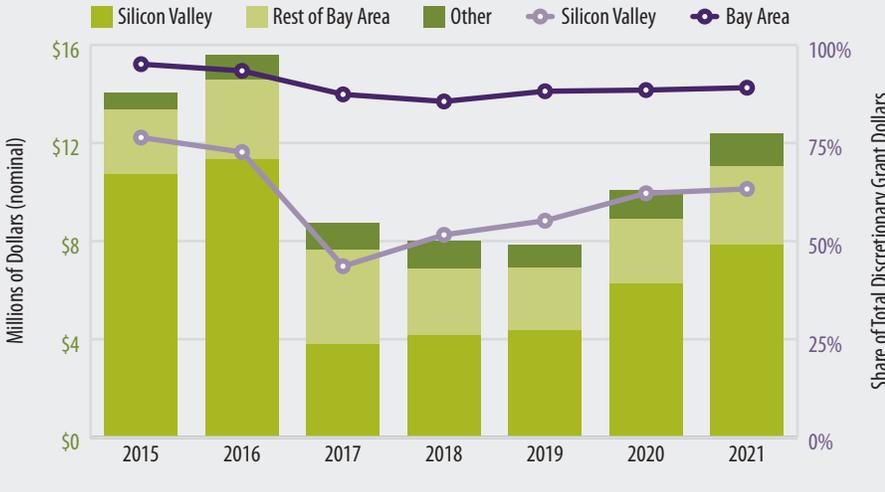
Discretionary grantmaking to local organizations by the Silicon Valley Community Foundation was relatively low for several years compared to the most recent high of \$11.4 million in 2016; however, the total amount awarded to grantees rose in both 2020 and 2021 (reaching \$6.3 and \$7.9 million, respectively).^a

a. Excludes disbursements not categorized under "discretionary" (such as those directed by staff and board members).

FOUNDATION GRANTS

Silicon Valley Community Foundation Discretionary Grants to Local Recipients & Share of National Total

Santa Clara & San Mateo Counties, Bay Area, and Other



Note: Other may include organizations operating locally but based in another part of California or elsewhere in the United States.
Data Source: Silicon Valley Community Foundation | Analysis: Silicon Valley Institute for Regional Studies

Of the Silicon Valley Community Foundation's \$12.4 million in total discretionary grantmaking in 2021, 63% went to Silicon Valley-based organizations (and 89% to those within the nine-county Bay Area).

In Santa Clara and San Mateo Counties combined, there are a total of more than 2,100 nonprofit organizations with 501c3 status (to which donations are generally tax exempt) and \$100,000 or more in annual revenues. The region also has an additional 5,400 501c3 organizations below that revenue threshold, which include a wide variety of organization types such as youth sports clubs, parent-teacher associations, library volunteer groups, and theater programs, among many others.

Just four of Silicon Valley's more than 2,100 501c3 organizations account for 68% of total annual revenues; the top 20 account for 80%.⁴⁶ The rest of the nonprofits 501c3 organizations in Santa Clara and San Mateo Counties have an average annual revenue of \$4.7 million (with a median of \$493,000).

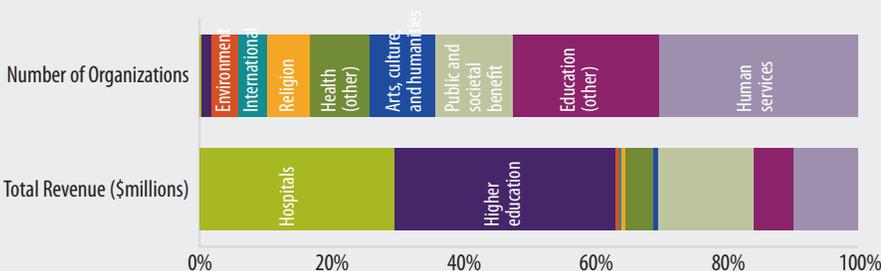
NONPROFITS

Active 501(c)(3) Nonprofit Organizations, by Type & Revenue

Charitable organizations to which donations are tax deductible

Santa Clara & San Mateo Counties | 2019-2022

	Number of Organizations	Latest Revenue Total (\$billions)
Santa Clara County	1,449	\$28.27
San Mateo County	677	\$2.70
Total	2,126	\$30.97



More than half (53%) of the region's nonprofit 501c3 organizations are focused on either Education (excluding higher-education) or Human Services; however, they account for a much smaller share of total nonprofit revenues (16%).

Nonprofit organization revenues may include a variety of sources, such as earned revenue, membership fees, and donations from both individuals and the broader philanthropic community. In total, Silicon Valley's nonprofit 501c3 organizations generate an estimated \$31 billion annually.^a

a. Based on the most recent IRS 990 form filed with the IRS within the past three years.

Note: Active nonprofit organizations include those with revenues of \$100,000 or more, which submitted Form 990s within the past 36 months.
Data Source: Internal Revenue Service; National Center for Charitable Statistics; Tax Exempt World | Analysis: Silicon Valley Institute for Regional Studies; Silicon Valley Council of Nonprofits; Thrive, The Alliance of Nonprofits for San Mateo County

PLACE

Housing

Home prices in Silicon Valley continued to soar in 2022, up nearly 7% over the prior year and reached a record-breaking median price of \$1.53 million. This persistent rise in home prices is driven by an increasing share of higher-end homes on the market (76% of those sold in 2022 were above \$1 million), as well as increasing demand given the region's longtime housing shortage. The development of new homes rose sharply in 2022 as indicated by the 12,000 units in residential building permits issued (80% of which are in multi-family buildings). In the planning pipeline, there were 1,700 newly-approved units that were affordable to low-income residents, 900 of which were affordable for those earning less than half the area median income.

Many of the region's current residents are struggling to afford their rents or mortgages, with nearly half of all renters (and 58% of all renters ages 65 and over) financially burdened by housing costs. Six percent of renter-occupied units were considered moderately or severely inadequate by the Department of Housing and Urban Development quality standards. Only 8% of homes sold in 2022 were below \$600,000, and 28% of them were sold to buyers who paid all-cash (as opposed to those who

are unable to get into the housing market at higher prices).

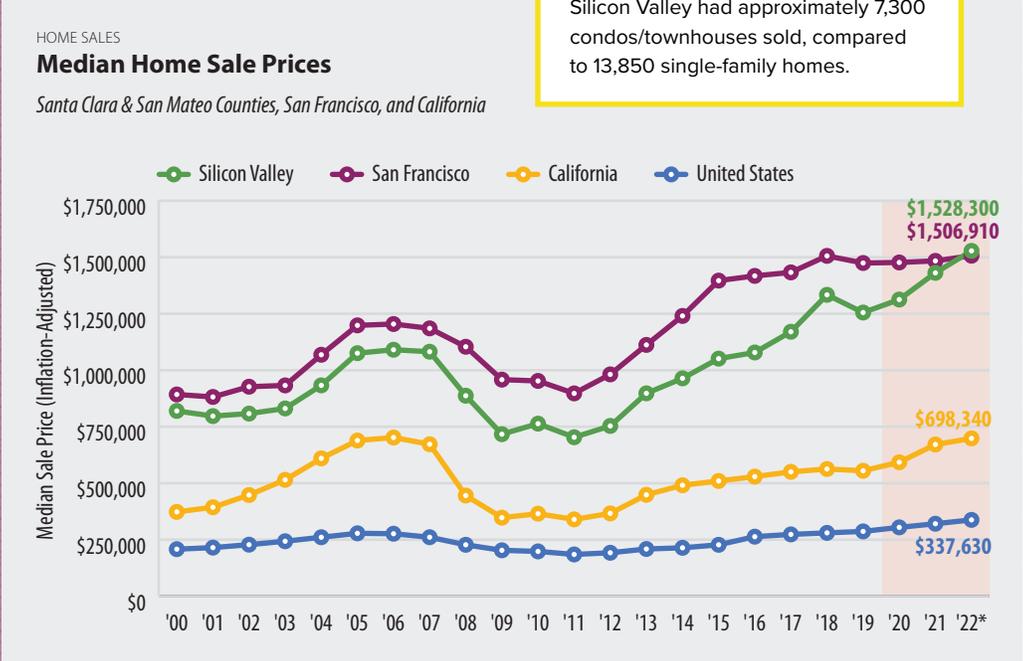
Whereas Santa Clara County has historically been more affordable than San Mateo County, median home sale prices rose to nearly \$1.8 million for a single-family residence (\$1 million for a townhouse/condo) in 2022, and the share of first-time homebuyers who can afford a median priced home there fell to

Median home sale prices in Silicon Valley exceeded those in San Francisco for the first time in decades (if ever), reaching \$1.53 million in 2022; San Francisco's median home sale price in 2022 was \$1.51 million.

Home prices in Silicon Valley continued to soar in 2022, up 6.8% year-over-year after inflation-adjustment. This trend was driven primarily by increases in Santa Clara County (+9.1% year-over-year), and the growing share of high-priced homes on the market.

While condos/townhouses sell for less than single-family homes, there are fewer of them on the market. In 2022, Silicon Valley had approximately 7,300 condos/townhouses sold, compared to 13,850 single-family homes.

76% of homes sold in Silicon Valley last year were above \$1 million; 30% were above \$2 million. In contrast, only 8% of all homes sold within the region were below \$600,000 (28% of which were all-cash sales, a likely sign that those units were being sold to buyers for renovation as opposed to being available for lower-income buyers to afford, live in, and gain home equity/wealth).



*Based on data through August 1 | Data Source: CoreLogic | Analysis: Silicon Valley Institute for Regional Studies

In 2022, Silicon Valley median home sale prices rose by 16% for single-family homes, and 11% for condos/townhouses (+13% overall). While prices rose in San Francisco as well, they increased by a relatively small amount in comparison (+6% and 5%, respectively, and +8% overall).

The median home sale price for a single-family residence in San Mateo County was \$1.9 million in 2022 (\$955,000 for a condo/townhouse), with an average sale price of \$2.6 million; in Santa Clara County, the median price of a single-family home rose to nearly \$1.8 million (\$1.0 million for a condo/townhouse), with an average sale price that was skewed by the higher-end homes (\$2.1 million).

27% — only two percentage points above that of San Mateo County. Home affordability was highly variable by race and ethnicity of the potential homebuyer, with rates as low as 14-15% for Black or African American and Hispanic or Latino residents. Meanwhile, Silicon Valley had nearly 60,000 potentially-available vacant units, and 240,000 housing units that are theoretically underutilized (low-occupancy for the number of bedrooms available).

Why is this important?

The housing market impacts a region’s economy and quality of life, particularly in

places where housing costs are extraordinarily high. An inadequate supply of new housing negatively affects prospects for job growth. A low for-sale inventory drives up prices. And a lack of affordable housing results in longer commutes, diminished productivity, curtailment of family time, and increased traffic congestion. It also restricts the ability of crucial service providers — such as teachers, registered nurses, and police officers — to live near the communities in which they work. Additionally, high housing costs can limit families’ ability to pay for basic needs, such as food, health care, transportation, childcare, and clothing.

They can push residents to live with one another for economic reasons and can increase homelessness. Being evicted from a rental unit can cause a rise in multifamily households and is a leading cause of homelessness in our region. As a region’s attractiveness increases, average home prices and rental rates tend to increase. Higher levels of new housing and attention to increasing housing affordability are critical to the economy and quality of life in Silicon Valley.

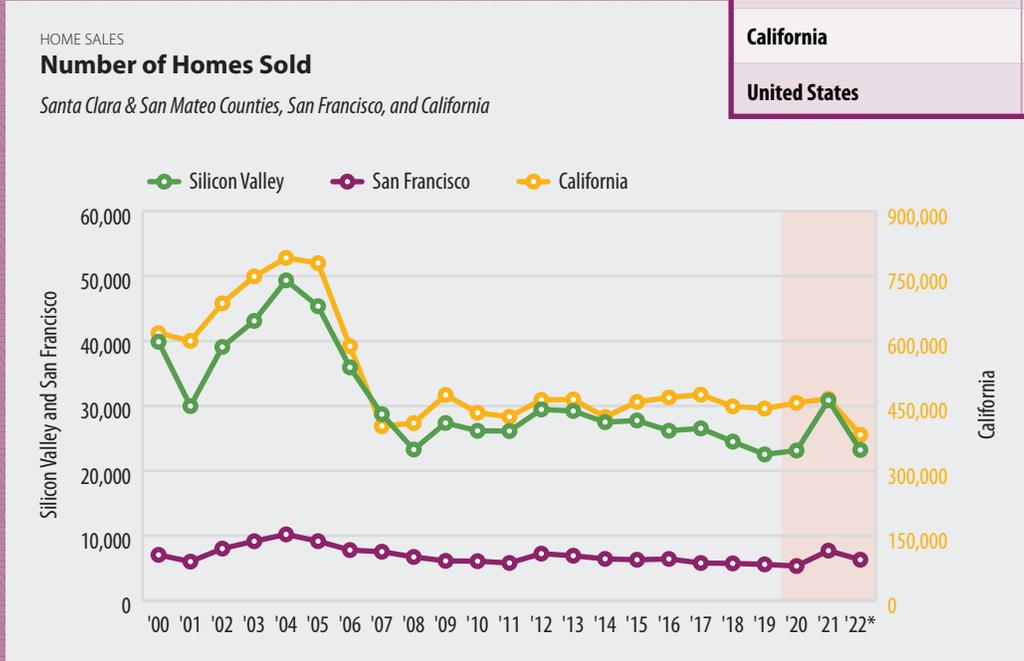
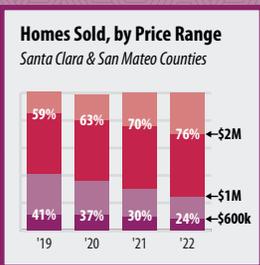
Over the past four years, the share of homes sold in Santa Clara and San Mateo Counties that are below \$1 million has diminished by nearly half — from 41% in 2019 to 24% in 2022. This trend toward an increasing share of higher-end homes being sold is a major factor affecting the region’s increasing median home sale prices.

One of the factors contributing to sustained home sales during the pandemic has been the availability of extremely low interest rates — averaging 3.11% for a primary, 30-year fixed rate mortgage in 2020 and 2.96% in 2021 with an historic-low rate of 2.65% in January. Interest rates have since increased, with an average of 5.34% in 2022 and 6.22% in the first six weeks of 2023.⁴⁷

The total number of homes sold in Silicon Valley spiked in 2021 to 30,900 (up by 34%) — more than any other year since 2006. Estimates for total home sales in 2022, based on data through November, indicate a drop of 25% year-over-year (to 23,200).

% All-Cash Home Purchases
2022

Silicon Valley	17%
San Francisco	22%
California	21%
United States	29%



The share of homes sold for all-cash in Silicon Valley is lower than elsewhere, at 17% in 2022 (compared to 22% in San Francisco, 21% in California, and 29% throughout the U.S.). This is likely due to the higher home sale prices in Silicon Valley — the few (less than 400) homes sold in Silicon Valley between \$600,000 and \$900,000 had similar shares of all-cash purchases to elsewhere (17%, compared to 19% in San Francisco); homes sold in the \$2 million+ range had only 17% all-cash offers, as well, but that compares to 29% all-cash for that price range in San Francisco.

*Based on data through August 1 | Data Source: CoreLogic | Analysis: Silicon Valley Institute for Regional Studies

PLACE

Housing

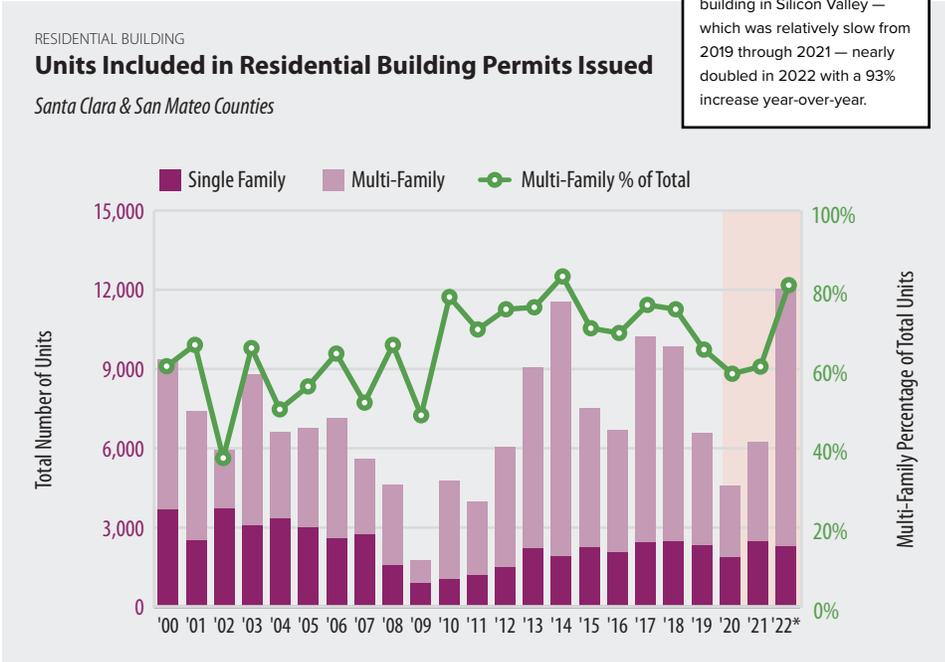
In FY 2021-22, 899 new residential units were approved that were specifically intended to be affordable for Very Low-Income residents (earning less than 50% of the Area Median Income), such as a family of four with two full-time income-earners at \$20 per hour each in Santa Clara County (\$22/hour in San Mateo County), or an individual living alone earning anything less than \$28 per hour in Santa Clara County (\$31 per hour in San Mateo County).

The share of multi-family units in Silicon Valley residential building permits issued exceeded 80% in 2022 for the first time since 2014, adding nearly 9,800 multi-family units such as duplexes, small apartment complexes, and larger (5+ unit) apartment buildings. In comparison, only approximately 53% of residential units permitted statewide in 2022 were for multi-family development.

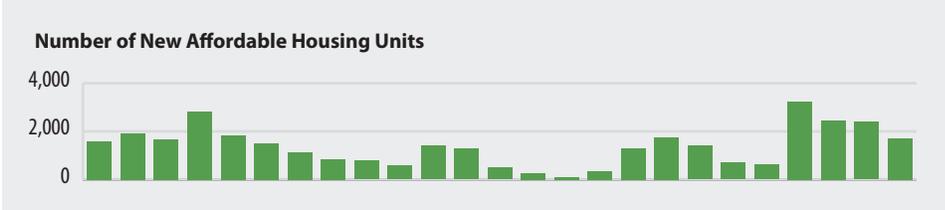
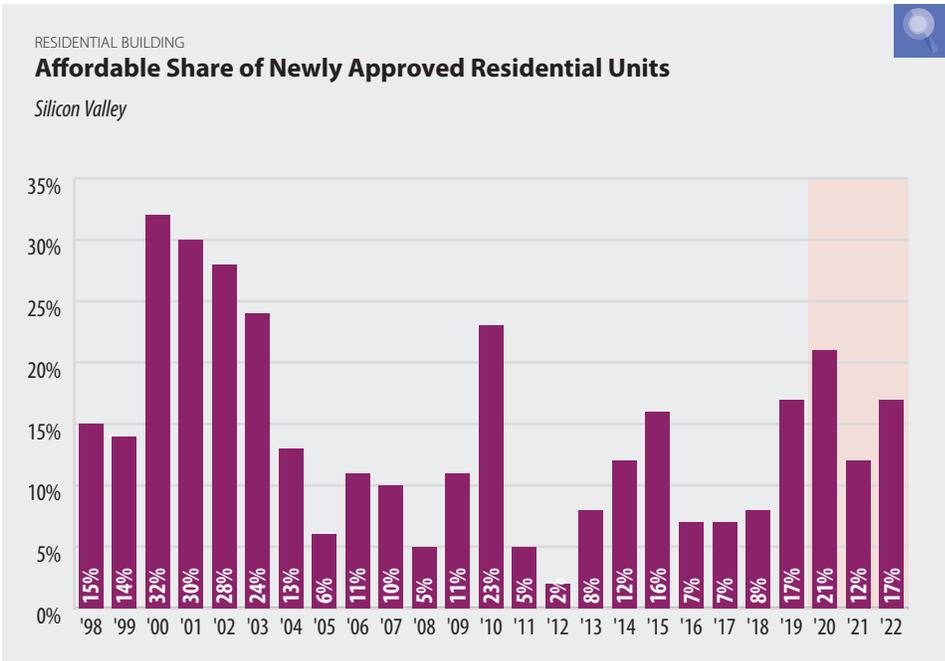
In total, Silicon Valley cities had 30,909 low-income units listed among HUD Low-Income Tax Credit properties in service between 1987 and 2020, representing 9% of those statewide;⁴⁸ more than half (56%) of these units are located in San Jose. In 2021, the California Tax Credit Allocation Committee approved 23 projects within the region with a total of 2,215 low-income units ranging from studios to 4-bedrooms – 58% of which are for very-low (<50% of the Area Median Income) or extremely-low (<20% of AMI) income residents.⁴⁹

An estimated 12,000 new residential units were permitted in 2022 throughout Santa Clara and San Mateo Counties, representing more than in any other year since 1978.

The rate of residential building in Silicon Valley — which was relatively slow from 2019 through 2021 — nearly doubled in 2022 with a 93% increase year-over-year.



*estimate based on data through November. | Data Source: Construction Industry Research Board and California Homebuilding Foundation | Analysis: Center for Continuing Study of the California Economy; Silicon Valley Institute for Regional Studies



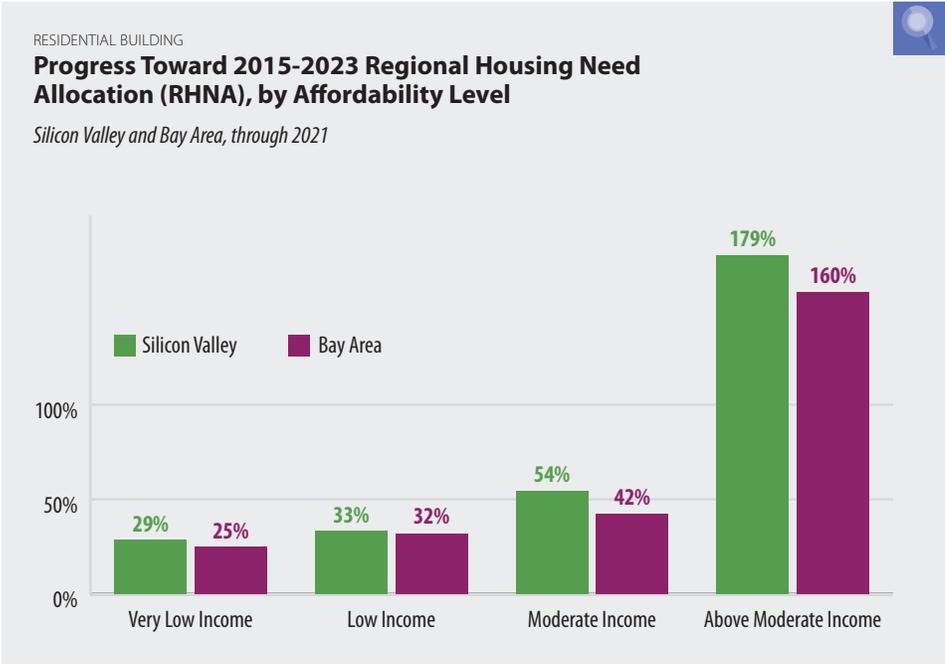
Note: Beginning in 2008, the Land Use Survey was expanded to include cities northward along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco). In 2014, the Survey was further expanded to include all Silicon Valley cities (adding Colma, Daly City, Half Moon Bay and Pacifica). Data Source: City Planning and Housing Departments of Silicon Valley | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley has far surpassed the 2015-2023 RHNA allocation for residential units in the Above Moderate Income category (at 179% through 2021); in contrast, only 29% of the RHNA had been met for Very Low Income (0-50% of the Area Median Income), 33% for Low Income (50-80% AMI), and 54% for Moderate Income (80-120% AMI) units.

As the region nears the 6th Regional Housing Needs Allocation (RHNA) cycle (2023-2031, with allocations more than double that of the current cycle), reports summarizing permits during the 2015-2023 cycle through 2021 indicate some continued progress toward RHNA allocations with more than 100% the Silicon Valley and Bay Area RHNA met in the Above Moderate income category; however, in the first seven years of an eight-year cycle, the region had not yet met a proportional share of new Very Low-, Low-, or Moderate-Income housing.

Three-quarters (75%) of Silicon Valley's residential units permitted thus far in the 2015-2023 Regional Housing Needs Allocation (RHNA) cycle were in the Above Moderate (120%+ of the Area Median Income) category; 11% were Moderate Income, and 15% were Low- and Very-Low Income, combined.

In the first seven years of the eight-year (2015-2023) RHNA Cycle, Silicon Valley permitted 91% of the total number of new residential units allocated.



Data Source: California Department of Housing & Community Development | Analysis: Silicon Valley Institute for Regional Studies

Progress Toward 2015-2023 RHNA

	Total Number of Units Permitted	RHNA	Progress Toward RHNA
Silicon Valley	75,735	82,893	91%
Bay Area	160,951	187,990	86%

Silicon Valley's RHNA progress accelerated in 2021 in the Very Low-, Low-, and Moderate-Income, with the share of total permits issued that year at 16%, 9%, and 8%, respectively (up from 8%, 5%, and 8%, respectively (up from 8%, 5%, and 11% cumulatively at the end of 2020)). Despite these increases, however, the region remained more than 32,000 units short of its goal at the end of 2021 in those income categories. The relatively small share of low-income units permitted thus far in Silicon Valley and throughout the Bay Area (13%) undoubtedly informed efforts to develop the 2023-2031 cycle allocations — approved in December 2021 — which aimed to not only increase the region's stock of low-income units but also address racial and economic segregation within and between communities.

In the 2021-22 fiscal year, Silicon Valley cities and counties approved 1,710 new housing units affordable to residents earning less than 80% of the area median income, representing 17% of all residential units approved that year.

Of the 1,710 newly-approved affordable housing units in FY 2021-22, 899 (53%) were affordable to very-low income residents (those earning less than half of the area median income); it is possible that some additional units approved as "below market rate" may end up being affordable to very-low income residents, as well.

PLACE

Housing

Average monthly rental rates in multifamily buildings (such as apartments and duplexes) were \$2,920 in Silicon Valley during the first three quarters of 2022; average rents were \$3,280 in San Francisco during that period.

In order to afford an average two-bedroom apartment in the Bay Area, both adults in a two-worker household would need to make a minimum wage of \$28 per hour in order to not be burdened^a by housing costs.

a. According to the U.S. Department of Housing and Urban Development, housing costs greater than 30% of household income pose moderate to severe financial burdens.

Silicon Valley renters are much more likely to be burdened^a by housing costs than homeowners, with 45% spending more than 30% (and 22% spending more than half) of their *gross* income on rent.

a. According to the U.S. Department of Housing and Urban Development, housing costs greater than 30% of household income pose moderate to severe financial burdens.

In late-2022, average Bay Area rental rates ranged from \$2,010 for a studio apartment to \$3,550 for a 3-bedroom/3-bath.

Average Monthly Apartment Rental Rate
Bay Area (November 2022)



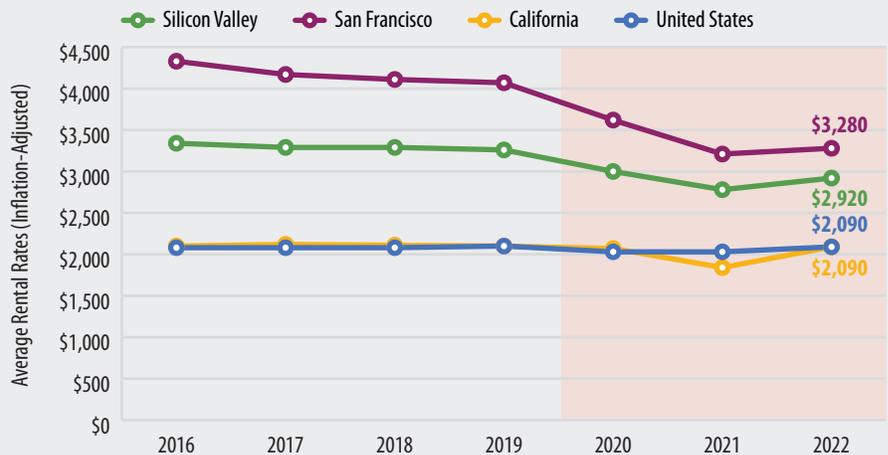
Percent Change in Multifamily Rental Rates

	2021-22	2019-22
Silicon Valley	5%	-10%
San Francisco	2%	-19%
California	14%	-0.5%
United States	3%	-0.5%

HOUSING AFFORDABILITY

Average Multifamily Rental Rates

Silicon Valley, San Francisco, California, and the United States



*Based on data through Q3 | Data Source: CBRE | Analysis: CBRE; Silicon Valley Institute for Regional Studies

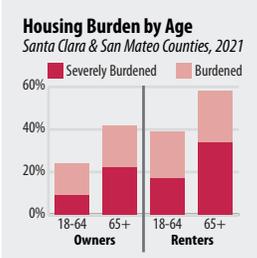
Rental rate declines since pre-pandemic have been more pronounced in Silicon Valley (-10% between 2019 and 2022 after adjusting for inflation) and San Francisco (-19%) than in California overall or throughout the country (both down less than 1%).

In 2022, the First-Time Buyer Housing Affordability Index declined in 50 out of 51 California counties included in the Index (by as much as nine percentage points year-over-year), and in the state overall (down by five percentage points). Because the Index is calculated based on the household income distribution, these declines were likely a result of pandemic-related income losses combined with rising median home prices.

More than half (58%) of Silicon Valley renters ages 65 and over are burdened by housing costs (compared to 42% of homeowners, 39% of younger renters, and 24% of younger homeowners).

Nearly half (45%) of all Silicon Valley households who rented in 2021 were burdened by housing costs, meaning that they spent more than 30% of their gross income on their rent.

While the share of renters burdened by housing costs in Silicon Valley is slightly lower than that of the nation as a whole (45% compared to 49%), the burden for Silicon Valley owners is slightly higher (31%, compared to 27% across the country).

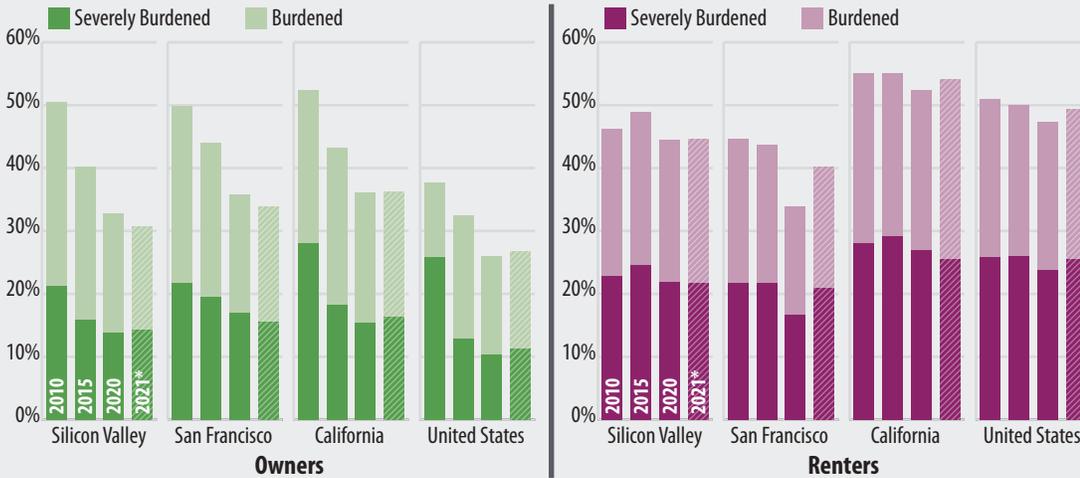


HOUSING AFFORDABILITY

Housing Burden

Percent of households with housing costs greater than 30% (Burdened) and 50% (Severely Burdened) of income

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



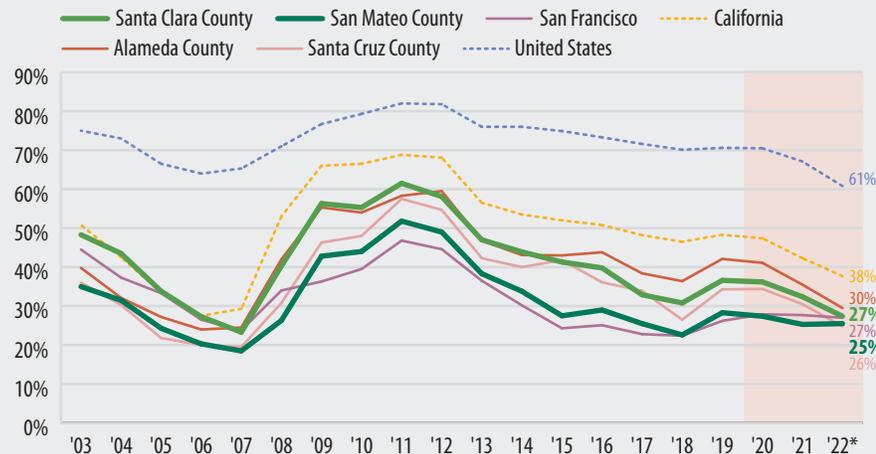
*Includes Software, Computer Hardware Design & Manufacturing, and Internet & Information Services
Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

The share of Silicon Valley homeowners (with a mortgage) that were burdened by housing costs in 2021 was 20 percentage points lower than a decade prior, amounting to 87,000 fewer burdened households. This long-term trend may be due to declining ownership costs over time due to refinancing, and/or the increasingly high bar of becoming a homeowner (with a more financially-select group able to purchase homes each year). In contrast, the number of burdened renter households has increased over that period by 15,400.

HOUSING AFFORDABILITY

Percentage of Potential First-Time Homebuyers That Can Afford to Purchase a Median-Priced Home

Santa Clara and San Mateo Counties, San Francisco, Alameda County, Santa Cruz County, California, and the United States



Potential first-time homebuyers are less likely to be able to afford a median-priced home in the greater Silicon Valley area (24% in Santa Cruz County, 29% in Alameda County) than in California overall (38%) or in other parts of the state (such as Sacramento, 51%). In comparison, 61% of potential first-time homebuyers nationwide were able to afford a median-priced home in 2022.

Only 25% of potential first-time homebuyers living in San Mateo County can afford a median-priced home; this compares to 27% in Santa Clara County (down from 32% in 2021), 27% in San Francisco, 24% in Santa Cruz County (down from 30%), and 30% in Alameda County (down from 35%); meanwhile, a median-priced home may be even less affordable to those who currently live outside of the region — including the 28% of workers who commute in from neighboring counties.

*Includes Q1-3 | Data Source: California Association of Realtors | Analysis: Silicon Valley Institute for Regional Studies

PLACE

Housing

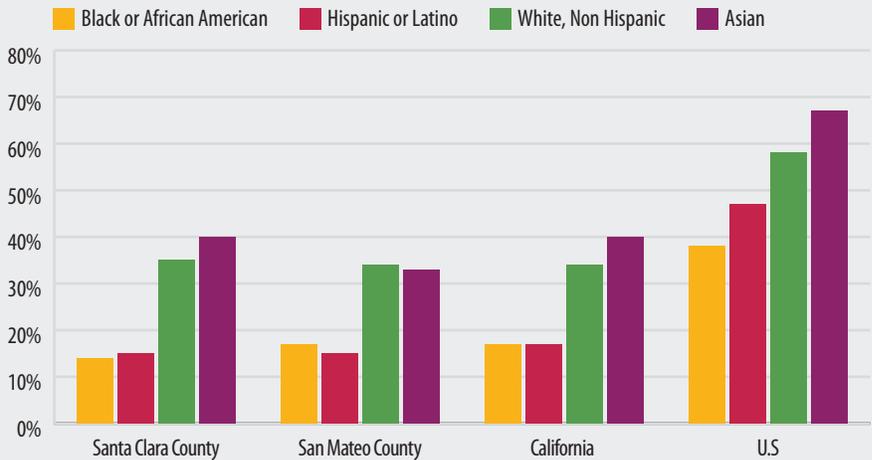
Between 2019 and 2021, there were incremental gains in the Home Affordability Index for Black or African American and Hispanic or Latino residents in Santa Clara and San Mateo Counties (+2-4 percentage points).

Deep disparities in housing affordability exist across racial and ethnic groups in Silicon Valley. In Santa Clara County, the Housing Affordability Index for Black or African American residents was 14% in 2021, compared to 32% overall; only 15% of potential first-time Hispanic or Latino homebuyers could afford a median-priced home, compared to 35% of White and 40% of Asian potential buyers. These disparities are also evident in estimates for San Mateo County, the state, and nation (though affordability rates are higher in the U.S).

HOUSING AFFORDABILITY BY RACE & ETHNICITY

Housing Affordability Index by Race & Ethnicity

Santa Clara & San Mateo Counties, California, and the United States | 2021

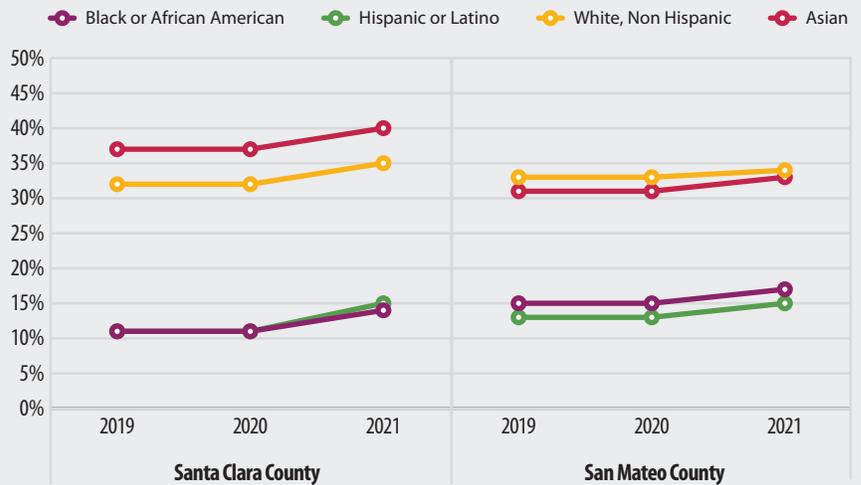


Data Source: California Association of Realtors | Analysis: Silicon Valley Institute for Regional Studies

HOUSING AFFORDABILITY BY RACE & ETHNICITY

Housing Affordability Index by Race & Ethnicity

Santa Clara & San Mateo Counties | 2019 - 2021



Data Source: California Association of Realtors | Analysis: Silicon Valley Institute for Regional Studies

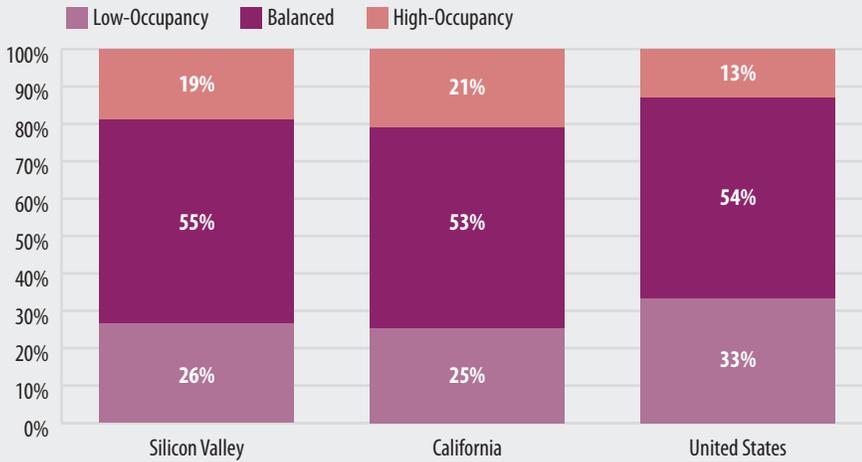
More than half (55%) of Silicon Valley's housing units are sized appropriately, in proportion to their occupants. Twenty-six percent are characterized by low-occupancy and potential underutilization (with more than one bedroom plus a spare room per occupant/couple), and 19% are at high-occupancy, potentially overcrowded (with two or more people per bedroom, excluding couples).

Both Silicon Valley and California overall had higher shares of high-occupancy housing units (19% and 21%, respectively in 2016-20) compared to the United States as a whole (13%).

OCCUPANCY CHARACTERISTICS

Share of Housing Units, by Occupancy Level

Santa Clara & San Mateo Counties, California, and the United States | 2016-2020



Data Source: United States Census Bureau, American Community Survey PUMS | Analysis: Silicon Valley Institute for Regional Studies

In 2021, Silicon Valley had approximately 59,600 potentially-available, vacant housing units (un-sold, un-rented, or otherwise reserved) containing a total of 120,400 bedrooms. The number of vacant units has increased by 70% since 2011.

Change in Vacant Housing Units

Santa Clara & San Mateo Counties, 2011 - 2021

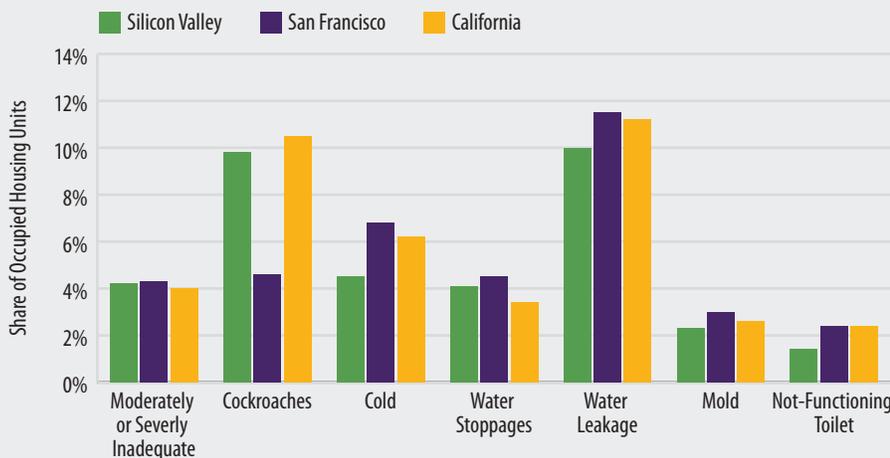
Units	+24,600 / 70%
Bedrooms	+44,600 / +59%

Note: Excludes units for migrant workers and those listed for sale. | Data Source: United States Census Bureau, American Community Survey PUMS Analysis: Silicon Valley Institute for Regional Studies

OCCUPANCY CHARACTERISTICS

Inadequate or Deficient Housing Units

San Jose-Sunnyvale-Santa Clara MSA, San Francisco-Oakland-Hayward MSA, and California | 2021



Data Source: United States Census Bureau, American Housing Survey | Analysis: Silicon Valley Institute for Regional Studies

An estimated one out of every 24 occupied housing units (4%) in Silicon Valley — based on data from the San Jose-Sunnyvale-Santa Clara MSA — are moderately or severely inadequate; that share rises to 6% (one in 17) for renter-occupied units.

Water leakage was an issue in 10% of all occupied units in Silicon Valley, along with cockroaches (10%) and heating issues (5%).

Approximately 4% of all occupied units in the San Jose and San Francisco MSAs, and California were considered moderately or severely inadequate in 2021, compared to other metro areas such as New York City (8%), Los Angeles (4%), Houston (10%), and Washington, D.C. (5%).

PLACE

Housing

One out of four Silicon Valley residents live in a multigenerational household; this share has been slowly rising over time, from one in five residents in 2007.

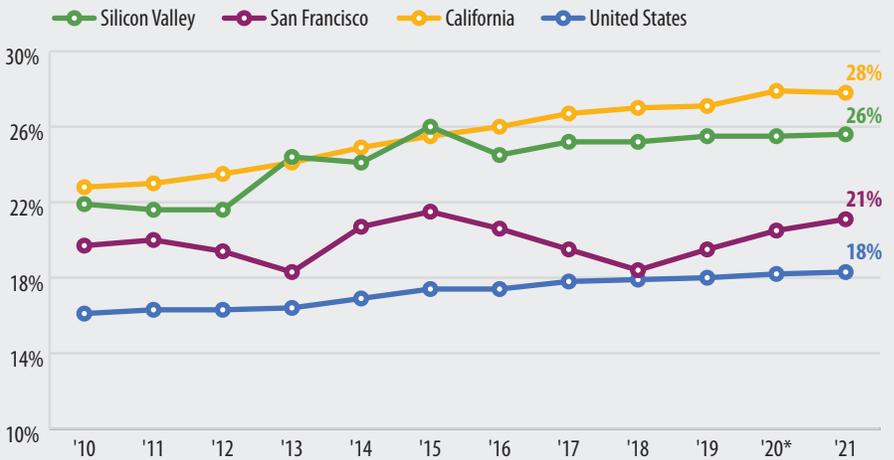
Living in multigenerational households is more common in Silicon Valley (26% of residents in 2021) compared to San Francisco (21%) — where residents are more likely to live with non-family members — or throughout the country as a whole (18%).

Increases in Silicon Valley multigenerational households over the past decade appear to coincide more closely with the influx of new residents from India and China, as well as the number of resident divorcees, than with monthly rental rates; while these early observations do not indicate causation, per se, they do intimate the relative importance of cultural and situational impacts over economic factors.

OCCUPANCY CHARACTERISTICS

Share of the Population Living in Multigenerational Households

Santa Clara & San Mateo Counties, San Francisco, California, and the United States



*2020 estimate from 1-year American Community Survey microdata with experimental weights. | Note: Multigenerational households include all households with two or more adult generations, where an adult is defined as age 25 and over.
Data Source: IPUMS-USA, University of Minnesota; Pew Research Center | Analysis: Kyle Neering; Silicon Valley Institute for Regional Studies; Pew Research Center

The share of young adults (ages 18-34) living with their parent(s) in Silicon Valley and statewide peaked in 2020 at approximately 37% and 40%, respectively; both estimates declined slightly in 2021, to 36% and 39%, respectively.

More than a third (36%) of all Silicon Valley young adults, ages 18-34, lived with their parent(s) in 2021; this compares to 17% in San Francisco, 39% in California as a whole, and an estimated 40% nationwide.

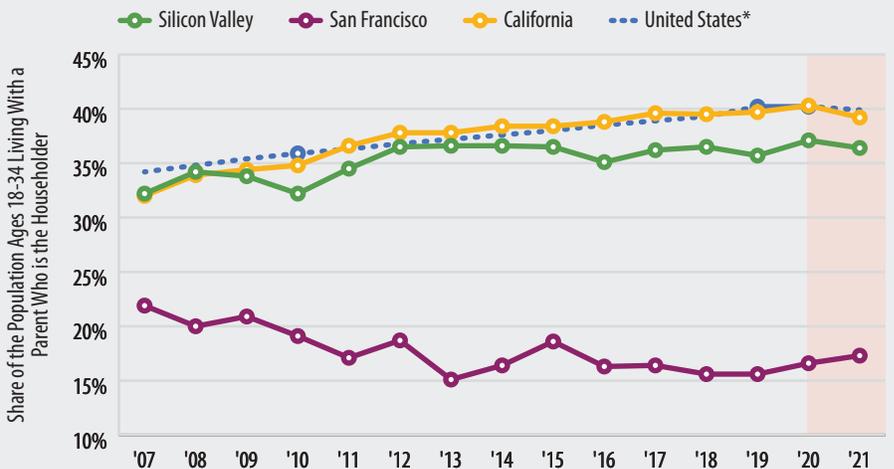
Nationally, 50% of a slightly younger cohort (ages 18-29) was estimated to live with a parent who is the householder in 2022 — a higher share than any other year in the dataset, back to 1976.⁵⁰

Nearly four in ten young adults (ages 18-34) in Silicon Valley live with their parent(s).

OCCUPANCY CHARACTERISTICS

Young Adults Living with a Parent

Santa Clara & San Mateo Counties, San Francisco, California, and the United States

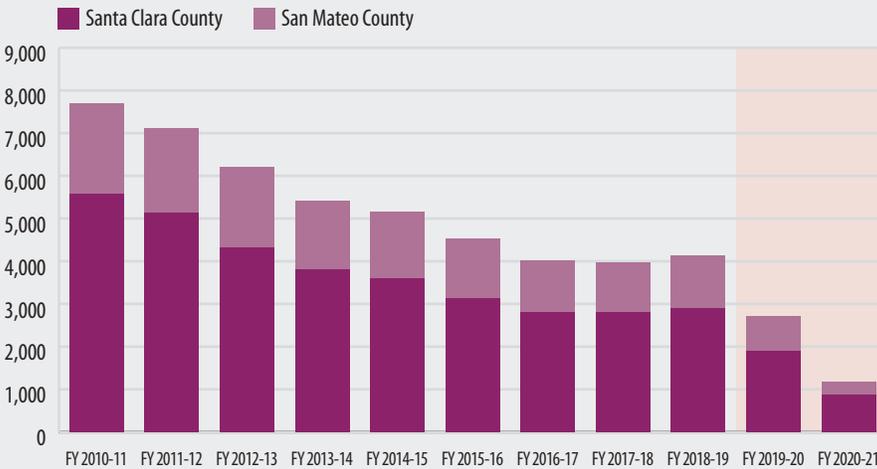


*estimated | Data Source: IPUMS-USA, University of Minnesota; Pew Research Center | Analysis: Kyle Neering; Silicon Valley Institute for Regional Studies

The total number of unlawful detainer evictions in Santa Clara and San Mateo Counties was 59% lower in FY 2020-21 than during the previous year (down by 4,700), representing the lowest on record over the past decade. Evictions have been steadily decreasing in the region since 2010, aside from a slight uptick in FY 2018-19; this trend is also evident in San Francisco.

HOUSING INSECURITY
Unlawful Detainer Evictions

Santa Clara & San Mateo Counties



In January 2021, more than 812,000 renter households throughout California were behind on their rent (down from 1.1 million one month prior), approximately 80% of whom had lost some employment income due to the pandemic. More than three-quarters of those behind on rent earned less than \$50,000, and 77% identified as people of color.⁵¹

Data Source: Judicial Council of California | Analysis: Silicon Valley Institute for Regional Studies

HOMELESSNESS
Homeless Population Share and Percentage Sheltered/Unsheltered

Santa Clara & San Mateo Counties



In 2022, 74% of Silicon Valley's homeless population was unsheltered, the second highest over the past decade (with the exception of 2019, at 79%). In total, there were an estimated 11,836 homeless residents in Santa Clara and San Mateo Counties combined, including 1,046 unsheltered/unaccompanied youth under age 18. In comparison, San Francisco had a homeless population of 7,754 in 2022.

Nine out of ten Santa Clara and San Mateo County residents believe homelessness in the region is a serious problem.⁵²

Data Sources: County of San Mateo, Human Services; County of Santa Clara, Office of Supportive Housing; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

PLACE

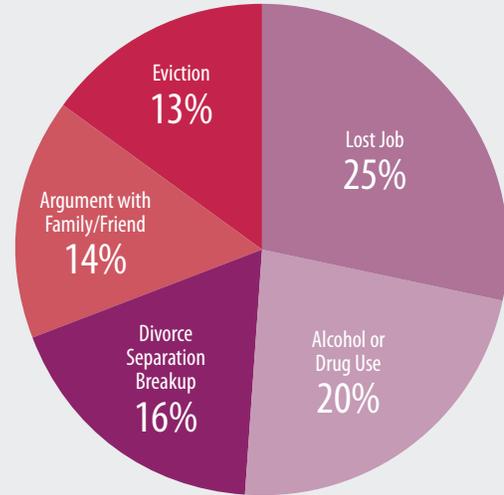
Housing

Thirty percent of the homelessness in Santa Clara County was prompted by an argument or breakup — an argument with a family member or friend (14%), or divorce/separation/breakup with a significant other (16%); 38% was due to lost jobs or evictions, and 20% sited alcohol or drug abuse.

HOMELESSNESS

Primary Causes of Homelessness

Santa Clara County | 2021



Data Sources: County of San Mateo, Human Services; County of Santa Clara, Office of Supporting Housing
Analysis: Silicon Valley Institute for Regional Studies

In response to the disproportionate impact of the pandemic on those at-risk of homelessness, federal Coronavirus Relief Funds (plus state General Funds and philanthropic dollars) were made available to local public agencies^a to repurpose motels, hotels, and other types of buildings for housing/housing assistance. Several local projects were funded during the first round of Project Homekey, and additional projects received funding in Round 2; in total, nearly 1,500 units in Santa Clara and San Mateo Counties had been funded as of November 2022.

a. by the the California Department of Housing & Community Development

Number of Units Funded through Project Homekey, by Funding Round

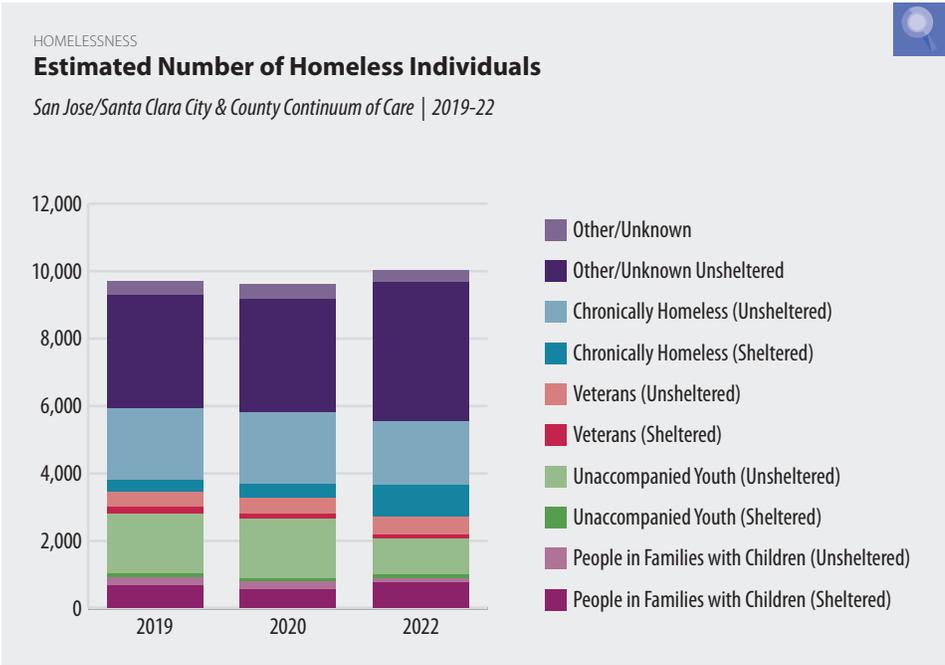
for interim and permanent housing

	Round 1	Round 2
San Mateo County	169	335
Santa Clara County	362	631
San Francisco	342	406
Alameda County	413	616
Rest of Bay Area	341	118
Rest of State	4,284	4,757
Total	5,911	6,863

Data Source: State of California Department of Housing & Community Development | Analysis: Silicon Valley Institute for Regional Studies

Youth and young adults^a (1,050) accounted for 12% of Santa Clara County's unsheltered homeless population last year.

a. Including youth (under age 18) and young adults (ages 18-24) without a parent or guardian.



Homelessness continues to be an issue for the region, the state, and the nation. In 2022, nearly 600,000 people were experiencing homelessness throughout the country. Despite investments in shelters/housing options, the population of unsheltered homeless rose by 3% while the number of people utilizing shelters fell by 2%.⁵³

Data Sources: U.S. Department of Housing and Urban Development; County of Santa Clara Office of Supportive Housing | Analysis: Silicon Valley Institute for Regional Studies

The number of chronically homeless individuals —those who have experienced homelessness for one year or more — has increased in Santa Clara County over the past three years to more than 2,800 people in 2022; more than two-thirds of them were unsheltered. Families with children experiencing homelessness increased in shelters while decreasing in unsheltered environments.

PLACE

Transportation

The pandemic and related shifts in workplace preferences, policies, and enabling technologies have vastly changed the region's commuter behavior, traffic delays, transportation-related collisions, and the propensity to take public transit.

Overall vehicle miles traveled on Silicon Valley freeways remain only slightly below pre-pandemic totals despite double-digit increases in the share of employed residents working from home (from 5-10% before the pandemic, to 35% in 2021). The total number of *megacommuters* (driving more than three hours daily to/from work) into Silicon Valley remained at 65% below pre-pandemic levels in 2021, with the largest change for those

who commuted by carpool, bus, train, or other means aside from driving alone.

Public transit ridership was already declining prior to the pandemic, when it fell sharply; estimates for 2022-23 fiscal year ridership indicate little recovery, with a regional average of 10 rides per person per year. Even private shuttle transportation remains depressed, as indicated by the number of common shuttle-type buses with DMV registrations (and likely contracts) shifting out of

the region, and the rising number of them being put out of service.

Why is this important?

Adequate highway capacity and improved transportation options, both public and private, are important for the mobility of people and goods. Investments in public

transportation, walking and bicycling infrastructure, along with improving automobile fuel efficiency and shifting from fossil fuels to electric vehicles, are important for meeting air quality and carbon emission reduction goals.

While freeway VMT has been increasing steadily in Silicon Valley since the Great Recession economic recovery began in 2010, estimates of the total number of miles driven per resident (on all public roadways) has slowly fallen year after year from 8,700 miles annually in 2011 to 7,900 in 2019 — indicating that VMT increases are primarily commuter-driven.

Average monthly freeway driving remained around 5% lower than pre-pandemic (2019) levels in the second half of 2022; this compares to 4% throughout the Bay Area, and 1% statewide.

Pandemic-related transportation declines throughout the region led to fewer freeway miles driven than any other time on record^a in April 2020; statewide, monthly VMT per capita was reduced to levels not observed since 2006.

a. At least 17 years, the length of the Caltrans Freeway Performance Measurement System monthly VMT dataset.

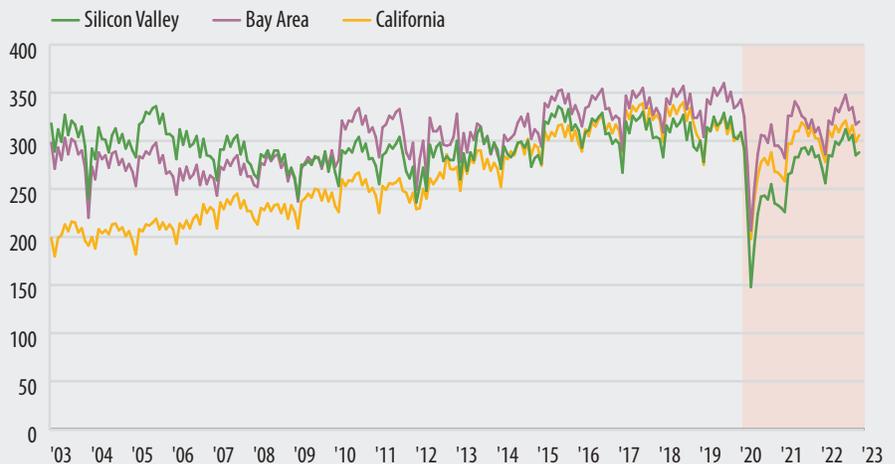
Silicon Valley's pre-pandemic VMT on all types of roadways (not just freeways) was 22 miles per person per day in 2019 (compared to nine miles in San Francisco, and 23 miles per person in Alameda County and statewide).³ In 2020, Silicon Valley all-road VMT fell by 15% to 18 miles/person/day.

a. Based on Caltrans Highway Performance Monitoring System (HPMS) data.

VEHICLE MILES TRAVELED

Monthly Freeway Vehicle Miles Traveled Per Capita

Santa Clara & San Mateo Counties, Bay Area, and California



Data Sources: Caltrans PeMS; California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

In 2022, Silicon Valley residents averaged approximately 3,500 freeway miles driven — 6% more than the prior year, and 5% below the 2019 (pre-pandemic) average.

Further, creating safe conditions for active modes of transportation, such as biking and walking, is important for helping residents get around within the region as well as promoting healthy lifestyles and enhancing quality of life. These modes became especially critical during the pandemic, with many people looking for alternatives to indoor exercise and public transit.

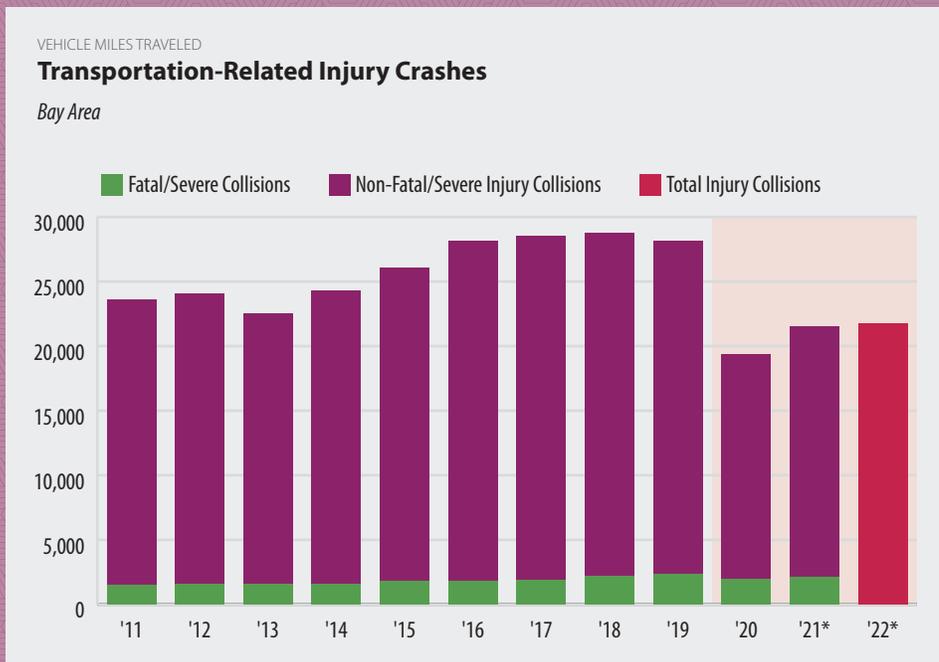
Creating affordable housing close to jobs can cut or eliminate commutes. How much residents are driving their cars, how they commute, and changes in overall commuting behavior affect congestion on the region's roadways. Transportation-related injuries, including deaths, are significantly reduced with declines in regional vehicle miles

traveled (VMT), an indicator of collision exposure. And the amount of time wasted due to long commutes and traffic delays affects the everyday lives of our residents — taking time away from work, participating in the community, and being with family and friends.

In 2022, San Mateo and Santa Clara Counties combined experienced approximately 8,200 transportation-related injury crashes, representing a 5% increase over the prior year. These injury crashes included 503 involving a bicyclist, and 583 involving a pedestrian.

Bay Area^a speeding-related fatalities and injuries declined by 38% in 2020, and remained at 31% below pre-pandemic (2019) levels in 2022; there were more than 900 DUI crashes that year (up 12% year-over-year).

a. Including Alameda, Contra Costa, Marin, Santa Clara, San Francisco, and San Mateo Counties. DUI crashes are injury crashes for which the police reported the Primary Collision Factor as Driving or Bicycling Under the Influence of Alcohol or Drugs.



*2021-22 data are provisional and subject to change; 2022 data are from Statewide Integrated Traffic Records System (SWITRS). | Note: Bay Area includes Alameda, Contra Costa, Marin, Santa Clara, San Francisco, and San Mateo Counties. Vehicle miles traveled are considered a measure of exposure to transportation-related vehicle crashes. | Data Sources: California Highway Patrol, SWITRS; Transportation Injury Mapping System (TIMS) | Analysis: Silicon Valley Institute for Regional Studies



As a result of pandemic-related declines in vehicle miles traveled (an indicator of collision exposure), the number of transportation-related injury crashes throughout the Bay Area^a declined significantly in 2020 – down 38% year-over-year, with 15% fewer fatal/severe injury collisions (and 3% fewer fatalities); the number of transportation-related injury crashes subsequently increased by 11% in 2021 and another 1% in 2022, while remaining well below pre-pandemic levels (-23%).

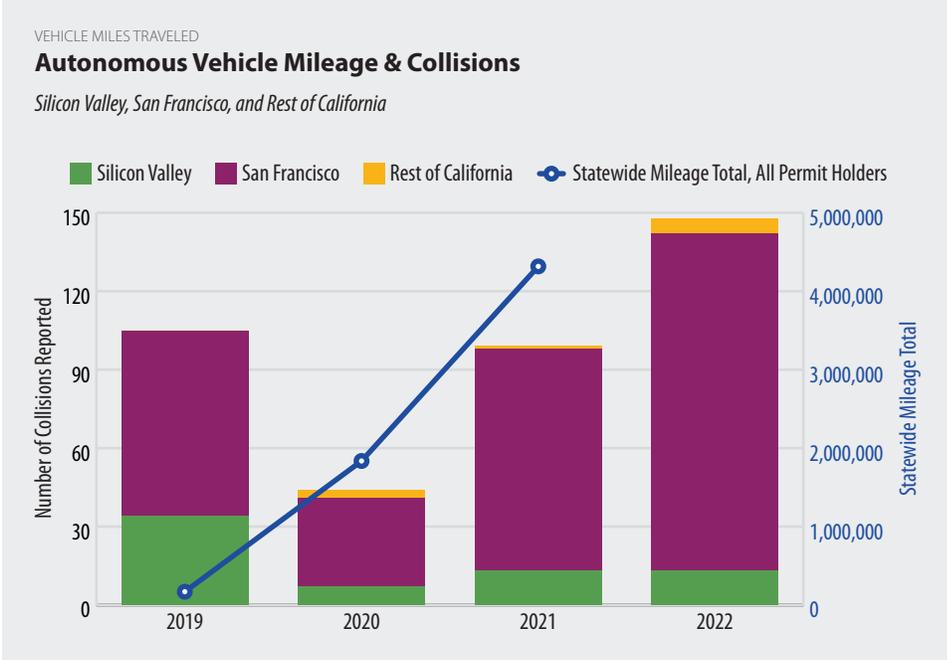
a. Including Alameda, Contra Costa, Marin, Santa Clara, San Francisco, and San Mateo Counties.

Of the 13 Silicon Valley AV crashes reported in 2022, three occurred in autonomous mode (i.e., without disengagement by a driver) including one where the AV was rear-ended at a stop; of the 129 San Francisco AV crashes in 2022, eight were rear-ended at (or coming to a) stop, and 82 occurred in autonomous mode.

Of the 148 reported autonomous vehicle (AV) collisions statewide in 2022, 102 (69%) were reported by just two of the state's 43 permit holders; 21 of those 102 crashes included non-fatal injuries.

Among the state's 43 autonomous vehicle testing permit holders (as of December 2022) are Silicon Valley-based Apple, Waymo (an Alphabet subsidiary⁵⁶), Zoox (acquired by Amazon in June 2020⁵⁷), Fremont-based Pony.ai, and Mountain-View based autonomous delivery company, Nuro. San Francisco-based Lyft no longer holds a permit with the state — the company sold its autonomous vehicle unit to permit-holder Woven Planet (a Toyota subsidiary) in 2021.⁵⁸

Between 2020 and 2021, both the total number of miles traveled as well as the number of collisions reported by California's 43 AV testing permit holders doubled; the number of collision-related injuries nearly tripled year-over-year.



Note: Miles traveled is a statewide total across all permit holders; 2022 autonomous vehicle miles traveled not yet available. | Data Source: California Department of Motor Vehicles | Analysis: Silicon Valley Institute for Regional Studies

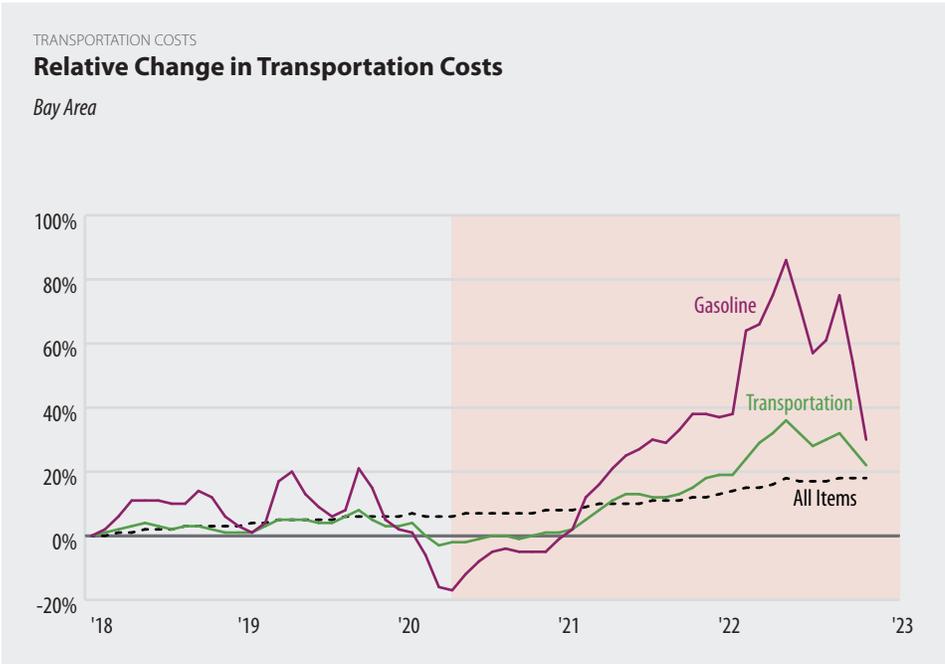
The 99 AV-testing crashes reported statewide in 2021 resulted in an estimated collision rate of one per 43,600 vehicle miles driven — nearly 13 times higher than the national average automobile collision rate (one every 553,000 miles)⁵⁴ and more than 100 times higher than the Tesla autopilot collision rate of one per 6.26 million miles.⁵⁵

Autonomous vehicles being rear-ended at a stop accounted for one in 20 AV-testing crashes reported statewide in 2022.

Since much of the 2022 autonomous vehicle testing took place in San Francisco and Silicon Valley, a large share of the collisions and collision-related injuries reported did as well (96% and 100%, respectively). Of the 27 AV collision-related injuries, four involved bicyclists, one a motorcyclist, and another a person riding an electric scooter.

Transportation costs have increased by 40% in Silicon Valley since 2018; this compares to the regional inflation rate over that same period^a for All Items (+15%), Gasoline (+48%), and Transportation overall (+25%) which includes gas in addition to the cost of vehicles, airfares, and motor vehicle insurance.

a. Based on annual averages.



Note: Family of four is based on a two-adult household. California represents a statewide county-average. | Data Sources: Center for Women's Welfare, University of Washington; California Department of Finance; U.S. Bureau of Labor Statistics | Analysis: Silicon Valley Institute for Regional Studies

Average Monthly Costs of Transportation Needs

for a Family of Four

Santa Clara & San Mateo Counties, Bay Area, and California

	2018	2022	2018-2022 % Change
Silicon Valley	\$526	\$739	+40%
Bay Area	\$470	\$653	+39%
California	\$519	\$663	+28%

Transportation costs were higher in Silicon Valley for a family of four (approximately \$8,900 annually) than in the Bay Area (\$7,800) or California overall (nearly 8,000) in 2022.

The cost of basic transportation needs for a Silicon Valley family of four (with two-adults, two-children) was nearly \$8,900 per year in 2022.^a If both adults worked minimum-wage^b jobs, that amount would add up to approximately 14% of their pre-tax household income.

a. For a two-adult household sharing one car, and only driving to work and school/daycare plus one errand per week.

b. At the 2022 statewide minimum wage for employers with more than 25 employees (\$15.00/hour), assuming year-round full-time work.

PLACE

Transportation

Between 2010 and 2021, the share of Silicon Valley commuters utilizing public transportation declined by three percentage points (from 5% to 2%) and number of those commuters was cut in half (from around 56,700 on most weekdays to 25,300); this decline was slightly more pronounced for bus than rail.

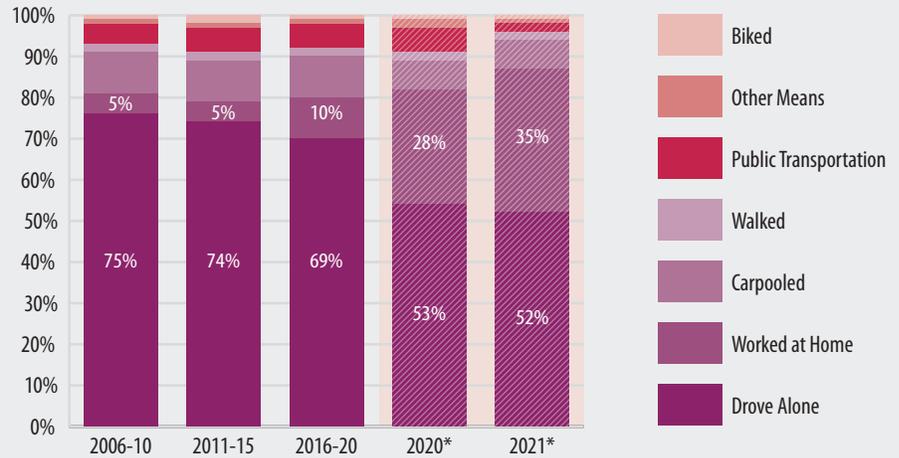
The way Silicon Valley residents get to work changed dramatically in 2020, with a much higher share working from home (28%) which not only persisted into 2021 but increased in share (to 35%).

Between 2006 and 2020, the share of Silicon Valley commuters driving alone to work declined by six percentage points to 69%; estimates for 2020 and 2021 indicate a drop to 53% and 52%, respectively, due primarily to the steep rise in remote work.

COMMUTING

Means of Transportation to Work

Santa Clara & San Mateo Counties



*2020 and 2021 from 1-Year American Community Survey microdata (2020 with experimental weights) | Note: Other Means includes taxicab, motorcycle, and other means not identified separately within the data distribution. | Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Average commute times for Santa Clara and San Mateo Counties residents — which had steadily been on the rise prior to the pandemic — fell in 2020^a and again in 2021 to approximately 48 minutes per commuter daily. In combination with a declining number of commuters on the road each weekday (from 1.2 million in 2016-20 to an approximately 850,000 in 2021), this drop may have saved Silicon Valley workers 136 million hours of collective drive-time.^b

a. Based on the limited data available.

b. Assuming they commuted five days per week.

COMMUTING

Mean Commute Times and Number of Commuters

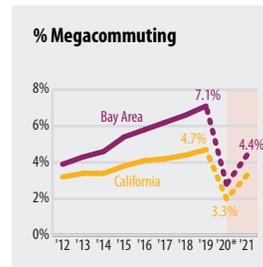
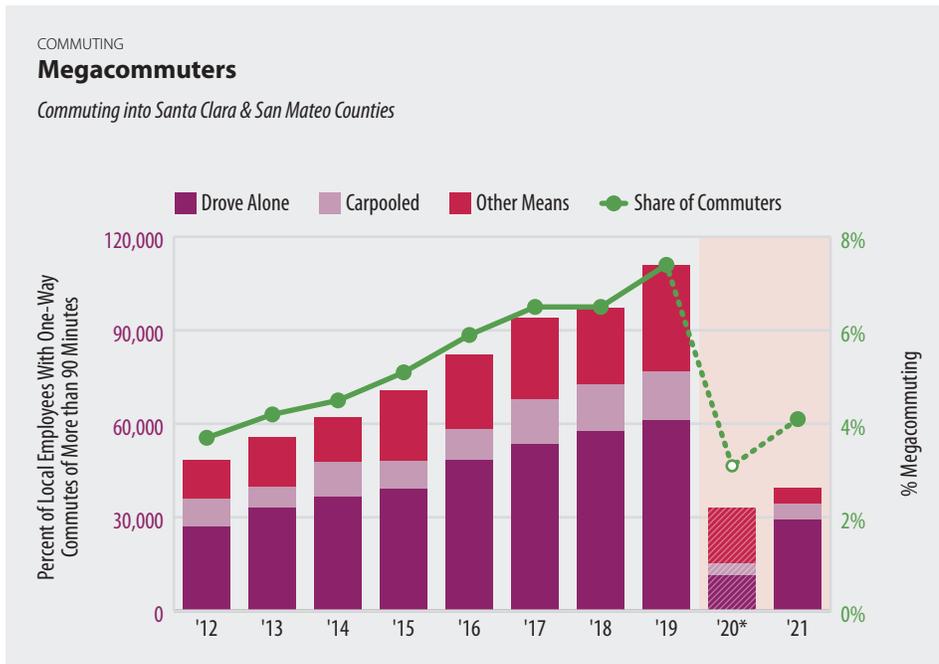
Santa Clara & San Mateo Counties



*2020 and 2021 from 1-Year American Community Survey microdata (2020 with experimental weights) | Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

In 2021, 34% of Bay Area megacommuters (workers commuting more than three hours daily to/from work) worked in either Santa Clara or San Mateo County.

Megacommuting rates were still well below pre-pandemic numbers in 2021 with 72,000 fewer commuting to jobs in Silicon Valley (-65%), 157,000 fewer working in the Bay Area (-57%), and 363,000 fewer throughout the state (-44%).



Workers commuting more than three hours daily to/from work in Santa Clara or San Mateo Counties had an estimated average commute time of 4.4 hours daily in 2020; this compares to 3.7 hours in 2019 and 3.8 hours in 2021.

*2020 estimate from 1-year American Community Survey microdata with experimental weights. | Data Source: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

Of the megacommuters driving more than three hours daily to/from work in Silicon Valley over the past decade, consistently more than half were driving alone; that share decreased to an estimated 35% in 2020, then rose precipitously to 75% in 2021. The remaining megacommuters either carpooled (13%), took a train or bus (8%), or commuted by other means.

Prior to the substantial changes in commute patterns that took place at the onset of the pandemic in 2020, megacommuting rates into Silicon Valley had increased steadily in the region since the beginning of the Great Recession economic recovery period (4% in 2010 to more than 7% in 2019).

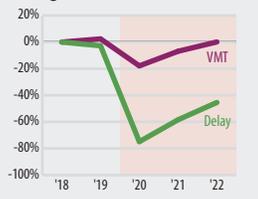
PLACE

Transportation

The number of commuters traveling between San Francisco or San Mateo County and Alameda County — who would presumably cross either the Bay Bridge or the San Mateo-Hayward Bridge — declined by 55% between 2019 and 2021; bridge traffic data, however, reflected a lesser (-20%) relative decline in congestion-related delays over that period (and a -10% change in vehicle miles traveled).^a

a. Based on Vehicle Miles Traveled (VMT) and Vehicle Hours of Delay for the Bay Bridge (westbound I-80) and San Mateo-Hayward Bridge (SR-92 westbound) combined, from Caltrans Performance Measurement System (PeMS).

% Change in Inbound Bridge Traffic



Note: 2020 data represent estimates from the 1-year PUMS with experimental weights.

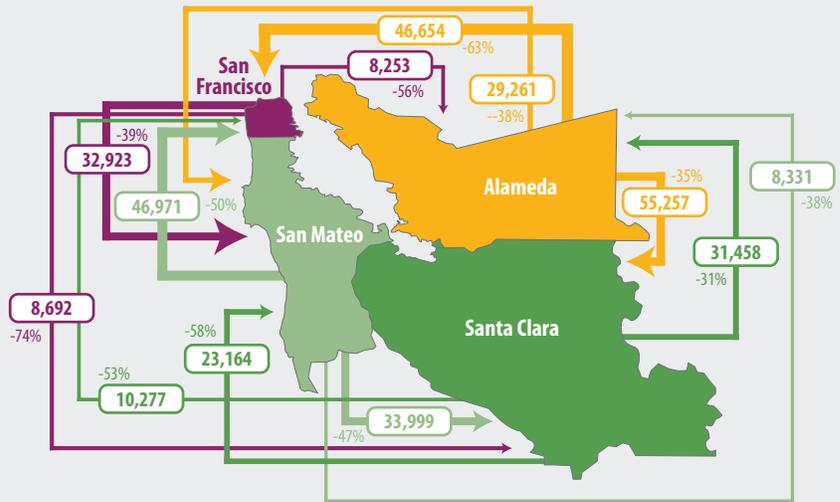
Prior to the pandemic, there were around 175,000 Silicon Valley residents commuting to San Francisco or Alameda County on an average weekday, and 219,000 commuters going the other way; by 2021, those numbers declined by an estimated 44% and 42%, respectively.

The most pronounced declines in greater Silicon Valley commute paths since pre-pandemic were for San Francisco residents working in Santa Clara County (-74% from 2019 to 2021) and Alameda County residents working in San Francisco (-63%).

COMMUTING

Greater Silicon Valley Commute Patterns

2021 and percent change since pre-pandemic (2019)



Note: Percent change in inbound bridge traffic includes Vehicle Miles Traveled (VMT) and Vehicle Hours of Delay for the Bay Bridge (westbound I-80) and San Mateo-Hayward Bridge (SR-92 westbound) combined. | Data Source: United States Census Bureau, American Community Survey PUMS | Analysis: Jon Haveman, Marin Economic Consulting; Silicon Valley Institute for Regional Studies

Overall, nearly 13% of Santa Clara County residents ride a bike during an average week for one reason or another.⁵⁹ Men are slightly more likely to ride a bike for exercise or recreation (10% compared to 6% of women), whereas women are much more likely to ride because the environment is “very important” to them (57% compared to 39% of men). Among other characteristics of those surveyed, those who are most likely to ride a bike for any purpose include young adults (15% of those ages 35-49), people born outside of California (11% from other parts of the United States and 16% of those from a foreign country), those with a bachelor’s degree or higher (14%), and White residents (14%).

Although the long-term trend over the two decades leading up to the pandemic showed a doubling of the number of Silicon Valley residents who commuted by bicycle to work, in 2021 that number dropped to pre-2007 levels, presumably due to more people working remotely. In 2021, over 12,500 residents commuted to work by bike, a decline of 42% from 2019.

Number of Bicycle Commute Trips		
Santa Clara & San Mateo Counties		
2003	2021	% Change
18,572	25,174	36%

The rate of bicycle accidents in Silicon Valley has increased by 16% since 2015.

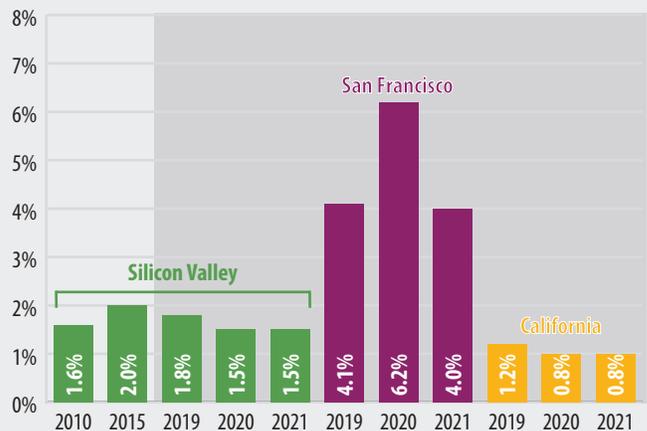
The number of residents commuting to work by bike has decreased to pre-2007 levels after two decades of growth. A record number of people are working from home — more than 450,000 in Silicon Valley — an increase of nearly 650% from 2019.

While only one percent of Silicon Valley commuters bike to work, greater shares of Santa Clara County residents bike for other reasons on an average week — including reaching any destination (7%, including to transit stops) or for exercise or recreation (9%) in 2020, pre-pandemic.⁶⁰

BICYCLING

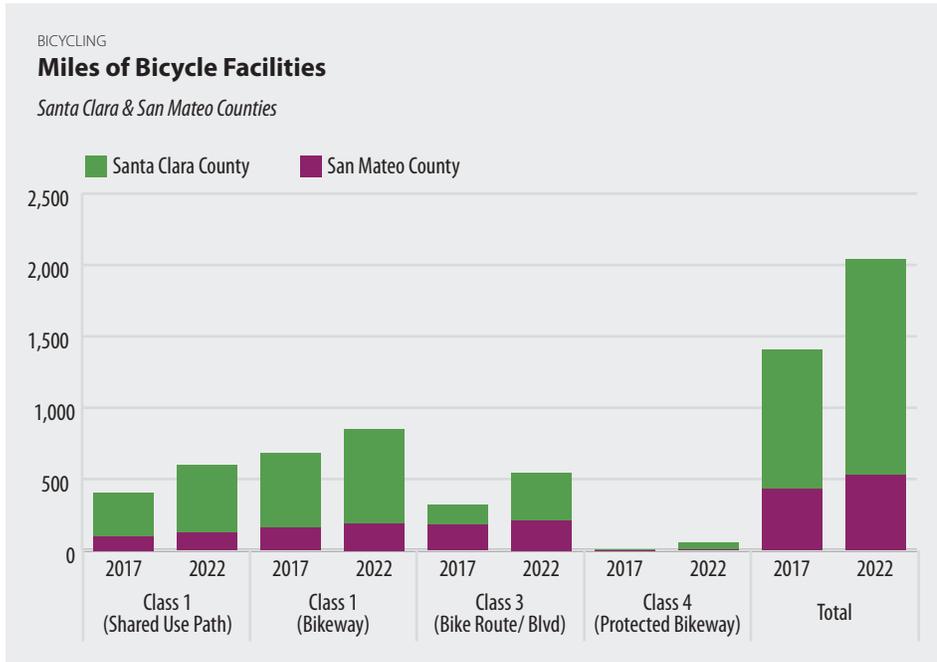
Share of Commuters Who Bike to Work

Santa Clara & San Mateo Counties, San Francisco, and California



Note: Share excludes those who Work at Home. | Data Sources: United States Census Bureau, American Community Survey | Analysis: Silicon Valley Institute for Regional Studies

The collective mileage of bikeways throughout Santa Clara and San Mateo counties has increased by 45% (approximately 640 miles) over the past three years alone, reaching a total of over 2,000 miles of shared use paths for biking, dedicated bikeways, bike boulevards, and protected bikeways in 2022.

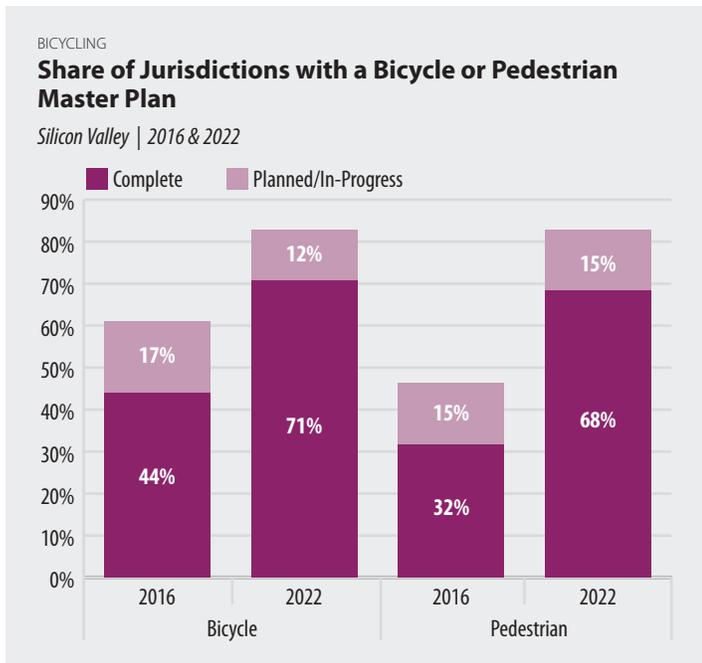


Since 2016, Silicon Valley has gone from having zero protected bikeways — the “gold standard” for bicyclists’ comfort and safety — to having over 50 miles in 2022 (nearly all of which have been added since 2017). Based on a pre-pandemic 2020 survey of Santa Clara County residents,⁶¹ more than three-quarters (81%) of respondents are comfortable biking on an off-street path, and slightly more than half are comfortable biking in a buffered bike lane or lane with vertical posts (compared to only 35% in a regular bike lane with a road speed limit of 25 miles per hour, and 11% with 45 mile-per-hour speed limits).

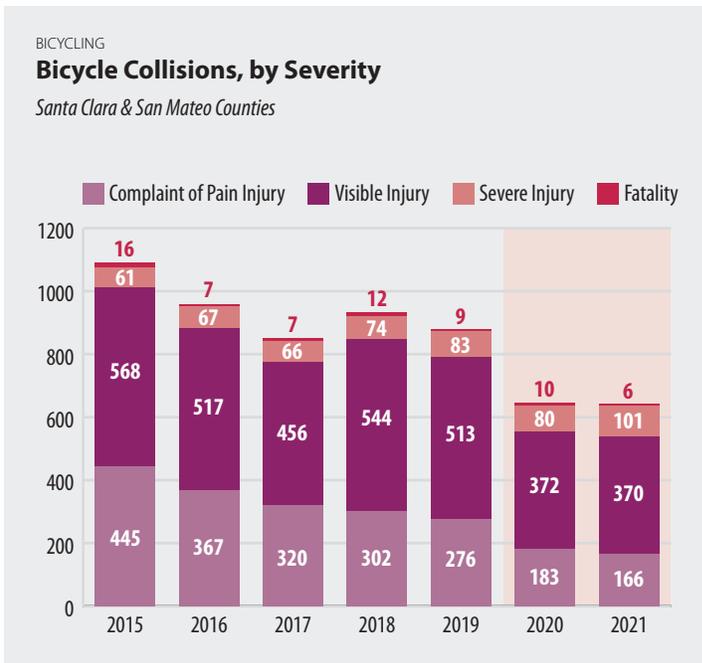
Data Source: Silicon Valley Cities; Metropolitan Transportation Commission; Santa Clara Valley Transportation Authority; Google Maps; Nelson\Nygaard Consulting Associates | Analysis: Silicon Valley Institute for Regional Studies; Nelson\Nygaard Consulting Associates

More than 80% of Silicon Valley cities and counties have a Bicycle Master Plan in place, in the planning stage, or in-progress; this share is up from 61% in 2016.

Silicon Valley had 643 bicycle collisions in 2022 resulting in either injury or death (two fewer than the prior year); six were fatalities, and 101 were severe injuries.



Note: Data includes all bicycle and pedestrian master plans created since 2011.
Data Source: Silicon Valley Cities & Counties | Analysis: Silicon Valley Institute for Regional Studies



Data Source: Statewide Integrated Traffic Records System (SWITRS); Transportation Injury Mapping System (TIMS)
Analysis: Silicon Valley Institute for Regional Studies

PLACE

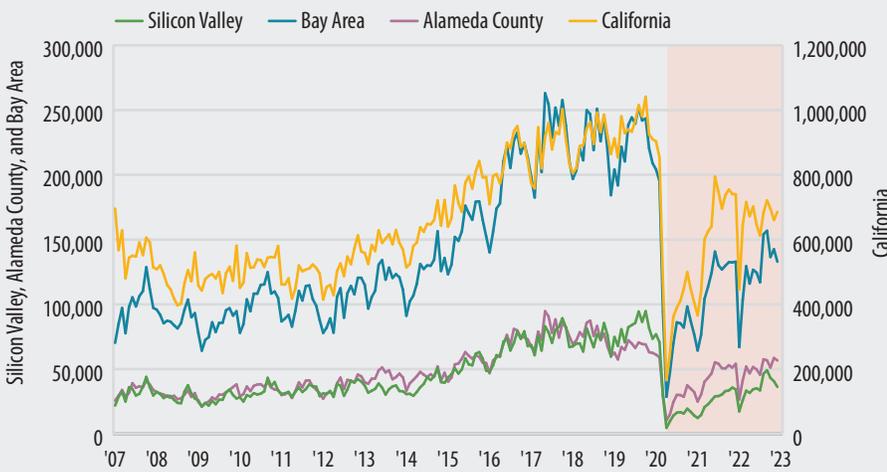
Transportation

While traffic delays on Silicon Valley and Bay Area freeways have risen significantly since the pandemic-low (April 2020), 2022 daily averages remained well below that of pre-pandemic (2019) levels — by 56% in Silicon Valley, 25% in Alameda County, 45% throughout the Bay Area, and 31% statewide.

TRAFFIC CONGESTION

Daily Vehicle Hours of Delay Due To Congestion

Santa Clara & San Mateo Counties, Alameda County, Bay Area, and California



Data Source: Caltrans PeMS | Analysis: Silicon Valley Institute for Regional Studies

In 2022, Silicon Valley commuters lost 35,600 hours to traffic congestion every day — 33% more than the prior year, but 56% fewer than pre-pandemic (2019). With the drastic declines of 2020 through 2022 combined, the annual loss in regional productivity due to traffic delays^a may have been lessened by as much as \$6.7 billion over a three-year period (from as much as \$3.7 billion lost in 2019 to \$1.3 billion in 2020, \$1.4 billion in 2021, and \$1.9 billion in 2022).

a. In 2022 dollars, based on annual estimates of labor productivity (\$144 per employee per hour in 2022, \$147 in 2021, \$137 in 2020, and \$126 in 2019).

More than two-thirds of Bay Area residents surveyed feel that traffic congestion is a serious issue. Among those who are most likely to rate the issue as serious are those who grew up in the Bay Area or elsewhere in California, whose highest level of educational attainment is less than a Bachelor's degree, rate the Bay Area economy in fair or poor condition, have incomes in the \$35,000 to \$75,000 range, and have no one in their household who works in tech.

Prior to pandemic-related declines in traffic congestion, vehicle hours wasted due to traffic in Silicon Valley and the Bay Area had tripled within a decade (2009-2019); most of that precipitous rise occurred since 2014.

There were significantly fewer traffic delays in the earliest months of the pandemic, with sharp declines experienced between February and April 2020 in Silicon Valley (-93%), Alameda County (-82%), the Bay Area overall (-85%), and statewide (-81%). Subsequent rebounding of Silicon Valley traffic delays through December 2022 have resulted in an 8x rise since the pandemic-low (compared to 5x in Alameda County, 5x in the Bay Area, and 4x in California).

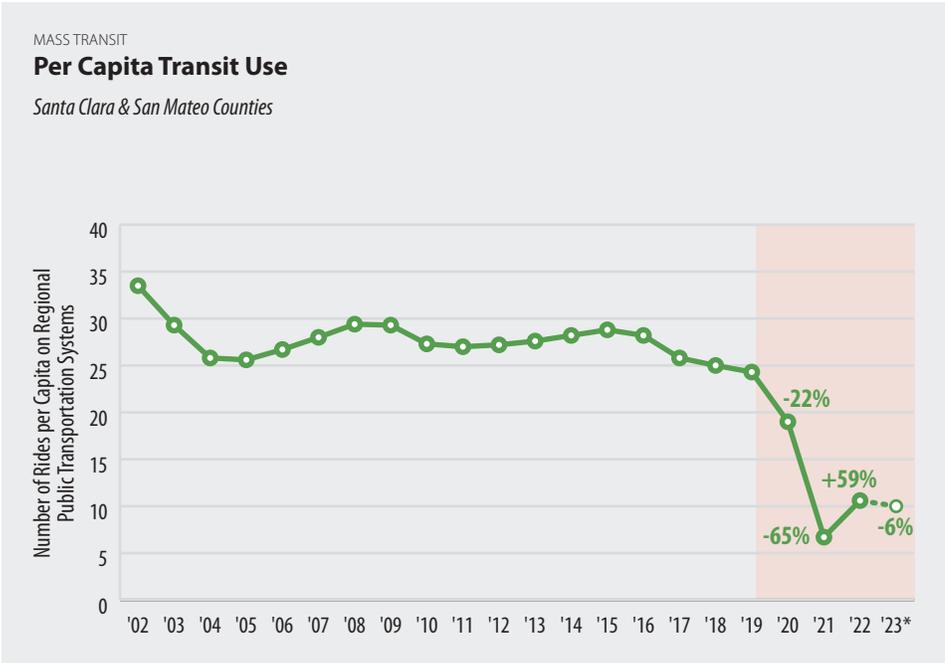
% Think Traffic Congestion is a Serious Issue

Bay Area | 2022

Women ages 65+	76%
Likely to move within next few years	75%
Income \$35,000 - \$75,000	74%
High school diploma, some college, or Associate's degree	72%
Think Bay Area economy is in fair or poor condition	72%
Spent youth primarily in California	71%
No one in the household works in tech	70%
Overall	68%
Men ages 65+	67%
Income \$250,000+	66%
Bachelor's degree or higher	63%
Unlikely to move within next few years	63%
Work in tech	62%
Spent youth primarily outside of California	60%
Think Bay Area economy is in excellent or good condition	59%

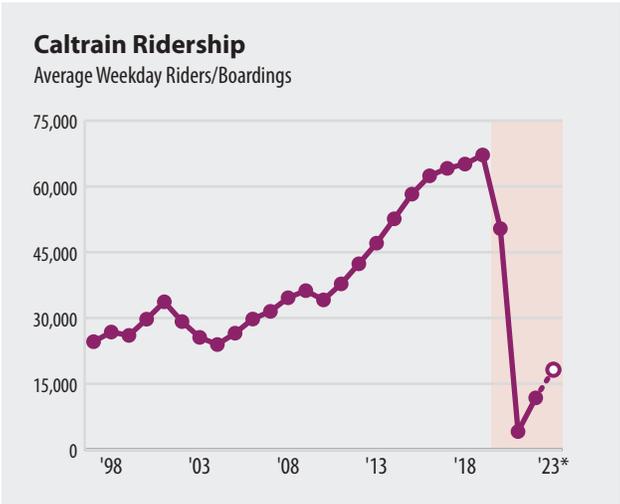
Data Source: Silicon Valley Poll (www.jointventure.org/svpoll)

Silicon Valley's public transit use per capita declined steadily for four years prior to the pandemic, then fell dramatically by 22% year-over-year in 2019-20 with the pandemic affecting the last several months of that fiscal year. Early estimates for FY 2022-23 put ridership at an average of ten rides per person, per year.



*estimated | Note: Transit data are in fiscal years. Regional per capita ridership is based on the populations of Santa Clara and San Mateo Counties combined. Data Sources: Altamont Corridor Express, Caltrain, SamTrans, Santa Clara Valley Transportation Authority, California Department of Finance | Analysis: Silicon Valley Institute for Regional Studies

Public transit ridership dropped to only a fraction (35%) of pre-pandemic levels in the 2020-21 fiscal year. While they came up slightly during the following year, 2022-23 estimates suggest that ridership remains low (at around 41% of pre-pandemic levels).

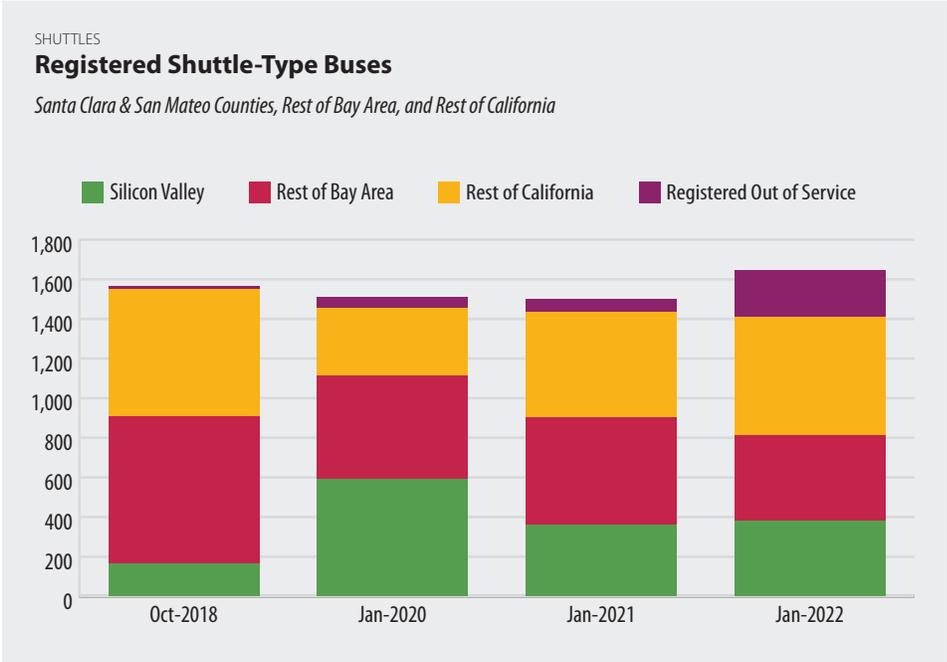


Average weekday ridership on Caltrain — which reached more than 67,000 daily in FY 2018-19 — dropped down to a mere 4,100 in FY 2020-21 (a -92% year-over-year decline). Ridership increased to nearly 11,800 daily in FY 2021-22 and 18,200 in the first five months of the 2021-23 fiscal year, but remained at less than one third of pre-pandemic levels.

*based on data through November. | Note: Data are in fiscal years. Data Source: Caltrain | Analysis: Silicon Valley Institute for Regional Studies

An increasing number of shuttle-type buses were put out of service over the past several years, including 64 in 2020 and 239 in 2021 (statewide).^a

a. As reflected in the January 2021 and January 2022 vehicle registration files, respectively.



Note: Includes common shuttle bus manufacturers. | Data Source: California Department of Motor Vehicles | Analysis: Silicon Valley Institute for Regional Studies

Prior to the pandemic and related increase in remote work, there were approximately 1,450 shuttle-type buses^a registered throughout the state. While not all of these vehicles were necessarily privately-operated commuter shuttles, the number of registrations by model year illustrates the growth of this transportation mode.

a. Including those commonly used for private commuter operations, as of January 2020.

The share of California's shuttle-type buses registered in Silicon Valley cities fell dramatically from 41% immediately prior to the start of the pandemic (January 2020) to 25% in January 2021; it rose very slightly to 27% in January 2022. This *may* reflect year-to-year contractual changes between Silicon Valley companies and shuttle-bus owners elsewhere, influenced by the limited number of in-person workers throughout the pandemic.

Since immediately prior to the pandemic, the number of shuttle-type buses registered to Silicon Valley users has declined by more than 210 (down 36% from January 2020 to January 2022); this decline is on par with the drop in commuters traveling to work most days of the week (-32%).

Of the more than 1,400 shuttle-type vehicles registered in California (as of January 2022), 58% were registered within the 9-county Bay Area (27% in Silicon Valley). Prior to the pandemic-related rise in remote work, private shuttles represented the Bay Area's sixth largest mass transit system, with annual ridership higher than SamTrans.^a

a. Joint Venture Silicon Valley, 2022 *Silicon Valley Index*. Based on transit ridership data from Bay Area transit agencies and the American Public Transportation Association (APTA), and shuttle trip data from the Bay Area Council and Metropolitan Transportation Commission, preliminary results from the 2019 Bay Area Shuttle Census (including the number of private shuttles traveling between Bay Area and adjacent counties each day).

PLACE

Land Use

Accessory dwelling units (ADUs) have gained popularity over the past seven years, with nearly 8,000 of them approved (or issued permits *in lieu*) over that period. While not all of these ADUs will be used as rental units, those that are will add to the region's much-needed housing supply. The average residential density of planned developments across Silicon Valley cities has increased significantly since 2018, up from 19 to 53 units per acre; 56% of these units will be within a short walk of a major rail or bus station. Non-residential

development approved over the past fiscal year, however, had a slightly lower share (38%) near transit.

Over the past decade, Silicon Valley cities and counties have approved twice as

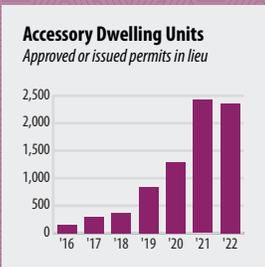
much non-residential development as the decade prior. Regional totals for FY 2021-22 (18.7 million square feet, after subtracting planned demolition) nearly matched the region's all-time high of the prior year. While planned development was spread throughout the region, 91% of it was concentrated in just four cities alone (with 52% in San José); 80% of it was either office or industrial space.

In the 2021-22 fiscal year, more than two-thirds of Silicon Valley cities/counties had average densities of planned residential development in the medium to high range (ten or more units per acre); nine cities had average densities in the 40- to 80-units/acre range, and seven had average densities of 80+ units/acre for newly-approved residential projects.

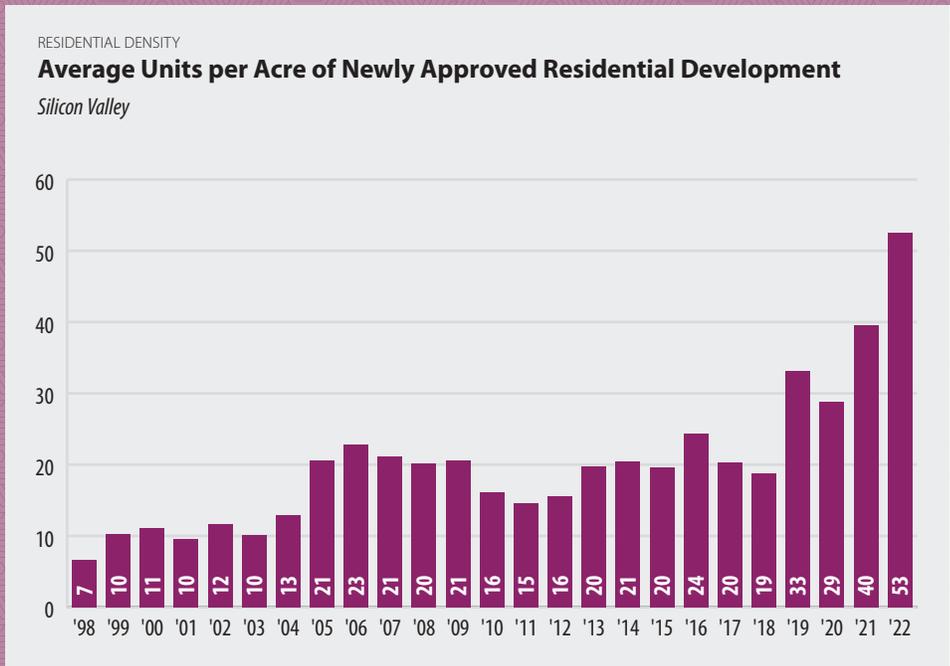
Why is this important?

By directing growth to already-developed areas, local jurisdictions can reinvest in existing neighborhoods, increase access to transportation systems, and preserve the character of adjacent rural communities while reducing vehicle miles traveled

The vast majority (92%) of ADUs approved in FY 2021-22 were standalone projects — not approved along with construction of a primary (main house) unit.



The average density of newly-approved residential units among Silicon Valley cities/counties in FY 2021-22 was the highest on record (spanning more than two decades), and nearly double what it was only two years prior.



Note: Beginning in 2008, the Land Use Survey was expanded to include cities northward along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco). In 2014, the Survey was further expanded to include all Silicon Valley cities (adding Colma, Daly City, Half Moon Bay and Pacifica). Beginning in 2020, the residential density calculation included accessory dwelling units (ADUs) that were issued a building permit in lieu of a planning approval. Data Source: City Planning and Housing Departments of Silicon Valley | Analysis: Silicon Valley Institute for Regional Studies

During each of the last two fiscal years, Silicon Valley cities and counties approved (or issued building permits in lieu for) approximately 2,400 accessory accessory dwelling units (ADUs); since 2015-16, the region has approved/permitted the development of more than 7,700 ADUs

Pockets of medium- to high-density residential development approvals over the last fiscal year were spread throughout the region, including two rental developments with a total of 345 Affordable units in Morgan Hill (Royal Oaks and Village at Madrone) and 19 Moderate-income units in Mountain View.

and associated greenhouse gas emissions. Siting 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, preserve open space near urbanized areas, and improve energy efficiency. By creating mixed-use communities, Silicon Valley gives workers alternatives to driving and increases access to workplaces. Adding accessory dwelling units provides leasing opportunities for residents (with potential income to buffer high ownership costs) and adds to the region's much-needed housing supply.

The number of approved housing units near transit in FY 2021-22 (5,230) was less than half of the prior year, and also represented a smaller share of total units approved throughout the region (56%, compared to 79% in the 2020-21 fiscal year).

Silicon Valley housing units within walking distance to public transit represented 56% of all newly-approved residential units in FY 2021-22.

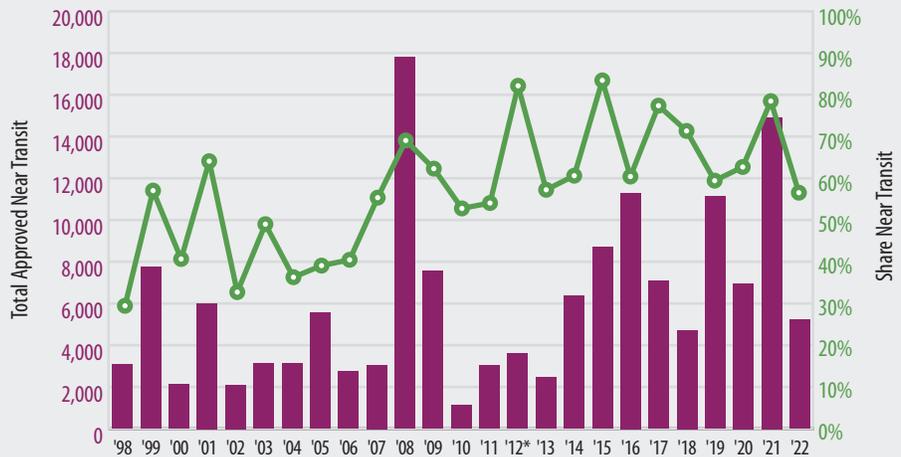
The 7,730 ADUs that were issued a planning approval (or building permit in lieu) over the past seven fiscal years by Silicon Valley cities/counties contributed significantly to the region's precipitous rise in residential density of approved development. While these ADUs may or may not be used as rental properties (thus expanding housing availability), and do not count toward density calculations according to state law⁶² (in order to prevent a violation of General Plan density limits), they were included in the regional density analysis as an indicator for housing inventory.³

a. Note that state law with regard to ADUs changed significantly as of January 1, 2021 – mid-way through the 2020-21 fiscal year. The changes included, but were not limited to, the approval/permitting process and the rental/leasing of ADUs.

HOUSING NEAR TRANSIT

New Housing Units Approved Within 1/3 Mile of Rail Stations or Major Bus Corridors, and Share of Total Units Approved

Silicon Valley



*Beginning in 2012, the definition of transit oriented development was changed from 1/4 mile to 1/3 mile. | Note: Beginning in 2008, the Land Use Survey was expanded to include cities northward along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco). | Data Source: City Planning and Housing Departments of Silicon Valley | Analysis: Silicon Valley Institute for Regional Studies

PLACE

Land Use

Silicon Valley's non-residential development approvals in FY 2021-22 (18.7 million square feet) nearly matched the prior year's all-time high of 21.5 million square feet.

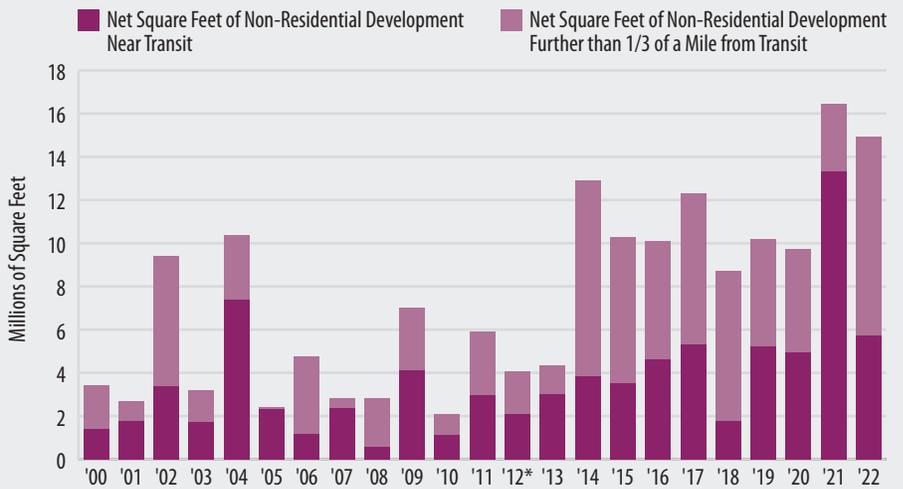
While approved non-residential development was spread throughout Silicon Valley, 91% (by square footage) was concentrated in just four cities alone: San José, South San Francisco, Santa Clara, and Sunnyvale; San José alone accounted for 52%.

Net non-residential development approvals (after planned demolition) in FY 2021-22 totaled 14.9 million square feet across 100 different development sites; less than half of the approved square footage (38%) is within walking distance to major public transit stations.

NON-RESIDENTIAL DEVELOPMENT

Net Non-Residential Development Approved, by Proximity to Transit

Silicon Valley



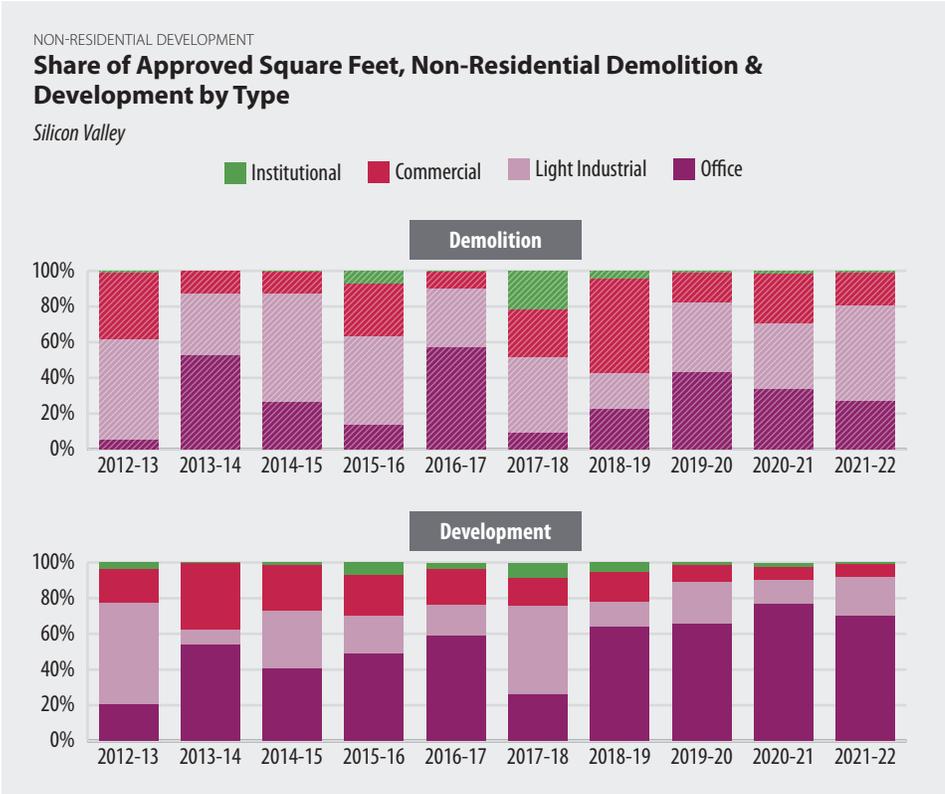
*Beginning in 2012, the definition of transit-oriented development has been changed from 1/4 mile to 1/3 mile. | Note: Beginning in 2008, the Land Use Survey was expanded to include cities northward along the U.S. 101 corridor (Brisbane, Burlingame, Millbrae, San Bruno and South San Francisco). In 2014, the Survey was expanded to include all Silicon Valley cities (adding Colma, Daly City, Half Moon Bay, and Pacifica). In 2014, the Survey was expanded to include all Silicon Valley cities (adding Colma, Daly City, Half Moon Bay, and Pacifica). | Data Source: City Planning and Housing Departments of Silicon Valley | Analysis: Silicon Valley Institute for Regional Studies

Over the past decade, Silicon Valley cities and counties approved more than double the amount of net-new non-residential square footage (110 million square feet) than during the decade prior (45 million square feet in 2003 through 2012).

Among some of Silicon Valley's smaller non-residential development approvals in FY 2021-22 were a Community Mausoleum in Colma and a new outdoor amphitheater in a city-owned park in Half Moon Bay, which will include a stage, terraced seating, a play area for children, and concessions among other features of the development.⁶³

Over the past decade, Silicon Valley's non-residential development has been heavily focused on new office space (55%), replacing a fairly even mix of the existing inventory of older Office (30% of planned demolition), Light Industrial (42%), and Commercial (25%).

Two-thirds of all Silicon Valley newly-approved non-residential development in FY 2021-22; 21% was Light Industrial, and 7% was commercial space.



If all of the non-residential development projects approved over the past decade had been developed as planned, the region would have added a net total (after subtracting demolition) of 110.2 million square feet of new office, light industrial, commercial, and institutional space to its landscape; in reality, the amount built was closer to 67 million square feet (increasing the region's rentable building area by approximately 53 million square feet), 53% of which was new Office.^a

a. Estimate of total commercial space delivered to the Silicon Valley market over the past decade is from the JLL inventory (see notes in Appendix A, Commercial Space Development) for Q3 2012 through Q2 2022, and includes the entire city-defined Silicon Valley region except Union City and Scotts Valley.

80% of all non-residential demolition approved in FY 2021-22 was either office or industrial space.

Data Source: City Planning and Housing Departments of Silicon Valley | Analysis: Silicon Valley Institute for Regional Studies

Planned Hotel Development

End of 2021, with year-over-year percent change

	Hotels	Rooms
Silicon Valley	119 (+10%)	19,711 (+20%)
San Francisco	51 (+/-0%)	6,245 (+0.20%)
California	1,250 (+0.4%)	164,352 (-0.8%)

Data Source: Atlas Hospitality Group
Analysis: Silicon Valley Institute for Regional Studies

At the end of 2021, there were 170 hotels (with nearly 26,000 rooms) throughout Silicon Valley and San Francisco in various stages of planning; while not all of these projects will necessarily be built, the total represents more than double the amount that has been developed over the past 17 years combined.

Of the 119 hotels (with 19,711 hotel rooms) planned for Silicon Valley, nearly a third (31%) received planning approvals in the 2021-22 fiscal year.

In 2021, the number of Silicon Valley and San Francisco hotel rooms in various stages of planning accounted for 14% of all planned hotel developments (and 16% of planned hotel rooms) throughout the state of California.

PLACE

Environment

Silicon Valley continues to make progress on a variety of environmental measures. The transition of customers to Silicon Valley's community choice energy programs has effectively reduced the region's overall carbon dioxide emissions from electricity by approximately 72% since 2016. Across all providers, the power used by Silicon Valley customers carries only a fraction of the greenhouse gas emissions intensity of the United States grid average, and is significantly cleaner than California's average as well. The total capacity of solar photovoltaic systems installed in Silicon Valley has increased sixfold over the past decade (from 140 megawatts in 2012 to 819 megawatts in 2022). Electric vehicle (EV) adoption

increased by 20% in 2021, and the number of public EV charging outlets in Silicon Valley has doubled since 2018; however, electric vehicles still only represent approximately one in 16 Silicon Valley (and 35 California) registered light-duty vehicles.

Other measures that point to environmental progress include a decline in per capita water usage (with an increased share of recycled water) and thriving food recovery and waste reduction efforts throughout the region. In compliance with California Senate Bill 1383, local surplus food recovery is currently being tracked through surveys of food recovery organizations and services, as well as direct reporting from commercial edible food generators. Over the past four years, more than 78 million pounds of surplus food has been recovered from businesses and institutions across San Mateo and Santa Clara Counties, with an estimated 25 million pounds recovered in 2022 alone.

The food was diverted from the waste stream, and repurposed for human consumption.

Why is this important?

Environmental quality directly affects the health and well-being of all residents as well as the Silicon Valley ecosystem.³ The environment is affected by the choices that residents make about how to live, how to get to work, how to purchase goods and services, where to build homes, their level of consumption of natural resources, and how to protect environmental resources.

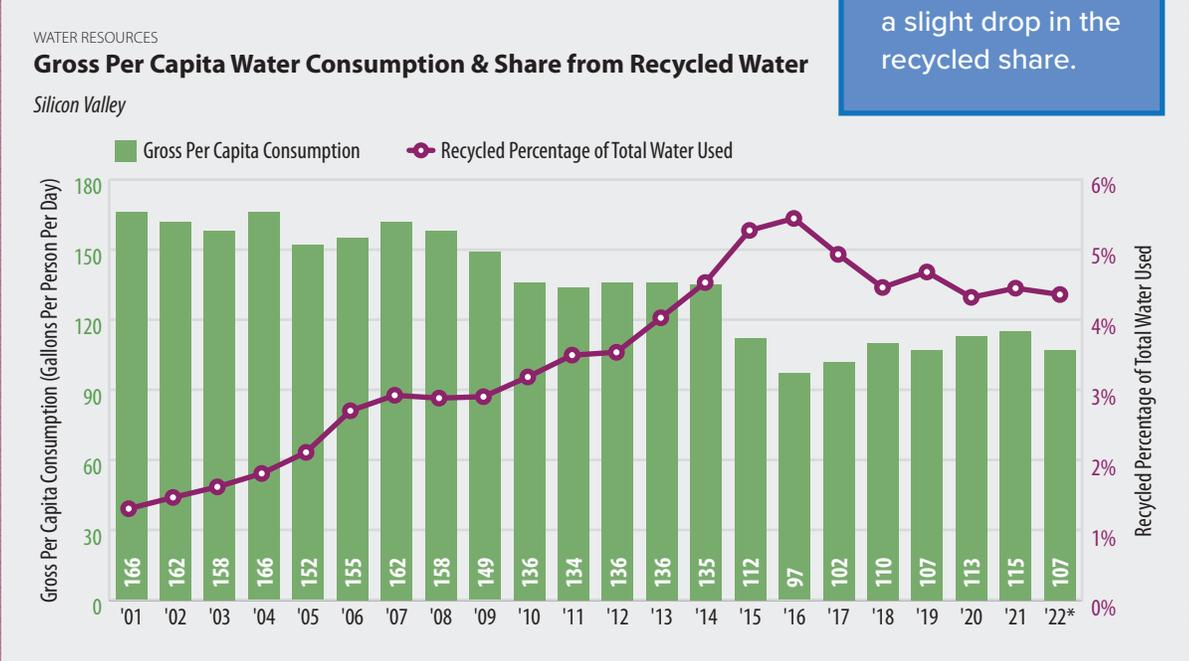
Electricity and fuel use affect the environment by emitting greenhouse gasses (GHGs) and atmospheric pollutants from fossil fuel

a. Studies have quantified the importance of the ecosystem services provided by the region's natural capital to the health of the economy including clean air, water quality and supply, healthy food, recreation, storm and flood protection, tourism, science and education. "Healthy Lands & Healthy Economies: Nature's Value in Santa Clara County" (Open Space Authority and Earth Economics, 2014) found that each year, Santa Clara County's natural and working lands provide a stream of ecosystem services to people and the local economy that range in value from \$1.6 billion to \$3.9 billion.

Year-over-year per capita water use decreased by 8% in FY 2021-22 with a slight drop in the recycled share.

While the share of recycled water used in Silicon Valley (4.4% in FY 2021-22) is much higher than it was two decades prior (1.3%), it has not changed much over the past several years.

Silicon Valley per capita water consumption reached a record low in 2016 at 97 gallons per person per day. In FY 2021-22, average daily water usage per person was 107 gallons.



*FY 2021-2022 data are preliminary | Note: Data are for the fiscal year. | Data Source: Bay Area Water Supply & Conservation Agency (BAWSCA), Santa Clara Valley Water District, and Scotts Valley Water District | Analysis: Silicon Valley Institute for Regional Studies

The production of waste per capita in Silicon Valley and San Francisco (4.4 pounds per person per day) remained significantly lower than statewide (5.6 pounds per person per day) in 2019.

combustion — the extent to which must be drastically reduced in response to the climate crisis. Sustainable energy policies include increasing energy efficiency and the use of clean, renewable energy sources. For example, more widespread use of solar-generated power diversifies the region’s electricity portfolio, increases the share of reliable and renewable electricity, and reduces GHGs and other harmful emissions. Shifting more customers to lower-emissions energy providers also decreases regional GHG emissions. The region’s relatively clean electricity has enabled the implementation of a variety of “natural gas fuel-switching” efforts, including programs that promote the use of heat pump water heaters and space heaters, induction cooktops, and swapping electricity for other gas-powered appliances.

It also helps to advance electric vehicle adoption throughout the region, and enables efforts to achieve environmental, air-quality, and cost benefits with all-electric buildings.

Electricity productivity is a measure of the degree to which the region’s production of economic value is linked to its electricity consumption, where a higher value indicates greater economic output per unit of electricity consumed. Electric vehicle infrastructure and adoption provide indicators on the extent to which Silicon Valley residents are utilizing a cleaner transportation alternative to fossil fuel combustion.

Water consumption and the use of recycled water are particularly important indicators given California’s recent drought conditions. Local emissions and

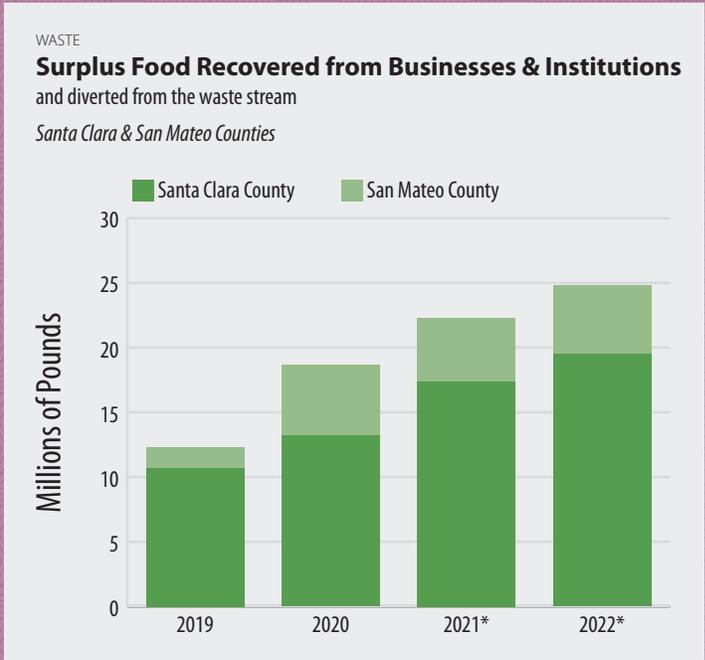
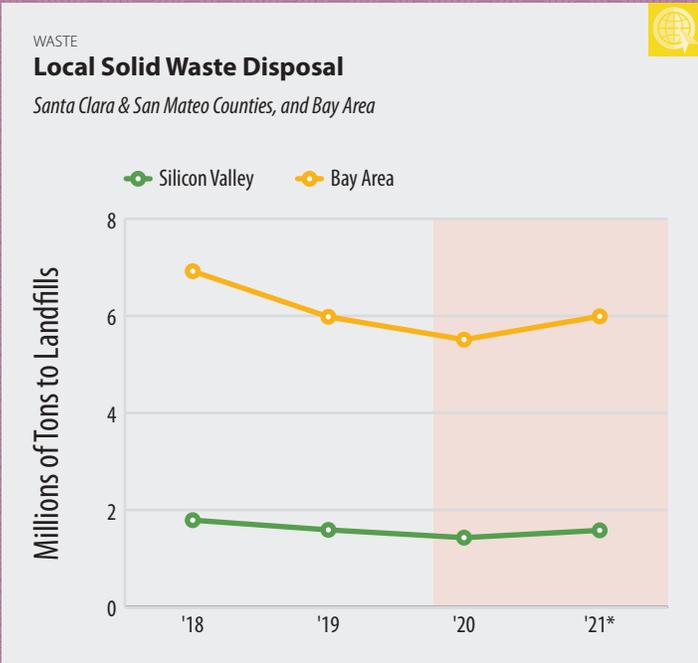
other contributing factors, such as wildfires, have an effect on regional air quality with potential health implications. Tracking resource consumption and material flows helps to better understand the impact of residents on their surroundings and the broader environmental costs of their everyday decisions, such as future emissions from landfills; in the case of surplus food, tracking the amount diverted from the waste stream also provides a measure of repurposed food for human consumption within the regional community.

In compliance with California Senate Bill 1383, local surplus food recovery is currently being tracked through surveys of food recovery organizations and services, as well as direct reporting from commercial edible food generators.

Solid waste disposal in Santa Clara and San Mateo Counties and the Bay Area overall declined in 2020 (by 10% and 8% year-over-year, respectively), but estimates indicate an uptick in 2021.

Efforts are underway in both Santa Clara and San Mateo Counties to recover edible food from businesses and institutions, and to in turn provide that food to local service providers for distribution. Total amounts of food recovered have increased steadily over the past four years, reaching an estimated 25 million pounds in 2022.

Over the past four years, more than 78 million pounds of surplus food has been recovered from businesses and institutions across San Mateo and Santa Clara Counties, with an estimated 25 million pounds recovered in 2022 alone. The food was diverted from the waste stream, and repurposed for human consumption. Through this process, not only are local service providers able to serve community needs, but waste to landfills as well as associated greenhouse gas emissions are reduced.



*estimate based on Jan-Aug 2021 and Jan-June 2022 (Santa Clara County) and Jan-July 2022 (San Mateo County)
Note: Amounts represent estimates from available reporting. Local surplus food recovered includes BY food recovery organizations/services in Santa Clara (2019-2022) and San Mateo Counties (2022), and FROM local edible food generators in San Mateo County (2019-2021); due to this reporting difference between the two counties, it is possible that some recovered food is in both datasets for 2019-2021 and is therefore represented twice in each chart column. See data file for disaggregation. | Data Source: Santa Clara County Food Recovery Program; County of San Mateo, Office of Sustainability Analysis; Joint Venture Silicon Valley, Food Recovery Initiative; County of San Mateo, Office of Sustainability; Silicon Valley Institute for Regional Studies

*estimate based on Q1-3 | Data Source: CalRecycle | Analysis: Silicon Valley Institute for Regional Studies.

PLACE

Environment

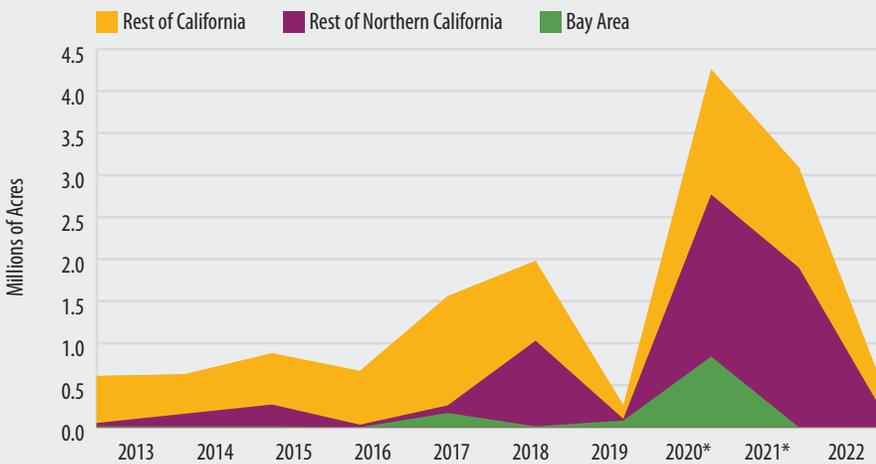
Both in terms of the number of wildfire incidents and amount of land area burned, the region experienced a decline in the prevalence of wildfires and their effects in 2022. Over the past five years, 9.4 million acres have burned (4% of that in 2022), including nearly 5.9 million acres in Northern California.

WILDFIRES

Land Area Burned by Wildfires

Bay Area, Northern California, and California

In 2022, Northern California and the state as a whole experienced a decline in wildfire incidents (-29% and -10%, respectively). This is a welcome development on the heels of some of the most devastating fire activity on record.



*preliminary | Data Source: CAL FIRE | Analysis: Silicon Valley Institute for Regional Studies

While there is a large and growing body of research and observational data linking climate change to the wildfire activity, there is a disconnect between the share of Bay Area residents who believe wildfires are a serious issue (80%) and those who believe the impacts of climate change are of equal concern (70%); this discrepancy is most pronounced for those identifying as Republicans (73% are seriously concerned about wildfires, but only 32% are concerned about climate change impacts).

% Think Wildfires & Climate Change are Serious Problems

Bay Area, 2022

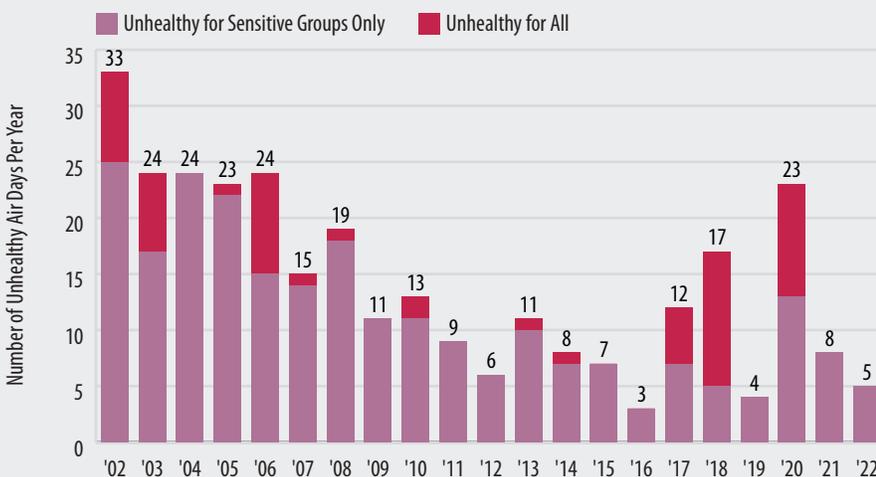
	Increasing Frequency of Wildfires	Impacts of Climate Change
Women	84%	77%
Ages 18-34	78%	76%
Remote Workers	82%	72%
Democrats	85%	86%
Overall	80%	70%
Republicans	73%	32%

Data Source: The Silicon Valley Poll (www.jointventure.org/svpoll)

AIR QUALITY

Number of Unhealthy Air Days

Santa Clara & San Mateo Counties



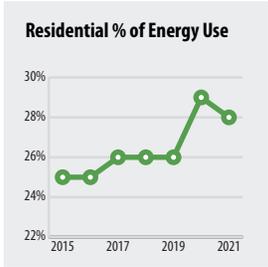
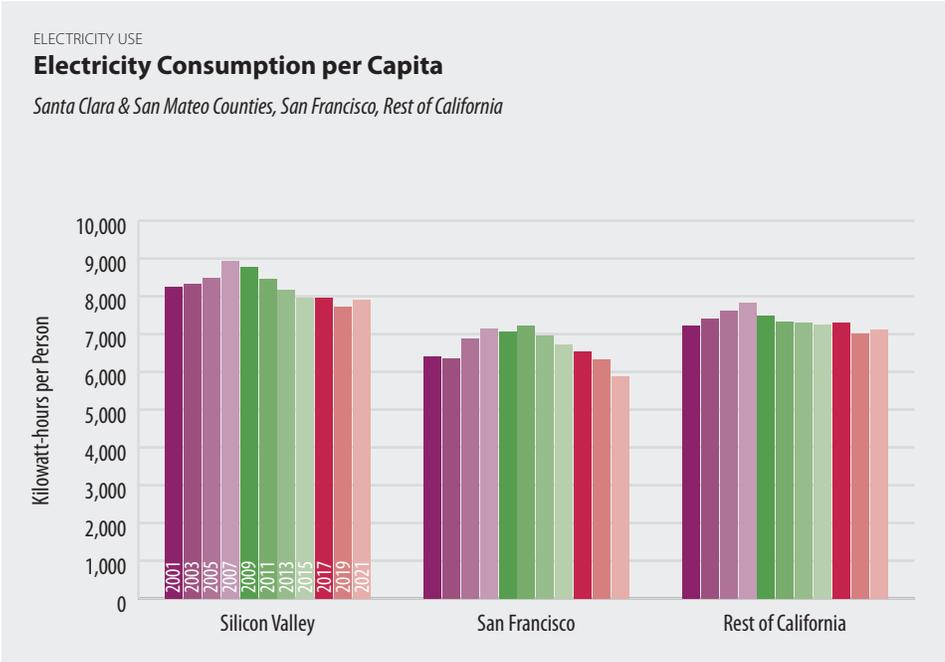
Note: 2021 data through December 7. | Data Source: United States Environmental Protection Agency, Outdoor Air Quality Data | Analysis: Silicon Valley Institute for Regional Studies

Approximately 39% of the unhealthy air days since 2017 have been *extremely* unhealthy — amounting to unsafe conditions for both the general population as well as for sensitive groups.

Over the past two years, Silicon Valley has not experienced any extremely unhealthy air days (unhealthy days for the general population, regardless of sensitivities such as lung disease or age-related risk factors) out of a combined total of 13 unhealthy air days for sensitive groups.

The presence of predominantly healthy air days in 2022 is in stark contrast to 2020, during which there were 23 unhealthy air days (of which nearly half were extremely unhealthy, even for non-sensitive groups). The region had not experienced such a high number of unhealthy air days since 2006.

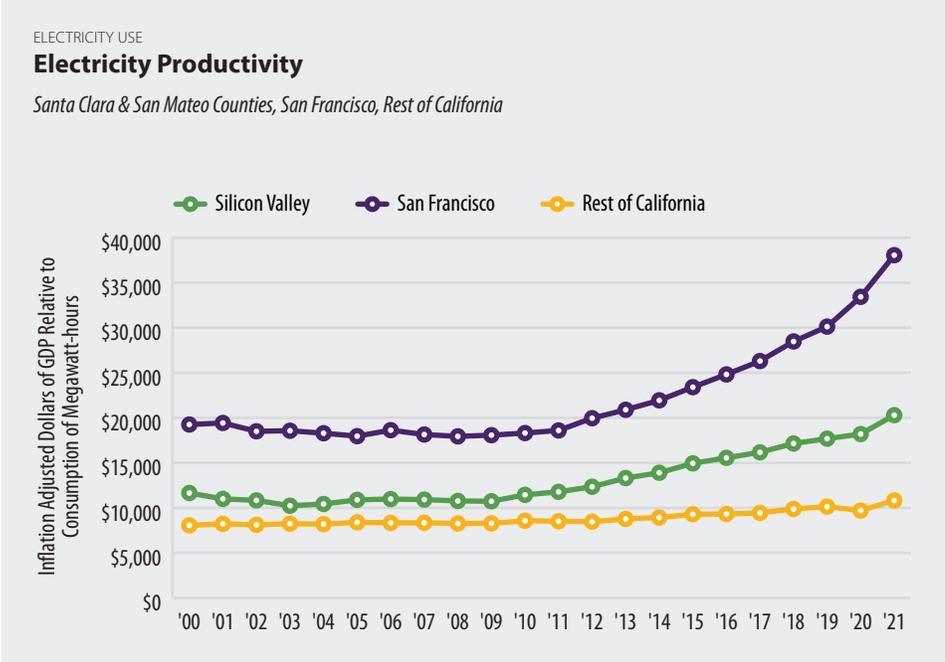
Silicon Valley electricity consumers use more per capita than in San Francisco or elsewhere within the state.



The share of regional electricity use by residential customers — which increased sharply in 2020 with more people working from home and attending school remotely — declined slightly in 2021 (by one percentage point, to 28%). Non-residential usage increased by 4% over the same period.

Data Source: Moody's Economy.com; California Energy Commission; State of California, Department of Finance
Analysis: Silicon Valley Institute for Regional Studies

In 2021, per capita electricity consumption in Silicon Valley and San Francisco increased by 4% over the previous year; this compares to a 1% increase in the rest of California.



While the rest of California's electricity productivity has remained relatively low over the past two decades, it has risen significantly in Silicon Valley and San Francisco since the start of the post-recession economic recovery period (up 83% and 104%, respectively, between 2009 and 2021).

Compared to Silicon Valley, San Francisco electricity users consumed 26% less in 2021, and the electricity productivity — ratio of regional GDP to electricity use — was 87% higher.

Data Source: Moody's Economy.com; California Energy Commission; State of California, Department of Finance
Analysis: Silicon Valley Institute for Regional Studies

The transition of electricity customers to Silicon Valley’s community choice energy programs happened over just a handful of years, and effectively reduced the region’s overall carbon dioxide emissions from electricity by approximately 72% since 2016.

The emissions intensity factor for Silicon Valley Clean Energy went up very slightly in 2021, primarily due to the addition of more geothermal power — an eligible “renewable” energy source although it has associated non-anthropogenic emissions.

Although PG&E has relatively clean energy — with an 84% reduction in emissions intensity between 2010 and 2020 — it is not as clean as that of Silicon Valley’s community choice energy programs, which procure a larger share of power from renewable resources.

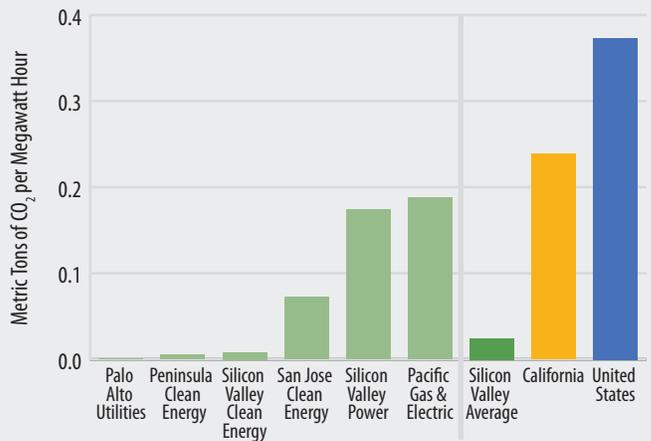
Across all providers, the power used by Silicon Valley electricity customers carries a fraction of the greenhouse gas emissions intensity^a of the United States grid average, and is significantly cleaner than California’s state average residual emissions intensity.

a. The emissions rate of carbon dioxide equivalent relative to energy use.

ELECTRICITY USE

Emissions Intensity for Power Providers

Silicon Valley, California, and the United States | 2020/21



*estimate | Note: California is for the CAMX eGrid Subregion, which encompasses most of the state. The United States is an average of all eGRID subregions. Silicon Valley average weighted based on customer counts. | Data Sources: Silicon Valley electricity providers (Peninsula Clean Energy, Silicon Valley Clean Energy, Palo Alto Utilities, Silicon Valley Power, Pacific Gas & Electric, and San Jose Clean Energy); The Climate Registry; Center for Resource Solutions; U.S. Environmental Protection Agency; California Energy Commission | Analysis: Silicon Valley Institute for Regional Studies

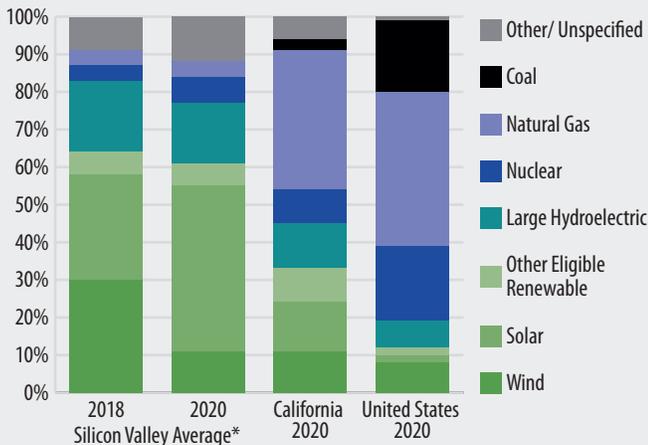
Three community choice energy programs now serve 90% of Silicon Valley's residential customers, and 62% of non-residential customers; Pacific Gas & Electric (PG&E), which served 92% of customers across Santa Clara and San Mateo Counties in 2016 — now provides bundled energy, transmission, and distribution service to only 6%.

Silicon Valley's energy mix shifted slightly in 2020, with less coming from large hydroelectric (18%, down from 29% in 2019) and more from solar (39%, up from 32%).

ELECTRICITY USE

Share of Electricity, by Generation Sources

Silicon Valley, California, and the United States | 2020



*Silicon Valley Average is an approximation; it is an un-weighted average of all power plans available to residential and non-residential customers. | Data Sources: Silicon Valley electricity providers (Peninsula Clean Energy, Silicon Valley Clean Energy, Palo Alto Utilities, Silicon Valley Power, Pacific Gas & Electric, and San José Clean Energy); The Climate Registry; Center for Resource Solutions; U.S. Environmental Protection Agency; California Energy Commission | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley's available electricity power plans, on average, consist of 39% solar (up from 32% the prior year), 22% wind generation, 5% from other eligible renewables, and 18% from large hydroelectric (down from 29% the prior year); 9% from nuclear and natural gas combined, and 7% from other/unspecified sources. The latter is up from 4% the prior year, primarily due to an increased share of "unspecified power" (power purchased on the open market, which cannot be traced back to a specific generation source) by the two municipal utilities.

Share of Electricity Customers Served, by Provider

Silicon Valley | 2021

	Residential	Non-Residential
San Jose Clean Energy	34%	20%
Peninsula Clean Energy	29%	22%
Silicon Valley Clean Energy	27%	20%
Silicon Valley Power	5%	6%
Palo Alto Utilities	3%	2%
Pacific Gas & Electric	3%	31%

Among Silicon Valley's electricity power plans available to residential and non-residential customers, the average share from renewable sources is nearly double the statewide power mix, and four times higher than the national average.

While non-renewable sources comprise 9% of Silicon Valley's power mix, they accounted for 49% of California's (including 3% from coal) and 79% of the national average power mix (including 19% from coal).

PLACE

Environment

There are nearly 96,000 solar PV systems on residential rooftops throughout Silicon Valley, plus another 2,200 non-residential installations.

Based on the amount of sunshine and available rooftop space, Silicon Valley has the technical potential for around 668,200 rooftop solar PV systems, with a total system size of approximately 12,000 MW.⁶⁴ As of 2022, the region had installed approximately 7% of that total technical potential.

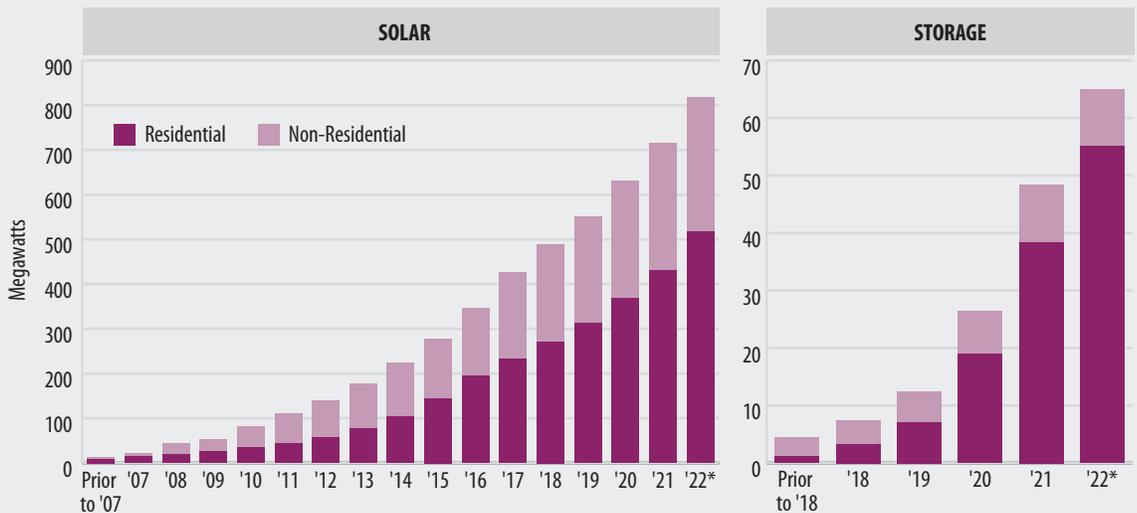
More than 13,000 new solar PV systems were installed in Silicon Valley in 2022, 99% of which were residential systems (by count); however, by installed capacity, residential systems represented 84% of all solar PV installations that year.

Over the past decade, the total capacity of solar photovoltaic (PV) systems installed in Silicon Valley has increased sixfold, from 140 megawatts (MW) in 2012 to 819 MW in 2022.

Silicon Valley's interconnected energy storage, paired with (non-export) solar PV systems, has increased significantly over the past several years. Prior to 2018, there were only 4.5 MW interconnected to the electrical grid; as of 2022, there were more than 65 MW.

CLEANTECH Cumulative Installed Solar & Storage Capacity

Silicon Valley



*2022 data are through June for the City of Palo Alto, August for Silicon Valley Power, and October for PG&E. | Note: Includes interconnected, Net Energy Metered (NEM) systems only. | Data Source: Palo Alto Municipal Utilities; Silicon Valley Power; Pacific Gas & Electric | Analysis: Silicon Valley Institute for Regional Studies

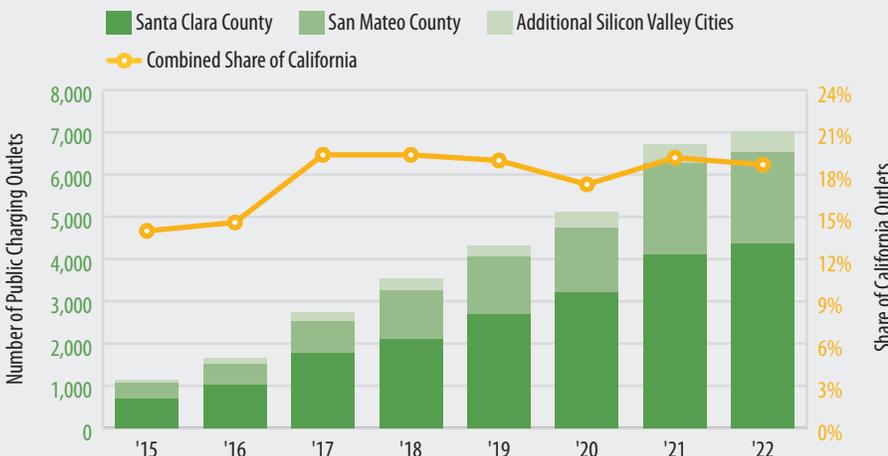
CLEANTECH

Electric Vehicle Infrastructure

Public Electric Vehicle Charging Outlets

Silicon Valley

17% of all California's public electric vehicle (EV) charging outlets are located in Silicon Valley.



Data Sources: United States Department of Energy, Alternative Fuels Data Center; California Energy Commission
Analysis: Silicon Valley Institute for Regional Studies

The region added 250 new public EV charging outlets in 2022 — a significant slowdown compared to the prior year (in which 1,600 outlets were installed, with large year-over-year increases in San Jose, Menlo Park, and Santa Clara).

While many Silicon Valley cities were well-equipped with EV charging infrastructure at the end of 2022, a handful of cities had almost no public charging stations whatsoever. East Palo Alto, for example, had only three public charging stations (aside from the one that is only available to Teslas) located along the edge of the city at IKEA, the Four Seasons Hotel, and the University Circle office development that houses the Four Seasons; there are no privately-owned charging stations either.⁶⁵

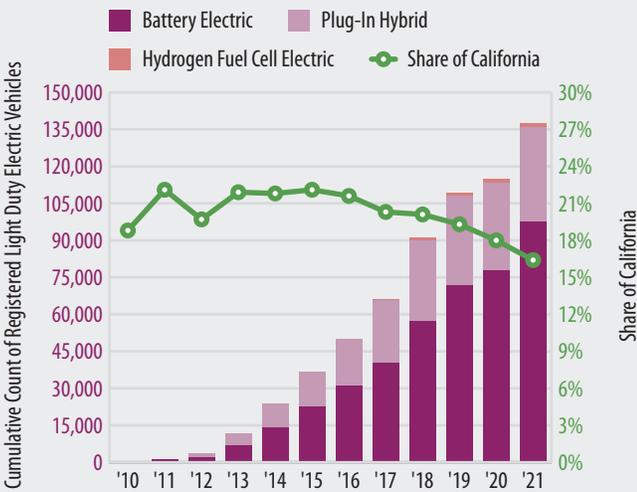
The number of public EV charging outlets in Silicon Valley has doubled since 2018. As of late 2022, the region had 6,500 public electric vehicle charging outlets (an increase of 4% year-over-year).

The total number of EVs registered to Silicon Valley drivers continued to climb in 2021, reaching more than 137,000 in total and representing a 20% year-over-year increase.

The majority of Silicon Valley's registered light-duty electric vehicles (71%) are Battery Electric, 28% are Plug-In Hybrids, and a very small share (approximately one percent) are Hydrogen Fuel Cell vehicles.

CLEANTECH Electric Vehicle Adoption

Silicon Valley



Electric % of Light Duty Vehicles



While adoption has accelerated over the past decade, electric vehicles still only represent approximately one in 16 Silicon Valley (and 35 California) registered light-duty vehicles.

As of January 2022, there were already 5,600 new (model year 2022) electric vehicles registered in Silicon Valley.

EV proliferation in Silicon Valley has extended beyond light-duty vehicles. In mid-2022, there were nearly 100 on-road electric buses and trucks registered (representing 5% of all on-road medium- and heavy-duty EVs throughout the state).

Teslas, Chevrolets, Toyotas, and Nissans account for 68% of all EVs registered in Silicon Valley. The most popular models are the Tesla Model 3 (29%), Tesla Model S (10%), Tesla Model Y (9%), Chevrolet Bolt EV (5%), Nissan LEAF (5%), Chevrolet Volt (5%), and the Tesla Model X (5%).^a

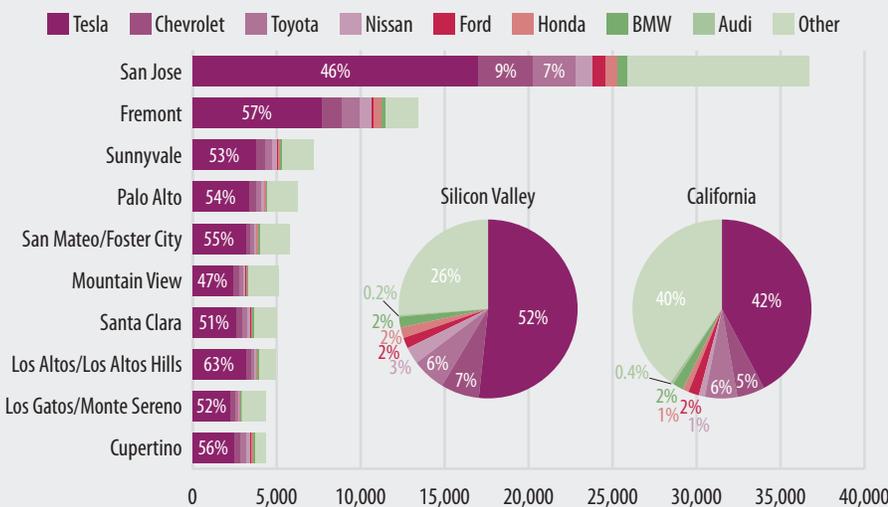
^a Shares by model are for Santa Clara and San Mateo Counties only, using vehicle population data from the California Energy Commission "Zero Emission Vehicle and Charger Statistics" (updated April 29, 2022; retrieved January 21, 2023).

San Jose has, by far, the highest number of EV drivers in the region, with 36,700 registered vehicles in 2022; the city with the next-highest number of EVs, Fremont, has 13,400 registered.

Among the top-ten cities for EV adoption, Los Altos and Los Altos Hills have the highest share of Tesla ownership at 63% of registered EVs, combined; this compares to 52% throughout the region and 42% statewide.

CLEANTECH Registered Light-Duty Electric Vehicles, by Make

Top 10 Silicon Valley Cities, Silicon Valley, and California | 2022



Data Sources: California Department of Motor Vehicles; California Energy Commission, Zero Emission Vehicle and Charger Statistics | Analysis: Silicon Valley Institute for Regional Studies

Top EV Models, by Market Share Santa Clara & San Mateo Counties, 2021

Tesla Model 3	29%
Tesla Model S	10%
Tesla Model Y	9%
Chevrolet Bolt EV	5%
Nissan LEAF	5%
Chevrolet Volt	5%
Tesla Model X	5%
Toyota Prius Prime	4%
Toyota Prius Plug-in Hybrid	3%
Toyota Mirai	1%

GOVERNANCE

Local Government Administration

Over the past two fiscal years, Silicon Valley cities have progressively tightened (and adjusted) their budgets to accommodate revenue declines and spending related to the pandemic. In the 2021-22 fiscal year, Silicon Valley's 39 cities — in aggregate — experienced an estimated 5% decline in revenues and a 6% decline in expenses, year-over-year. While the aggregate net position (assets minus liabilities) of Silicon Valley cities declined by approximately \$26 million over that period, the region's total household liquid wealth rose by \$72 billion — not including the growing wealth of Silicon Valley's ultra high net worth (UHNW) households, each of which has an estimated \$30 million or more. Inclusive of these HNW

households, the region's household wealth rose to nearly \$1.1 trillion, reaching 72 times the combined net position of Silicon Valley's 39 cities. This gap has grown over time, and is a phenomenon being observed on a national level as well and in various countries throughout Western Europe and Asia over the past 50 years. This gap is illustrative of the challenges facing local government agencies to keep up with rising costs, and maintain the flexibility

and adaptability needed to address future challenges and respond in emergency situations.

The region's city and county leadership has remained relatively consistent over

While there are many factors affecting year-to-year changes in public agency revenues, expenses, and net position, the overall trend two full fiscal years into the pandemic has been a tightening of budgets with declining expenses (down by an estimated 6% since FY 2019-20, in nominal values) to counteract the decrease in revenues (-5% over the same period, for all Silicon Valley cities combined).

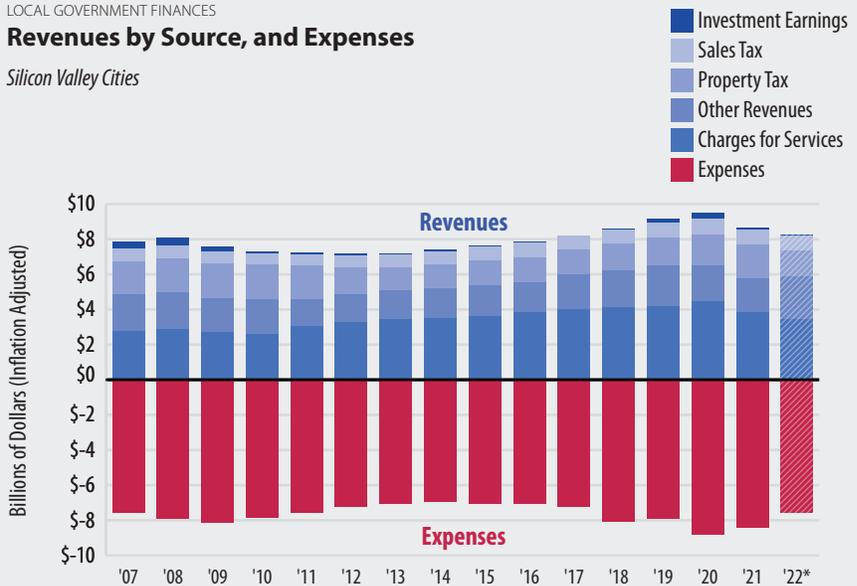
The first two full fiscal years of the pandemic reflected declines in Silicon Valley cities' aggregate revenues of more than \$400 million (in nominal values), including a 15% decline in Charges for Services and a 71% decline in Investment Earnings.

Silicon Valley city revenues declined by 6% in the first full fiscal year of the pandemic — in nominal values — then increased 1% the following year; however, the 1% gain lagged behind inflation. In inflation-adjusted dollars, Silicon Valley's aggregate city revenues fell by an estimated 4% in FY 2021-22.

LOCAL GOVERNMENT FINANCES

Revenues by Source, and Expenses

Silicon Valley Cities



*estimated | Data Source: Silicon Valley Cities, Audited Annual Financial Reports | Analysis: Silicon Valley Institute for Regional Studies

Silicon Valley city revenues totaled nearly \$8.3 billion in FY 2021-22, with 42% coming from Charges for Services totaling \$3.5 billion.

the past two years, with some turnover of city/county managers, but also an increased share of those who have served for four or more years. Women represent less than one-third of Silicon Valley’s city/county managers, a share that has increased by only five percent since 2014.

Why is this important?

Many factors influence local government’s ability to govern effectively, including the availability and management of resources, as well as staffing levels and retention. Administrative turnover rates may affect working relationships and the retention of institutional

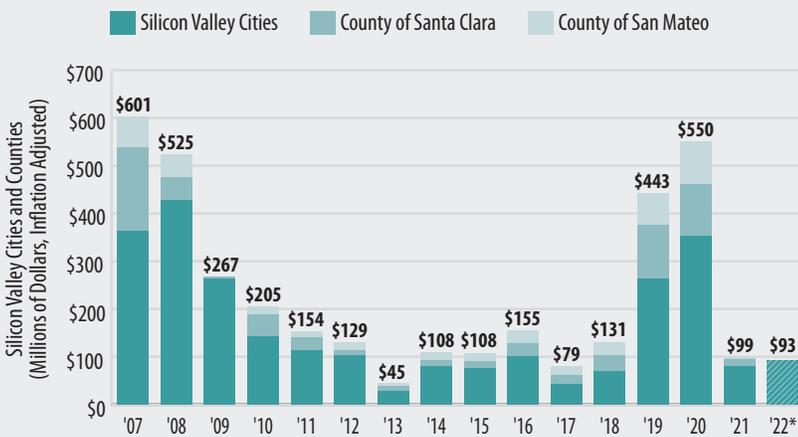
memory, and have been tied to the effectiveness and cooperation with and among elected officials.^{66 67 68}

To maintain service levels and respond to a changing environment, local government revenue must be reliable. Property tax revenue is the most stable source of city government revenue, fluctuating much less over time than other sources, such as sales and other taxes. Since property tax revenue represents only about a quarter of all revenue, other revenue streams are critical in determining the overall volatility of local government funding.

The amount of public capital (assets minus debts) in relation to overall regional

wealth can be indicative of the government’s ability to invest in infrastructure, which has been linked to distributive equity from both an economic and social perspective.^{69 70}

LOCAL GOVERNMENT FINANCES
Investment Earnings
Silicon Valley Cities and Counties



Silicon Valley cities budgeted an estimated \$84 million in investment earnings for FY 2021-22, an amount similar to the prior fiscal year’s total (\$81 million) but less than a quarter of the year before that (FY 2019-20).

*Silicon Valley Cities only; estimated | Data Source: Silicon Valley Cities and Counties | Analysis: Silicon Valley Institute for Regional Studies

GOVERNANCE

Local Government Administration

While the aggregate net position (assets minus liabilities) of Silicon Valley cities declined by approximately \$26 million over the past two fiscal years, the region's total household liquid wealth *increased* by an estimated \$73 billion dollars.^a This is not only illustrating growth compared to decline, but an order of magnitude difference in terms of total amounts.

a. This increase from 2020 to 2022 does not include the Ultra High Net Worth households that were added to the dataset in 2022.

In 2022, estimated liquid assets of Silicon Valley residents — not including real estate equity — outweighed the aggregate “wealth” of Silicon Valley’s 39 cities by 72 to one.

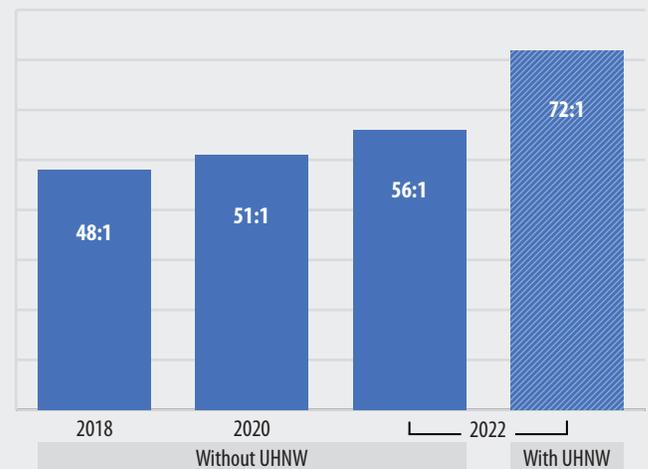
The inclusion of Silicon Valley’s multimillionaire and billionaire population — households with net investable assets of \$30 million or more, which are typically excluded from large-scale survey data — further amplifies the disparity in wealth between what is privately-held and what gives the region’s cities flexibility in spending, adapting, and responding to emergency situations.

PUBLIC CAPITAL

Public Capital

Ratio of Total Household Wealth to Aggregate City Net Position

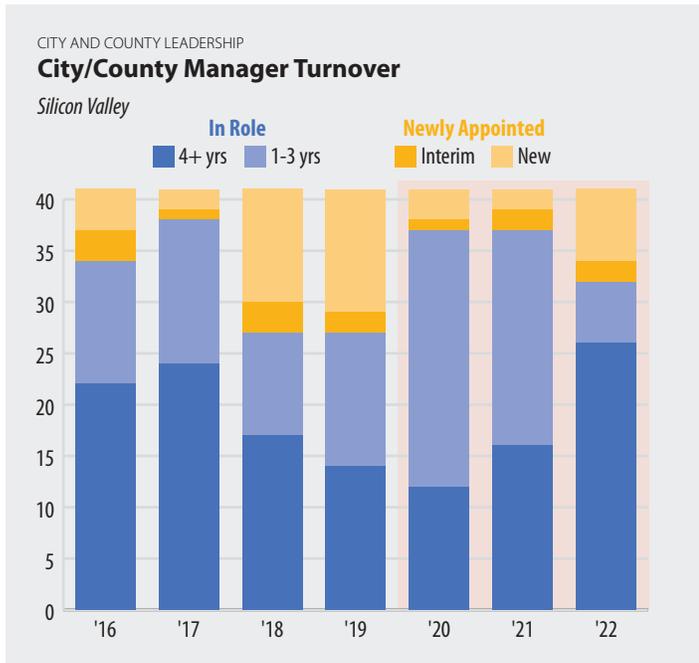
Santa Clara & San Mateo Counties



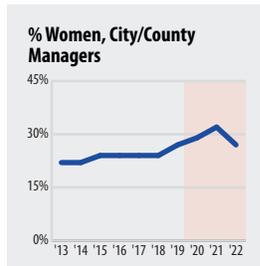
*estimated | Note: Ultra High Net Worth (UHNW) households include those with net investable assets of \$30 million or more. Data represent estimates. Total Household Wealth includes investable assets (all liquid assets such as checking accounts, CDs, and retirement accounts). | Data Source: Silicon Valley Cities; Claritas; Altrata; Forbes; Phoenix Global Wealth Monitor | Analysis: Silicon Valley Institute for Regional Studies

In 2018, Silicon Valley’s household wealth was more than 48 times that of the city governments themselves. By 2022, that share had risen to 56 times even without the inclusion of Silicon Valley’s Ultra High Net Worth (UHNW) households; with the UHNW households, this ratio rises to 72x. The trend of a declining share of public capital relative to private wealth has been documented on a national level in the United States, as well as in various countries throughout Western Europe and Asia since the 1970s. This issue of governments getting poorer while individuals get richer was compounded worldwide by governments borrowing the equivalent of as much as 20% of GDP for pandemic response. Nationally, public wealth accounts for an estimated -10% of total wealth when including negative-net public assets.⁷¹

Silicon Valley’s average city/county manager turnover rate is approximately eight managers per year, amounting to an average term of four years per manager — lower than the most recent national estimate of seven years.⁷²



Note: Annual counts represent a snapshot in time, taken in August of each year. | Data Sources: Silicon Valley City and County Websites | Analysis: Silicon Valley Institute for Regional Studies



Some cities have had significantly less turnover than others. Ten out of 41 city/county managers in 2022 had been in their positions for seven or more years with an average of nearly 11 years; among the other 31, the average tenure was just over two years.

Silicon Valley experienced much higher-than-typical rates of city/county manager turnover in 2018 and 2019, replacing 14 out of 41 managers in each of those two years.

Less than one-third (27%) of Silicon Valley city/county managers are women. While this share is higher than the latest statewide^a and national⁷³ estimates (both 19%), it has only increased by five percentage points over the past eight years and remains far from parity.

a. Women led 76 out of the 473 California cities with a manager in 2014. Grassrootslab, *California City Managers* (2015).

Each year, Silicon Valley cities and counties typically appoint anywhere from three to fourteen new (or interim) city/county managers, representing a turnover rate of 7-34%. In 2022, the turnover rate was 22% with nine out of 41 managers that were new or interim.

In contrast to the increased turnover rate, the number of long-term city/county managers (who have served in their position for four or more years) more than doubled over the past two years, from 12 in 2020 to 26 in 2022.

GOVERNANCE

Civic Engagement

Registered Democrats represent a narrow majority (53%) of the Silicon Valley electorate, whereas the share of registered Republicans has declined to the lowest level since 1970 (16%); the remaining 31% either have no party preference, or are registered as American Independent or other political party.

Voter turnout has historically varied considerably between primary and general elections, and between midterm general elections and presidential general elections. In the June 2022 primary election and the November midterm general election, Silicon Valley's voter turnout was extremely low (31% and 45%, respectively) in comparison to turnout for the November 2020 presidential general election (73%). Only 9% of the

region's youngest voters (ages 18-24) cast ballots in the June primary; this compares to a slightly higher rate of 14% in San Francisco, and 10% statewide.

Since Assembly 37 was codified into law in 2021, mail-in ballots were sent to all registered voters for both the June 2022 primary and the November 2022 general election. Silicon Valley's rate of vote-by-mail in November reached an all-time high of 93%.

Why is this important?

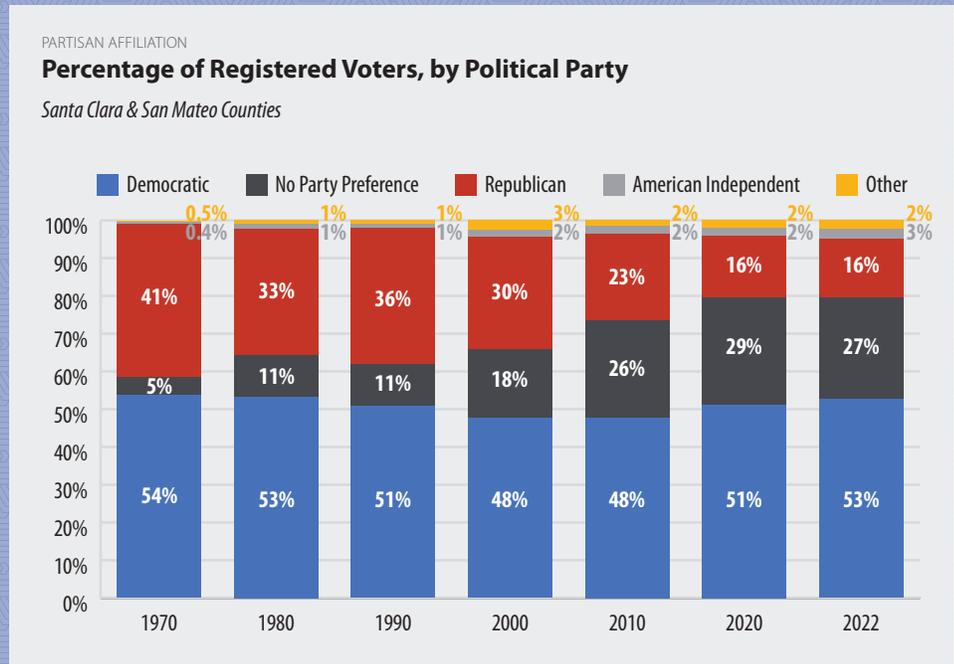
An engaged citizenry shares in the responsibility to advance the common good, is committed to place, and holds a level of trust in community institutions. Voter participation is an indicator of civic engagement and

reflects community members' commitment to a democratic system, confidence in political institutions, and optimism about the ability of individuals to affect decision-making.

The share of Silicon Valley registered voters with no political party affiliation has declined slightly to 27% from reaching historical highs in 2018 (33%). At the same time, the share of registered Republicans (16%) has declined to the lowest level ever in the available record (back to 1970 when it was 41%).

Over the past 50 years, the share of Silicon Valley voters registered with No Party Preference has risen from less than 5% in 1970 to 27% in advance of the 2022 general election (compared to 23% statewide).

53% of Silicon Valley voters were registered as Democrats (compared to 47% statewide) at the time of the November 2022 presidential general election, the highest level since 1984.



Data Source: California Secretary of State, Elections Division | Analysis: Silicon Valley Institute for Regional Studies

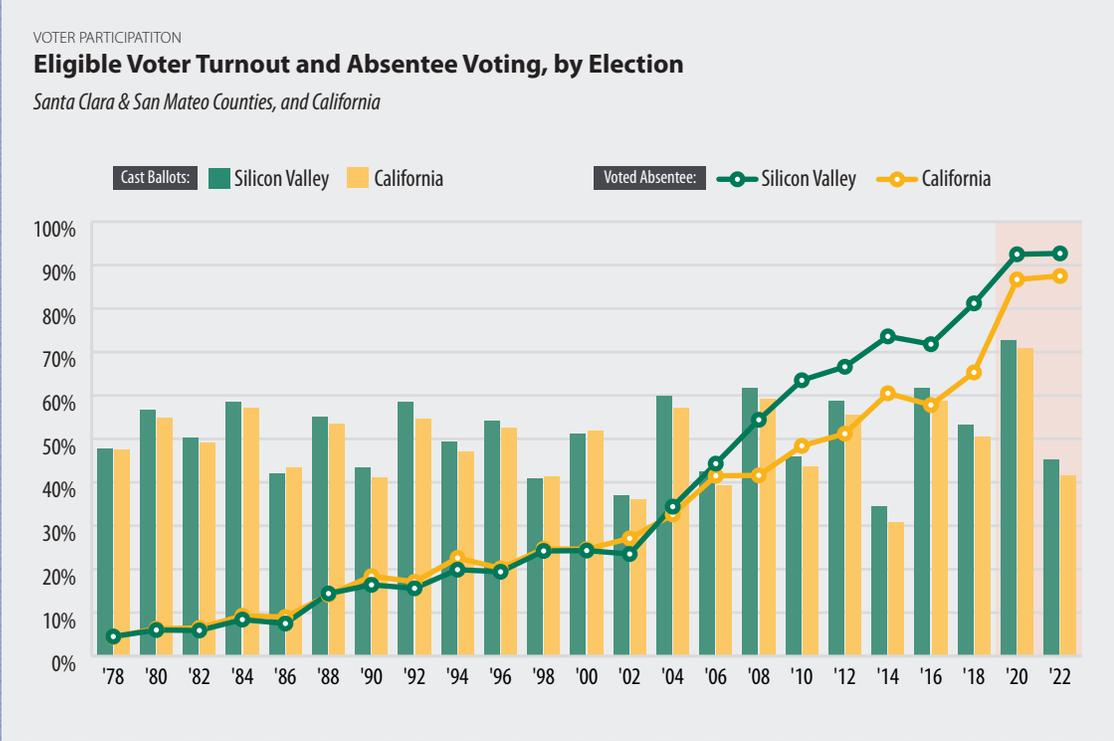
In Silicon Valley, 81% of those who are eligible to vote are registered; this compared to 75% in San Francisco and 82% statewide.

Voter registration rates were higher in 2022 compared to 2016 in both Silicon Valley (+6pp) and California overall (+4pp).

Share of Eligible Voters Who Registered
Santa Clara & San Mateo Counties, San Francisco, and California
 2016, 2020 & 2022 General Elections

	2016	2020	2022
Silicon Valley	75%	85%	81%
San Francisco	79%	78%	75%
California	78%	88%	82%

Silicon Valley's vote-by-mail rate reached an all-time high for the November 2022 elections, reaching 93%; this compares to a statewide vote-by-mail rate that rose to 88%. In September 2021, Governor Newsom signed landmark elections legislation (Assembly Bill 37) that makes permanent the measure initiated during the pandemic to send vote-by-mail ballots to all registered voters in California.⁷⁴



Voter turnout in Silicon Valley for the midterm general election on November 8, 2022 (45%) was in keeping with past midterm elections which historically have lower voter turnout than presidential general election years (turnout in 2020 was 73%).

San Mateo County had a slightly higher voter turnout (49%) than Santa Clara County (44%) for the November midterm election with each having a vote-by-mail rate of 93%.

Data Source: California Secretary of State, Elections Division | Analysis: Silicon Valley Institute for Regional Studies

GOVERNANCE

Civic Engagement

Primary elections historically garner lower voter turnout than general elections. The overall voter turnout among Silicon Valley voters was 32% for the 2022 primary election, compared to 49% for the November 2022 general election.

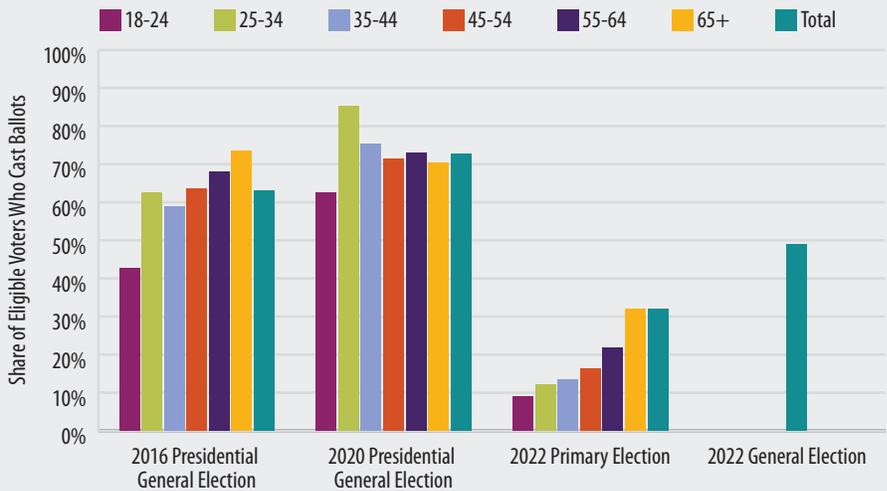
Voters ages 65+ had the highest turnout rates for the 2022 primary election, at 32% in Silicon Valley, 50% in San Francisco, and 49% statewide.

Young adult voters (ages 18-24) turned out for the June 2022 primary election at a rate of 9% — lower than both San Francisco (14%) and the state overall (10%) for this age group. This relatively low young voter turnout for the primary election is in contrast to the 62% of young voters who voted in the 2020 Presidential general election.

VOTER PARTICIPATION

Eligible Voter Turnout, by Age

Santa Clara & San Mateo Counties | 2016 & 2020 Presidential General Elections & 2022 Primary and General Elections



Data Source: Center for Inclusive Democracy (Data: Statewide Database and California Department of Finance) | Analysis: Center for Inclusive Democracy at the USC Sol Price School of Public Policy

Young adults (ages 18-24) remained underrepresented at the polls in Silicon Valley, San Francisco, and statewide in the 2022 primary election; in Santa Clara and San Mateo Counties combined, young adults accounted for 11% of all eligible voters but only 3% of the ballots cast. This pattern of underrepresentation at the polls for this age cohort was evident in the 2018 and 2020 general elections as well, but to a lesser degree.

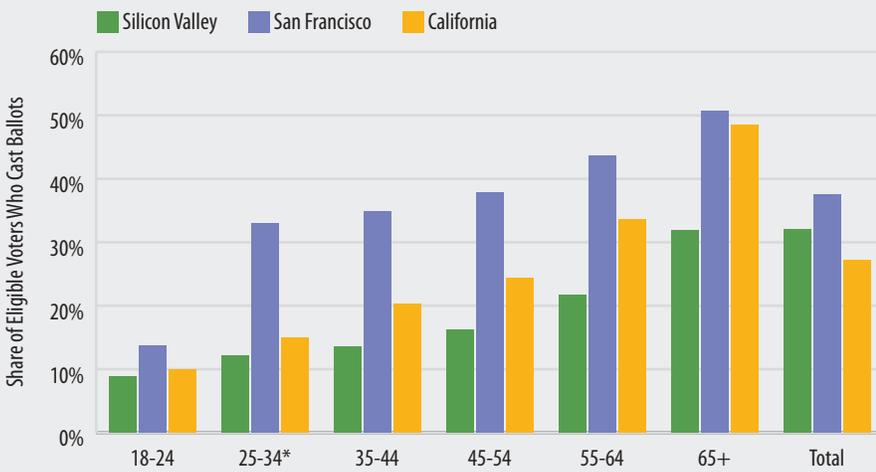
Share of Eligible Young Adult Voters, and Turnout (Ages 18-24)

	2018 General Election		2020 General Election		2022 Primary Election		2022 General Election
	% Eligible Voters	% Ballots Cast	% Eligible Voters	% Ballots Cast	% Eligible Voters	% Ballots Cast	% Eligible Voters
Silicon Valley	11.4%	7.0%	11.8%	10.1%	11.3%	3.2%	11.3%
San Francisco	9.7%	5.6%	8.3%	6.9%	10.4%	3.8%	10.4%
California	13.8%	7.3%	14.5%	10.2%	13.0%	4.7%	13.0%

VOTER PARTICIPATION

Eligible Voter Turnout, by Age

Santa Clara & San Mateo Counties, San Francisco, and California | 2022 Primary Election



Eligible voter turnout in Silicon Valley was higher than in the state overall (32% compared to 27%) but lower across all age groups in the 2022 primary election. Voter turnout rates ranged from 9-32% across age groups, compared to 10-49% statewide.

*The eligible turnout rate in San Francisco increased significantly in 2020 due to an estimated decline in the citizen voting age population ages 25-34.
 Data Source: Center for Inclusive Democracy (Data: Statewide Database and California Department of Finance) | Analysis: Center for Inclusive Democracy at the USC Sol Price School of Public Policy

GOVERNANCE

Representation

Women are closing the gap to achieve proportional representation in Silicon Valley's local elected offices, reaching 46% in 2022 — a ten percentage point increase since 2017. While local elected offices are non-partisan in nature, the overwhelming majority of local elected officials are Democrats (77%), with a relatively small share of Republicans (12%). Race and ethnicity data were not available for 2022, but based on 2021 data, Asian and Pacific Islander representation is relatively high in Silicon Valley (21%), compared to 6% in local offices statewide. The share of local elected officials identifying as Hispanic or Latino was 14% in 2021, up from 10% in 2017.

Over the past decade, there has been a slight shift in the demographics of Silicon

Valley's superior courts. There were twice as many Asian judges in 2021 compared to 2011, and an additional one out of 93 judges identifying as Hispanic or Latino over that period. In 2021, the overwhelming majority of judges/justices serving in Santa Clara and San Mateo counties identified as White (63% in 2021). The share of female judges was 37%, compared to 31% throughout the state.

Why is this important?

Local government is considered the closest level of government to the people, yet there is little scholarship or reporting on the activities and identities of local elected officials. In many respects, local elected officials create the policies that shape and affect

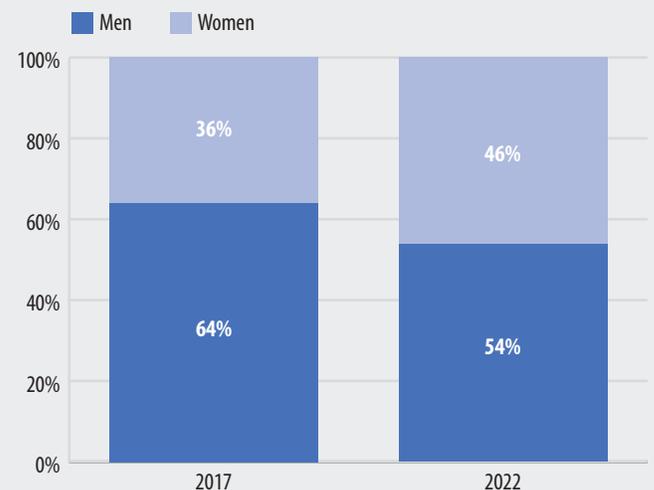
residents' daily lives and determine how resources will be allocated. Having leaders with a diverse set of lived experiences brings firsthand knowledge when representing residents' needs and concerns, particularly with respect to historically marginalized communities. The County Board of Supervisors also has an important role across many areas including public health and health equity, planning and development, as well as the Registrar of Voters. Judges and justices are also local elected officials, serving in the Superior Courts (also known as Trial Courts) in each county. These judges/justices are the first level of court proceedings, whether civil or criminal, for cases that occur within local jurisdictions.

Consistent with State and Federal government representation,⁷⁶ women have historically been underrepresented in local elected office in Silicon Valley. In 2022, the share of female local elected officials was near proportional representation (46%) with a gain of ten percentage points since 2017. This compares to female representation in the California Legislature of 42% as of the beginning of the 2023-24 session.⁷⁷

REPRESENTATION

Share of Local Elected Officials, by Gender

Silicon Valley

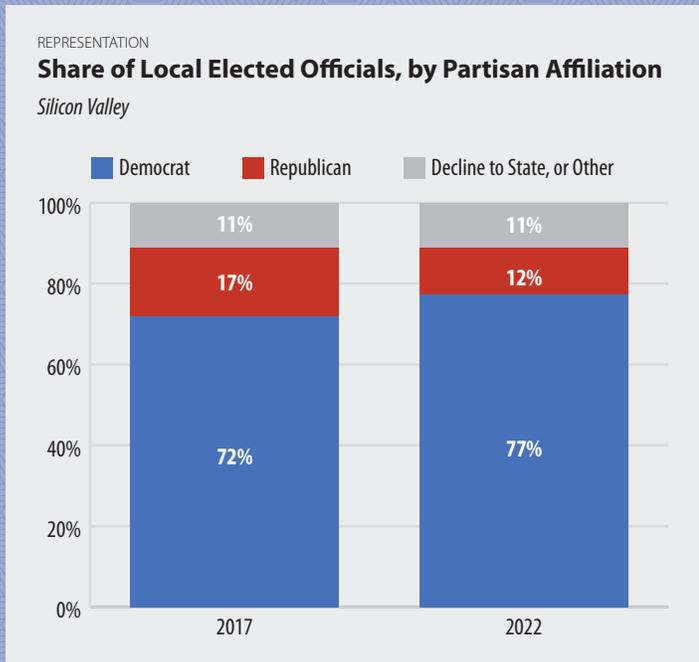


Data Source: I2 Voter and Demographic Dataset, California Voter File
Analysis: Silicon Valley Institute for Regional Studies

In Silicon Valley, each local elected official represents, on average, nearly 12,000 residents. By examining these local elected leaders, we are able to illustrate the extent to which Silicon Valley’s constituency is represented, and gain insights on the backgrounds that may shape their decisions on behalf of our communities. The composition of a region’s local elected officials is also critical because it represents the future cohort of state and regional leadership.³ If any given constituency is not cultivated at the local level, they are unlikely to gain increased representation at the State and Federal levels. In June, 2021, President Biden signed an Executive Order committing the nation’s

largest employer, the federal government, to removing barriers in recruiting, hiring, promoting, and retaining talent in order to advance diversity, equity and inclusion.⁷⁵ These same principles are critical to removing barriers that exist in local government.

a. For example, in 2015, 58% of California Senators and Assemblymembers had previously served in local government – in the Assembly alone, 67% of members were former local government officials. This means that broadly, more than half of the California State legislature is comprised of former local elected officials.



The majority of elected officials serving on City and Town Councils and County Boards of Supervisors in Silicon Valley are Democrats (77%, up from 72% in 2017).

12% of Silicon Valley’s local elected officials are Republicans, compared to 16% of registered voters.

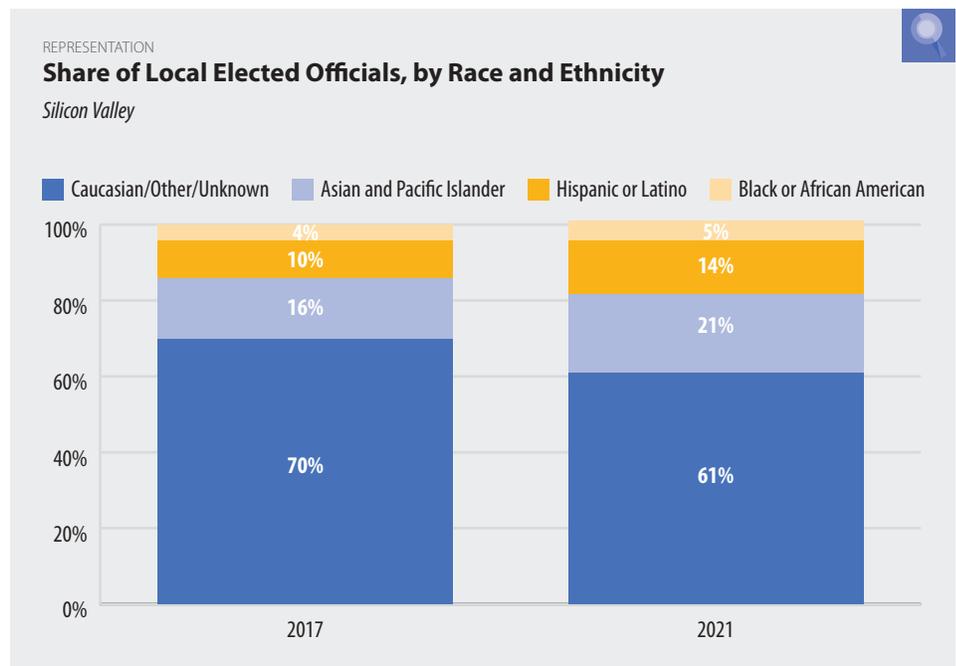
Data Source: L2 Voter and Demographic Dataset, California Voter File
 Analysis: Silicon Valley Institute for Regional Studies

GOVERNANCE

Representation

The share of local elected officials identifying as Hispanic or Latino increased from 10% in 2017 to 12% in 2019, and 14% in 2021.

Diversity in representation is not evenly distributed throughout the region. At the local municipal level, seven of Silicon Valley's 39 cities did not have any representation from racial/ethnic groups other than White in 2021; there were two cities in which all five members of the city council were Hispanic or Latino, Black or African American, or Asian.

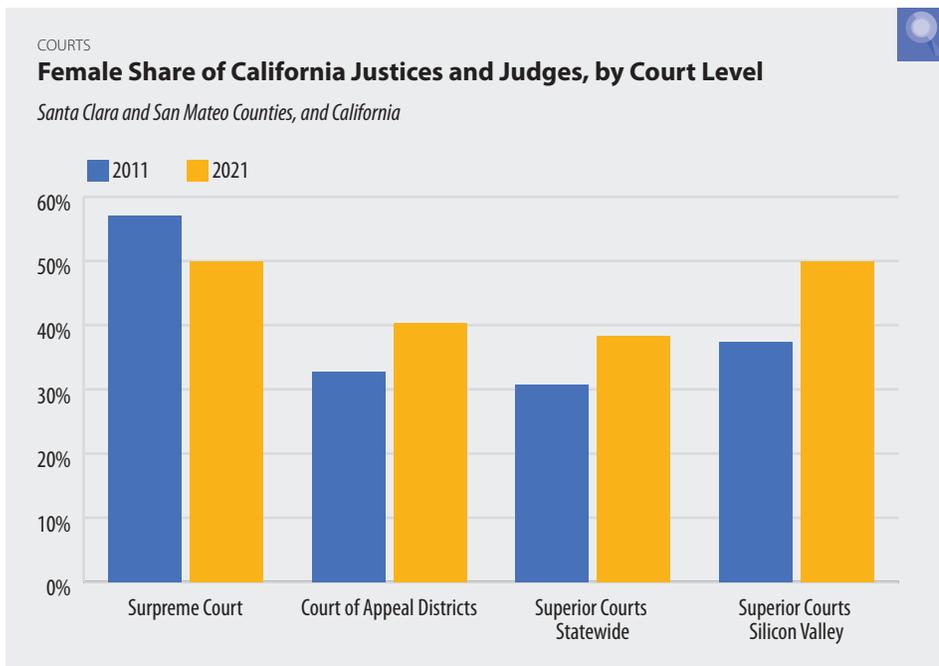


Data Source: L2 Voter and Demographic Dataset, California Voter File | Analysis: Silicon Valley Institute for Regional Studies

Asian and Pacific Islander representation is relatively high in Silicon Valley, with 21% of local elected officials identifying as such (compared to 6% of local elected officials throughout the state).^a

a. Data for the race and ethnicity of local elected officials were not available for 2022. Since not all of the officials represented in the 2021 dataset remained in office in 2022, data by race and ethnicity should not be directly compared to data by gender or partisan affiliation.

While female judges/justices make up 31% of all superior court judges in the state, a slightly higher share (37%) of Silicon Valley's superior court judges are female.



Note: Multiple and Other includes American Indian and Alaskan Native, Pacific Islander, Some Other Race, More than One Race, and Information not provided. Data Source: Judicial Council of California | Analysis: Silicon Valley Institute for Regional Studies

Share of Superior Court Judges, by Race & Ethnicity

Santa Clara and San Mateo Counties

	2011	2016	2021
Black or African American	6.4%	7.4%	6.5%
Hispanic or Latino	7.4%	8.5%	8.6%
Multiple and Other	8.5%	8.5%	8.6%
Asian	6.4%	9.6%	12.9%
White	71.3%	66.0%	63.4%

Note: Multiple and Other includes American Indian and Alaskan Native, Pacific Islander, Some Other Race, and More than One Race.

In 2021, there were 96 justices and judges serving in Trial/Superior Courts in San Mateo and Santa Clara Counties,^a reflecting a racial and ethnic breakdown that has shifted slightly over the past ten years. Since 2011, the largest gains in representation were for Asian (from 6% to 13%) and Hispanic or Latino (from 7% to 9%) judges/justices, with a corresponding decline in the share of White justices/judges (from 71% to 63%).

a. California has 58 trial or superior courts, one in each county. The number of justices and judges in each trial court is determined by the State Legislature. Superior court judges serve six-year terms and are elected by county voters on a nonpartisan ballot at a general election during even-numbered years. Vacancies occurring during those terms — due to retirements, deaths, or other departures — are filled through appointment by the Governor.

The overwhelming majority of local judges/justices in 2021 were White (63%), with Black or African American judges/justices accounting for 7%.

APPENDIX A

PROFILE OF SILICON VALLEY

Area

Land Area includes Santa Clara and San Mateo counties, Fremont, Newark, Union City, and Scotts Valley. Land Area data (except for Scotts Valley) are from the U.S. Census Bureau: State and County QuickFacts. Land area is based on current information in the TIGER database, calculated for use with Census 2010. Scotts Valley data are 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 January 2022.

Jobs

The total number of jobs in the city-defined Silicon Valley region for Q2 of 2022 was estimated by BW Research using data from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages, using Q1 2022 QCEW data and updated based on Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment.

Average Annual Earnings

Data are from the California Employment Development Department and JobsEQ. Earnings include wages, salaries, profits, benefits, and other compensation, and are calculated by dividing total earnings by the number of jobs. Data for Silicon Valley includes San Mateo and Santa Clara counties, and the cities of Fremont, Newark, Scotts Valley, and Union City.

Foreign Immigration and Domestic Migration

Data are from the California Department of Finance E-2 and E-6 Population Estimates and Components of Change, and include San Mateo and Santa Clara counties. Estimates for 2022 are preliminary. 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.

Population by Age

Data are from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates. Silicon Valley includes Santa Clara and San Mateo counties.

Public School Enrollment

Data are from the California Department of Finance (DOF), Public K-12 Graded Enrollment and High School Graduate Projections by County — 2022 Series (released September 2022), and include data through 2021-22 plus projections over the following ten years given current fertility and migration trends. The DOF methodology for the 2022 Series includes an adjustment to account for the rollout of transitional kindergarten to cover all four-year-olds by 2025-26. Data and projections include Santa Clara and San Mateo Counties; TK-12 includes all students from ages four (Transitional Kindergarten) through high school; TK-8 is through eighth grade; Grades 9-12 includes high school students only.

Population by Gender

Gender distribution represents a Bay Area estimate for 2022. County-level non-binary gender data were not readily available. Population by gender is from the United States Census Bureau, Household Pulse Survey (Weeks 41-52, spanning the dates 12/29/21 through

12/19/22) and includes the San Francisco-Oakland-Berkeley Metro Area. Percentages are calculated based on the total number of people who reported their gender. Transgender/Non-Binary includes "None of these."

Racial & Ethnic Composition

Data are from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates. Silicon Valley data include Santa Clara and San Mateo counties. Multiple & Other includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, Some Other Race alone, and Two or More Races. White, Black or African-American, and Multiple & Other are not Hispanic or Latino; Asian subgroups are not mutually exclusive. In 2021, the U.S. Census Bureau changed the way respondents were categorized into racial and ethnic groups if they indicated more than one race in addition to Hispanic or Latino, which has resulted in a significant year-over-year increase in the number of Hispanic or Latino persons in the Some Other Race and Two or More Race categories.

Population by Place of Birth

Data are from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates, and include Santa Clara & San Mateo counties. The Foreign Born Population excludes those who were born at sea. Oceania includes American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Caledonia, New Zealand, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Wallis, and Futuna.

Educational Attainment

Data are from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates, and include Santa Clara & San Mateo counties. Data reflects the educational attainment of the population 25 years and over.

Homeownership

Data are from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates, and include Santa Clara & San Mateo counties. Owned with a mortgage includes loans, such as home equity loans. Other includes Occupied without rent or payment, Group quarters, Vacant units, and Unknown.

Population Density

Data for Population Density are from the United States Census Bureau, American Community Survey 1-Year Estimates for 2021 for the city-defined Silicon Valley region by zip code. Zip codes by Locale Assignment are from the United States Department of Education, National Center for Education Statistics 2019 ZIP Code Tabulation Area (ZCTA) Locale Assignments. Percentages represent the share of the population living within each type of environment. Urban/City includes territories inside an Urbanized Area and a Principal City; Suburban includes territories outside a Principal City and inside an Urbanized Area or Urban Cluster; Rural/Town includes census-defined rural territory that is less than or equal to 25 miles from an Urbanized Area, rural territory that is less than or equal to 10 miles from an Urban Cluster, and territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area.

Industry Employment

Data for employment by industry for Silicon Valley includes the city-defined region, and are from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), modified slightly by JobsEQ.

SNAPSHOT OF KEY INDICATORS

COVID-19 Cases, Deaths, and Cases Per 100,000

COVID-19 case and death data are from the County of Santa Clara, San Mateo County Health, the California Health and Human Services Agency Open Data Portal, New York Times COVID Data, and the World Health Organization (WHO) Coronavirus (COVID-19) Dashboard. Santa Clara County cases are by specimen collection date; San Mateo County cases are by episode date (the earliest of symptom onset date, specimen collection date, diagnosis date, lab result date, or death date); for California, United States, and the world, data are by reporting date. Death is by death date. Population data used to calculate per capita values were from the California Department of Finance (E-1: City/County Population Estimates with Annual Percent Change for January 1 of 2020, 2021, and 2022), the United States Census Bureau Population Clock (Estimate for January 2020, 2021, and 2022), and the United Nations Population Fund World Population Dashboard (mid-year 2020, 2021, and 2022). Visit the Silicon Valley COVID-19 Dashboard for data updated daily (<https://siliconvalleyindicators.org/live-updates/covid-2021>). The Silicon Valley COVID-19 Dashboard was developed in partnership with the Stanford Future Bay Initiative (Student Lead: Simone Speizer; Mentor: Derek Ouyang).

Unemployment Rate

see Employment (Monthly Unemployment Rate)

CalFresh Enrollees

CalFresh data are from the California Department of Social Services, and include Santa Clara & San Mateo Counties. Data through November 2022.

Freeway Driving

see Transportation (Vehicle Miles Traveled)

Aggregate Regional Market Cap

Stock market performance data include all public companies in Silicon Valley (Joint Venture's city-defined region) and San Francisco based on addresses from D&B Hoovers, cross-referenced with CB Insights and Crunchbase. The company list is based on presence within the region (which may or may not be the company headquarters) and includes those listed on the Nasdaq, NYSE, and NYSE American exchanges only. New regional IPOs are added on a monthly basis, excluding special purpose acquisition companies (SPACs). Company name, exchange, industry, share price (unadjusted), and market cap are from IEX Cloud. Stock index prices are from TradingView. In the tables, points, share price, and market cap are updated as of the time listed on the sidebar. If the time listed is after market close, then the share price shown is closing price. The chart only records daily closing prices. Market cap is share price multiplied by shares outstanding. Pharms outstanding comes from IEX Cloud for all table results and recent chart data, but reverts to shares

outstanding from the quarterly balance sheet as available from each company, updated on the first of every month. Historical data begin on February 19, 2020, and represent the unadjusted closing prices and aggregate market cap immediately prior to the first market-wide trading halt since 1997 (which occurred on February 20, 2020, and was also the first ever halt—or suspension of trading—of the "modernized" Market-Wide Circuit Breaker); subsequent trading halts across U.S. exchanges followed on March 9, 12, 16, and 18, 2020.

Consumer Spending

Data are from Earnest Research, and are derived from a panel of over 6.5 million U.S. consumers, normalized by the Earnest Consultant Shopper Methodology. n-Store vs. Online Spending includes the city-defined Silicon Valley region, and excludes Store Card purchases; it includes spending categories Apparel & Accessories, Autos, Department Stores, Electronic, Events & Attractions, Finance, Fitness, General Merchandise, Grocers, Health & Beauty, Hobbies & Toys, Home, Home Entertainment, Occasion & Gifts, Pets, Restaurants, Specialty, Specialty Food & Beverage, Sporting Goods, Travel & Transportation.

Relative Change in Prices

Relative change in prices are from the United States Bureau of Labor Statistics, Bay Area Consumer Price Index by Expenditure Category, and are relative to February 2019.

Workers & Workforce

The share of employees living and working in Silicon Valley is from the United States Census Bureau, 2021 American Community Survey 1-Year Estimates, and includes all the civilian employed population over age 16.

Remote Work

see Transportation (Means of Commute)

Natural Change & Net Migration

see Talent Flows & Diversity (Population Change; Net Migration Flows)

Venture Capital & Megadeals

see Innovation & Entrepreneurship (Venture Capital)

Wealth Inequality

see Income (Wealth)

Average Wages, Bachelor's Degree+

see Income (Average Wages by Race & Ethnicity)

PEOPLE

TALENT FLOWS AND DIVERSITY

Population Change

Data are from the California Department of Finance E-2 and E-6 Population Estimates and Components of Change, and include San Mateo and Santa Clara Counties. Estimates for 2022 are preliminary. Natural Change equals births minus deaths. 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. 2021 and 2022 data are from the January 2023 release; 2011 to 2020 data are from the December 2021 release; 2000-2010 data were updated with the revision released in December 2011; 1991-1999 data were updated with the revised historical data released February 2005.

Net Migration Flows

Data are from the California Department of Finance E-2 and E-6 Population Estimates and Components of Change, and include San Mateo and Santa Clara Counties. Estimates for 2022 are preliminary. 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. 2021 and 2022 data are from the January 2023 release; 2011 to 2020 data are from the December 2021 release; 2000-2010 data were updated with the revision released in December 2011; 1991-1999 data were updated with the revised historical data released February 2005. Refugee Processing Center, via the California Immigrant Data Portal (National Equity Atlas), and include the number of refugees admitted into the United States. Silicon Valley data includes Santa Clara & San Mateo counties, plus the City of Fremont. Percent likely to move out is from the 2022 Silicon Valley Poll, and include those who responded that it is an "agree" or "strongly agree." Democrats and Republicans include "leaners." Employed includes part-time, full-time, or business owner.

Domestic Outmigration Destinations

Domestic migration data are from the United States Census Bureau, 2021 American Community Survey (ACS) 1-Year Public Use Microdata. Silicon Valley includes Santa Clara and San Mateo counties, and migration between those two counties are not included. Domestic Outmigration is the gross outmigration (not net, which would subtract counterflow). The Monterey Bay Area includes Santa Cruz, San Benito, and Monterey Counties; the Sacramento Metro area includes Sacramento, Yolo, El Dorado, and Placer Counties; San Joaquin Valley includes San Joaquin, Kern, Kings, Stanislaus, Merced, Fresno, Madera, and Tulare Counties; Rest of Northern California includes Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, and Yuba Counties; Rest of Southern California includes Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, San Luis Obispo, and Ventura Counties; Seattle-Tacoma includes Grays Harbor, Island, King, Kitsap, Pierce, Skagit, Mason, San Juan, Snohomish, and Thurston Counties; the Greater Phoenix, AZ Area includes La Paz, Maricopa, Mohave, Pima, Pinal, Gila, Graham, Greenlee, Yavapai, and Yuma Counties; the Greater Portland, OR Area includes Multnomah, Clackamas, Columbia, Polk, Washington, and Yamhill Counties; the Dallas-Fort Worth, Texas Metro includes Collin, Dallas, Ellis, Hunt, Kaufman, and Rockwall Counties; New York City includes New York County (Manhattan), Kings County (Brooklyn), Bronx County (The Bronx), Richmond County (Staten Island), and Queens County (Queens); Las Vegas, NV includes Clark County; Greater Austin, Texas includes Bastrop, Caldwell, Hays, Travis, and Williamson counties; Greater Boston, MA includes Bristol, Norfolk, Plymouth, Suffolk, Essex, Middlesex, and Worcester Counties; Greater Chicago, IL includes Cook, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will Counties; the Salt Lake City, UT Metro Area includes Box Elder, Davis, Salt Lake, and Tooele counties; the Washington, D.C. Metro area includes the District of Columbia, Maryland (Calvert, Charles, Frederick, Montgomery, Prince George's, and St. Mary's Counties), Virginia (Alexandria, Arlington County,

Clarke County, Culpeper County, Fairfax County, Fairfax, Falls Church, Fauquier County, Fredericksburg, Loudoun County, Manassas, Manassas Park, Prince William County, Rappahannock County, Spotsylvania County, Stafford County, Warren County), and West Virginia (Jefferson County); Greater Denver, CO includes Denver, Arapahoe, Douglas, Elbert, Jefferson, Boulder, Broomfield, Weld, Adams, Clear Creek, and Gilpin counties.

Domestic In/Out Migration

Worker migration data are from the December LinkedIn Economic Graph Workforce Reports. Domestic in/out migration is estimated using worker migration estimates, average household size and average number of workers per household (from the U.S. Census Bureau American Community Survey 1-Year Estimates), LinkedIn member estimates, and the approximate share of California workers represented on LinkedIn (from LinkedIn Talent Insights). This estimation methodology assumes that workers move their entire household at once, and that workers on and off LinkedIn are moving in/out at approximately the same rates. Migration data only include the top ten U.S. origins/destinations each year. Estimates are rounded to the nearest hundred.

Population by Age

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates. Silicon Valley includes Santa Clara and San Mateo counties.

Population Share by Race & Ethnicity

Silicon Valley data include Santa Clara and San Mateo counties. Multiple & Other includes American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone, Some Other Race alone, and Two or More Races. White, Black or African American, and Multiple & Other are not Hispanic or Latino; Asian subgroups are not mutually exclusive. In 2021, the U.S. Census Bureau changed the way respondents were categorized into racial and ethnic groups if they indicated more than one race in addition to Hispanic or Latino, which has resulted in a significant year-over-year increase in the number of Hispanic or Latino persons in the Some Other Race and Two or More Race categories. The Diversity Index calculation for Silicon Valley utilized the formula from the U.S. Census Bureau 2020 Census: Racial and Ethnic Diversity Index by State (August 12, 2021), originally from Phillip Meyer and Shawn McIntosh, "The USA Today Index of Ethnic Diversity," International Journal of Public Opinion Research (Volume 4, Issue 1), 1992. The index includes population estimates encompassing Joint Venture's city-defined region, and is calculated as: $DI = 1 - (H^2 + W^2 + B^2 + AIAN^2 + Asian^2 + NHP)^2 + SOR^2 + Multi^2$ where H is % Hispanic or Latino, W is % White alone, B is % Black or African American alone, AIAN is % American Indian and Alaska Native alone, Asian is % Asian alone, NHP is % Native Hawaiian and Other Pacific Islander alone, SOR is % Some Other Race alone, MULTI is % Two or More Races. Estimates for all races included in the calculation are not Hispanic or Latino. The Diversity Index (DI) indicates the probability that two people chosen at random will be from different racial and/or ethnic groups; a DI of zero indicates no diversity, whereas a DI of 1 indicates complete diversity (everyone is of a different race and/or ethnicity). The probabilities have been converted into percentages to make them easier to interpret. The Divergence Index is a measure of racial residential segregation and compares the demographics of census tracts in Santa Clara and San Mateo counties to the demographics of the larger metro-regions (CBSAs) in which the tracts are located. The degree of difference is how much those demographics diverge, thus the divergence score. This methodology allows for the comparison of more than two groups at a time, which is especially useful in a region like the Bay Area which is both diverse and segregated. Rather than thresholds or cut-offs for low, moderate, and high divergence scores, the Othring & Belonging Institute recommends looking at the ranking of the score compared to all US census tracts since the scores of a region may change drastically over time, and single numbers may become incomparable to the larger U.S. The percentages indicate the share of Silicon Valley census tracts which are in the top third, middle third, and bottom third of U.S. divergence scores per decade (i.e. the comparison to the U.S. is built into the high/mod/low classification).

APPENDIX A

PEOPLE CONTINUED

Total Number of Births

Data are from the California Department of Finance E-2 and E-6 Population Estimates and Components of Change, and include San Mateo and Santa Clara counties. Estimates for 2022 are preliminary. 2021-2022 are from the 22 release; 2011-2020 data are from the 2021 release; 2000-2010 data were updated with the revision released in 2011; 1991-1999 data were updated with the revised historical data released February 2015.

Educational Attainment

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates for 2021, and 5-Year Estimates for 2010, 2015, and 2020, and Decennial Census for 1970, 1980, 1990, and 2000. Data reflect the educational attainment of the population ages 25 years and over. Bachelor's Degree or Higher includes adults ages 25 years and over whose highest degree received was either a bachelor's degree or a graduate degree. In 2021, the U.S. Census Bureau changed the way respondents were categorized into racial and ethnic groups if they indicated more than one race in addition to Hispanic or Latino, which has resulted in significant year-over-year increase in the number of Hispanic or Latino persons in the Some Other Race and Two or More Race categories. Multiple and other includes Two or More Races, Some Other Race, Native Hawaiian and Other Pacific Islander, and American Indian and Alaska Native. White does not include those who are also Hispanic or Latino.

Science and Engineering Degrees

Data are from the National Center for Education Statistics. Regional data for the Silicon Valley includes the following post-secondary institutions: Menlo College, University of Silicon Valley (formerly known as Cogswell Polytechnical 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, and Golden Gate University. Beginning with the 2015 data, California State University-East Bay, International Technological University, and Notre Dame de Namur University were added. 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 first major and level of degree (bachelor's, master's, or doctorate). The year listed represents the end of the school year (e.g., 2021 represents the 2020-2021 school year). Data for race and ethnicity includes the share of degrees where data was available; other includes American Indian, Alaska Native, Native Hawaiian or Other Pacific Islander.

Foreign Born & Immigration Status

Data for the population by nativity are from the United States Census Bureau, 2021 American Community Survey, 1-Year Estimates. Silicon Valley includes Santa Clara and San Mateo counties. Foreign born residents do not include those who were Born Abroad of American Parent(s). Historical estimates are from the United States Census Bureau, Decennial Census; 1852-53 estimate is from the Works Progress Administration, Inventory of the County Archives of California No. 44 Santa Clara County (San Jose) 1939 and History of San Mateo County, California (B.F. Alley, Publisher; 1883). Historical data for 1852-53 include Santa Clara County (1852), Half Moon Bay (<1860), and Redwood City (1856) only. Estimates for the foreign born share of employed residents over age 16 include those who are at work only. Tech includes Computer & Mathematical, Architectural & Engineering occupations. Immigration Status is from the California Immigrant Data Portal (Data: IPUMS USA), a project of University of Southern California's Equity Research Institute (ERI), and includes the composition of the immigrant population by immigration status, race, ancestry and age

ECONOMY

EMPLOYMENT

Total Number of Jobs and Percent Change over Prior Year

Data includes average annual employment estimates as of the second quarter for years 2001 through 2022 from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages, and include the entire city-defined Silicon Valley region. Q2 of 2022 was estimated at the industry level by BW Research using Q1 2022 QCEW data and updated based on Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment.

Total Employment, by Major Areas of Economic Activity; Innovation & Information Products and Services Jobs at the Region's Largest Tech Companies

Data include average annual employment estimates as of the second quarter from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages, and include the entire city-defined Silicon Valley region. Data for Q2 of 2022 was estimated at the industry level by BW Research using Q1 2022 QCEW data and updated based on Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Community Infrastructure & Services includes Healthcare & Social Services (including state and local government jobs); Retail; Accommodation & Food Services; Education (including state and local government jobs); Construction; Local Government Administration; Transportation; Banking & Financial Services; Arts, Entertainment & Recreation; Personal Services; Federal Government Administration; Nonprofits; Insurance Services; State Government Administration; Warehousing & Storage; and Utilities (including state and local government jobs). Innovation and Information Products & Services includes Computer Hardware Design & Manufacturing; Semiconductors & related Equipment Manufacturing; Internet & Information Services; Technical Research & Development (Include Life Sciences); Software; Telecommunications Manufacturing & Services; Instrument Manufacturing (Navigation, Measuring & Electromedical); Pharmaceuticals (Life Sciences); Other Media & Broadcasting, including Publishing; Medical Devices (Life Sciences); Biotechnology (Life Sciences); and I.T. Repair Services. Business Infrastructure & Services includes Wholesale Trade; Personnel & Accounting Services; Administrative Services; Technical & Management Consulting Services; Facilities; Management Offices; Design, Architecture & Engineering Services; Goods Movement; Legal, Investment & Employer Insurance Services; and Marketing, Advertising & Public Relations. Other Manufacturing includes Primary & Fabricated Metal Manufacturing; Machinery & Related Equipment Manufacturing; Other Manufacturing; Transportation Manufacturing including Aerospace & Defense; Food & Beverage Manufacturing; Textiles, Apparel, Wood & Furniture Manufacturing; and Petroleum and Chemical Manufacturing (Not in Life Sciences). Largest Bay Area tech employers are from the *Silicon Valley Business Journal*, "Largest technology employers in Silicon Valley" ranked by local employee headcount and data from LinkedIn merged into one list of the largest 30. Employment numbers are estimates obtained from LinkedIn; Silicon Valley represents the city-defined region. Because LinkedIn is primarily a professional network, employment should be considered to primarily include business professionals (as opposed to retail and/or other employees). 2022 data are as of December. Largest 20 tech employers included in the analysis were Google, Apple, Meta, Amazon, Cisco, Tesla, Oracle, Intel, Salesforce, LinkedIn, Nvidia, Adobe, Applied Materials, Microsoft, Western Digital, VMware, Lockheed Martin, Uber, Gilead Sciences, and PayPal; the rest of the largest 30 tech employers included HP Inc, eBay, Hewlett Packard Enterprise, Airbnb, Juniper Networks, Netflix, SAP, Advanced Micro Devices, Yahoo, and Splunk. Uber employment estimates exclude those who self-reported as a driver.

Employment by Major Areas of Economic Activity & Tier

Data include average annual employment estimates as of the second quarter from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages, and includes the entire city-defined Silicon Valley region. Data for Q2 of 2022 was estimated at the industry level by BW Research using Q1 2022 QCEW data and updated based on Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Community Infrastructure & Services includes Healthcare & Social Services (including state and local government jobs); Retail; Accommodation & Food Services; Education (including state and local government jobs); Construction; Local Government Administration; Transportation; Banking & Financial Services; Arts, Entertainment & Recreation; Personal Services; Federal Government Administration; Nonprofits; Insurance Services; State Government Administration; Warehousing & Storage; and Utilities (including state and local government jobs). Innovation and Information Products & Services includes Computer Hardware Design & Manufacturing; Semiconductors & related Equipment Manufacturing; Internet & Information Services; Technical Research & Development (Include Life Sciences); Software; Telecommunications Manufacturing & Services; Instrument Manufacturing (Navigation, Measuring & Electromedical); Pharmaceuticals (Life Sciences); Other Media & Broadcasting, including Publishing; Medical Devices (Life Sciences); Biotechnology (Life Sciences); and I.T. Repair Services. Business Infrastructure & Services includes Wholesale Trade; Personnel & Accounting Services; Administrative Services; Technical & Management Consulting Services; Facilities; Management Offices; Design, Architecture & Engineering Services; Goods Movement; Legal, Investment & Employer Insurance Services; and Marketing, Advertising & Public Relations. Other Manufacturing includes Primary & Fabricated Metal Manufacturing; Machinery & Related Equipment Manufacturing; Other Manufacturing; Transportation Manufacturing including Aerospace & Defense; Food & Beverage Manufacturing; Textiles, Apparel, Wood & Furniture Manufacturing; and Petroleum and Chemical Manufacturing (Not in Life Sciences). Occupational segmentation into tiers has been recently adopted by the California Employment Development Department (EDD), and implemented over the last several years by BW Research for regional occupational analysis. Occupational segmentation allows for the in-depth examination of the quality and quantity of jobs in a given economy. This occupational segmentation technique delineates the majority of occupations into one of three tiers. Tier 1 Occupations include managers (Chief Executives, Financial Managers, and Sales Managers), professional positions (Lawyers, Accountants, and Physicians) and highly-skilled technical occupations, such as Scientists, Computer Programmers, and Engineers, and are typically the highest-paying, highest-skilled occupations in the economy. Tier 2 Occupations include sales positions (Sales Representatives), teachers, and librarians, office and administrative positions (Accounting Clerks and Secretaries), and manufacturing, operations, and production positions (Assemblers, Electricians, and Machinists). They have historically provided the majority of employment opportunities and may be referred to as middle-wage, middle-skill positions. Tier 3 Occupations include protective services (Security Guards), food service and retail positions (Waiters, Cooks, and Cashiers), building and grounds cleaning positions (Janitors), and personal care positions (Home Health Aides and Child Care Workers).

Monthly Unemployment Rate

Monthly unemployment rates are calculated using employment and labor force data from the Bureau of Labor Statistics, Current Population Statistics (CPS) and the Local Area Unemployment Statistics (LAUS). Rates are not seasonally adjusted. County-level and California data for November and December 2022 are preliminary, and county-level data for December are from the California Employment Development Department January 20, 2023 release.

group. Data represent a 2015-2019 average. Immigration status is estimated based on an approach developed by the Equity Research Institute.

Foreign Language

Population data for Santa Clara and San Mateo counties, San Francisco, California, and the United States are from the United States Census Bureau, American Community Survey 1-Year Estimates. The population-based data are for ages five years and over. German includes other West Germanic Languages, French includes Haitian or Cajun, Tagalog includes Filipino, Slavic Languages include Russian, Polish, and other Slavic Languages, and Chinese includes Mandarin and Cantonese. The limited English-speaking data are from the United States Census Bureau, American Community Survey 5-Year Estimates. The U.S. Census defines a limited English-speaking household as one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well."

Female Tech Talent in the Core Working Age Group

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates, and include civilian employed women ages 25-44 with a bachelor's degree or higher. Technical roles include Computer, Mathematical, Architectural and Engineering occupations. Silicon Valley includes Santa Clara & San Mateo counties.

Tech Talent in the Core Working Age Group, by Race and Ethnicity

Data are from the United States Census Bureau, American Community Survey 5-Year Estimates and include adults in the core working age group (ages 25-44) with a bachelor's degree or higher, who are employed full-time (35 or more hours per week) in the private sector, and work in Computer, Mathematical, Architectural and Engineering occupations. Asian, Some Other Race, and Black or African American include respondents who only listed one race; White includes respondents who only listed one race and are not Hispanic or Latino.

Share of Female Employees and Employees by Race and Ethnicity at Silicon Valley's Largest Technology Companies

The twenty largest Bay Area tech employers are from the *Silicon Valley Business Journal*, "Largest technology employers in Silicon Valley" ranked by local employee headcount and data from LinkedIn merged into one list of the largest 20. Employment numbers are from companies' EEO-1 consolidated reports; technical roles include the EEO-1 job classifications of Professional and Technical, and Leadership roles include Executive/Senior Officials and First/Middle Level Officials and Managers. The overall regional workforce data by gender, and race and ethnicity are from the U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates. Multiple and Other includes Two or More Races, American Indian or Alaskan Native, and Native Hawaiian or Pacific Islander. Silicon Valley includes San Mateo and Santa Clara counties.

Share of Residents in Technical Occupations with a Bachelor's Degree or Higher, by Place of Origin

Data are from the U.S. Census Bureau, American Community Survey 1-Year Estimates for 2021, and include all civilian employed workers who reside in San Mateo or Santa Clara counties, with a bachelor's degree or higher, who work in technical occupations (including Computer, Mathematical, Architectural, and Engineering occupations). Oceania includes At Sea.

Unemployment by Race & Ethnicity

Unemployed resident data are from the U.S. Census Bureau, American Community Survey 5-Year Estimates, and 1-Year Estimates; 2020 data are from the American Community Survey 1-Year Estimates and are considered experimental. Silicon Valley includes Santa Clara and San Mateo counties. The data include estimates of the number of unemployed persons in the civilian labor force in each racial and ethnic category for residents 16 years of age and older. White is not Hispanic or Latino. Data are limited to the household population and include the population living in institutions, college dormitories, and other group quarters. Data for Initial Unemployment Insurance (UI) Claims are from the California Employment Development Department and include Santa Clara and San Mateo counties. Estimates represent a weekly average for each month. Race is from optionally self-identified information at the time a claim is filed. County represents the mailing address given by the claimant at the time of filing; it is possible that an individual can reside in a different county than their mailing address. Initial claims represent the number of claims submitted for all UI programs in addition to federal extended benefits programs. Initial claims totals are not representative of the number of individuals filing as a claimant can have multiple initial claims. Employment data by race and ethnicity used to calculate UI claims filed per 10,000 employed are from the U.S. Census Bureau, 2019, 2020, and 2021 American Community Survey 1-Year Estimates and include all employed workers ages 16 and over.

Top U.S. Tech Talent Centers

Data are from the CBRE Research 2022 Scoring Tech Talent report. Scoring Tech Talent is a comprehensive analysis of labor market conditions, cost and quality in North America for highly skilled tech workers. The top 50 markets in the U.S. and Canada were ranked according to their competitive advantages and appeal to both employers and tech talent using data from the U.S. Bureau of Labor Statistics and other sources. Tech Talent includes the following occupation categories: software developers and programmers; computer support, database and systems; technology and engineering related; and computer and information system managers. Tech talent workers comprise 20 different occupations, which are highly concentrated within the high-tech services industry but are spread across all industry sectors. Using this definition, a software developer who works for a logistics or financial services company is included in the data.

Change in Employment at Largest Silicon Valley Tech Companies

Largest Bay Area tech employers are determined using the Silicon Valley Business Journal, "Largest technology employers in Silicon Valley" ranked by local employee headcount and data from LinkedIn merged into one list of the largest 20. Employment numbers presented are estimates obtained from LinkedIn. Because LinkedIn is primarily a professional network, employment should be considered to primarily include business professionals (as opposed to retail, warehouse, delivery, or other employees). Historical data for companies not previously listed among the top 20 was included using global workforce numbers from SEC filings and past Silicon Valley Business Journal overall employment counts; U.S. workforce numbers from EEO-1 reports, as available, or estimated using the nearest data for U.S. workforce numbers; Bay Area workforce numbers from the Silicon Valley Business Journal or from Silicon Valley cities' audited annual financial reports. 2019 and 2020 data were as of January of each year; 2021 data were from June and December; 2022 from June and December; and 2023 data from February 1. The tech companies included in the analysis were Google, Apple, Meta (formerly Facebook), Amazon, Cisco, Tesla, Intel, Nvidia, LinkedIn, Applied Materials, Western Digital, Lockheed Martin, Adobe, VMware, Microsoft, PayPal, Gilead Sciences, Salesforce, and HP Inc. The various U.S. regions are defined by LinkedIn as either metro areas or the "greater" region around a particular city; location is self-reported by LinkedIn users. Regions include the San Francisco Bay Area, Greater Seattle WA, New York City Metro, Austin TX Metro, Atlanta GA Metro, Portland OR Metro, Denver CO Metro, Greater Sacramento CA area, and Los Angeles CA Metro. Change in Employment at Largest Silicon Valley Tech Companies in 2019 and 2020 excludes PayPal due to data limitations.

INCOME

Per Capita Personal Income

Per capita income is from the United States Department of Commerce, Bureau of Economic Analysis (BEA). Values are calculated using personal income data and population figures from the U.S. Census Bureau mid-year population estimates released November 16, 2022 including new statistics for 2021 and revised statistics for 2010-2020. Silicon Valley data include Santa Clara and San Mateo counties. All per capita income values have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data. The personal per capita income for the United States is derived from state and regional data (as opposed to National Income and Product Accounts data), which include all persons who reside in a state, regardless of the duration of residence, except for foreign nationals employed by their home governments in the United States. State personal income includes the income of resident foreign nationals working in the United States—including migrant workers—regardless of length of residency. It excludes the portion of income earned abroad by U.S. citizens living abroad for less than a year. It also excludes the earnings of federal civilian and military personnel stationed abroad and the personal income received by the federal pension plans of those workers.

Per Capita Income by Race & Ethnicity

Data for Per Capita Income are from the United States Census Bureau American Community Survey 5-Year Estimates. All multi-year dollar-denominated data are inflation-adjusted by the U.S. Census using the All Items CPI-UR Annual Averages for each year in the multiyear time period to calculate a set of inflation adjustment factors. Adjustment factors for a time period are calculated as ratios of the CPI-UR Annual Average from the most recent year to the CPI-UR Annual Averages from each of the earlier years. The ACS values for each of the earlier years in the multiyear period are multiplied by the appropriate inflation adjustment factors to produce the inflation-adjusted values. These values are then used to create the multiyear estimates. The 2011 and 2016 5-Year Estimates were inflation-adjusted to 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data. Silicon Valley data includes Santa Clara and San Mateo counties. Per capita income is the mean money income received computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area. Income is not collected for people under 15 years old even though these people are included in the denominator of per capita income. This measure is rounded to the nearest whole dollar. Money income includes amounts reported separately for wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. Population data used to

APPENDIX A

ECONOMY *CONTINUED*

compute per capita values are from the United States Census Bureau, American Community Survey 5-Year Estimates. Multiple & Other includes Native Hawaiian & Other Pacific Islander Alone, American Indian & Alaska Native Alone, Some Other Race Alone and Two or More Races; White is not Hispanic or Latino.

Share of Silicon Valley Cities with Minimum Wage Ordinances

Data are from the U.C. Berkeley Labor Center, Inventory of U.S. City and County Minimum Wage Ordinances, by year enacted. Minimum wage ordinances are city-level policies that set a higher minimum wage than is required by the state.

Average Wages by Race & Ethnicity

Data are from the United States Census Bureau, American Community Survey Public Use Microdata (PUMS) 5-Year Estimates, and include all full-time (35 or more hours per week) workers over age 15 with earnings. All average wage data have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo counties.

Individual Median Income, by Educational Attainment

Data for Median Income by Educational Attainment are from the U.S. Census Bureau American Community Survey, 1-Year Estimates, and include the population 25 years and over with earnings. All income values have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data; California consumer price index for all urban consumers from the California Department of Finance; and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics. Silicon Valley data includes Santa Clara and San Mateo counties.

Average Annual Earnings

Data are from the California Employment Development Department and JobsEQ. Earnings include wages, salaries, profits, benefits, and other compensation, and are calculated by dividing total earnings by the number of jobs. Data for Silicon Valley include San Mateo and Santa Clara counties, and the cities of Fremont, Newark, Scotts Valley, and Union City.

Median Wages for Various Occupational Categories

Data are from the California Employment Development Department, Employment and Wages by Occupation, 2010-2022, for the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA), including Santa Clara and San Benito Counties, and the San Francisco-San Mateo-Redwood City MSA, including Marin, San Francisco, and San Mateo Counties. The San Francisco-Redwood City-South San Francisco Metropolitan Division replaced the San Francisco-San Mateo-Redwood City MSA in 2017. Wages have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Bay Area data, 2022 estimate based on January-August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data. Management, Business, Science and Arts Occupations include Management; Business and Financial Operations; Computer and Mathematical; Architecture and Engineering; Life, Physical, and Social Science; Community and Social Services; Legal; Education, Training, and Library; Arts, Design, Entertainment, Sports, and Media; and Healthcare Practitioners and Technical Occupations. Service Occupations include Healthcare Support; Protective Services; Food Preparation and Serving-Related; Building and Grounds Cleaning and Maintenance; and Personal Care and Service Occupations. Sales and Office Occupations include Sales and Related; and Office and Administrative Support Occupations. Natural Resources, Construction and Maintenance Occupations include Farming, Fishing and Forestry; Construction and Extraction; and Installation, Maintenance and Repair Occupations. Production, Transportation and Material Moving Occupations include Production; and Transportation and Material Moving Occupations.

Median Wages by Tier

Data include average annual employment estimates as of the second quarter from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages, and includes the entire city-defined Silicon Valley region. Data for Q2 of 2022 were estimated at the industry level by BW Research using Q1 2022 QCEW data and updated based on Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Community Infrastructure & Services includes Healthcare & Social Services (including state and local government jobs); Retail; Accommodation & Food Services; Education (including state and local government jobs); Construction; Local Government Administration; Transportation; Banking & Financial Services; Arts, Entertainment & Recreation; Personal Services; Federal Government Administration; Nonprofits; Insurance Services; State Government Administration; Warehousing & Storage; and Utilities (including state and local government jobs). Innovation and Information Products & Services includes Computer Hardware Design & Manufacturing; Semiconductors & related Equipment Manufacturing; Internet & Information Services; Technical Research & Development (Include Life Sciences); Software; Telecommunications Manufacturing & Services; Instrument Manufacturing (Navigation, Measuring & Electromedical); Pharmaceuticals (Life Sciences); Other Media & Broadcasting, including Publishing; Medical Devices (Life Sciences); Biotechnology (Life Sciences); and I.T. Repair Services. Business Infrastructure & Services includes Wholesale Trade; Personnel & Accounting Services; Administrative Services; Technical & Management Consulting Services; Facilities; Management Offices; Design, Architecture & Engineering Services; Goods Movement; Legal; Investment & Employer Insurance Services; and Marketing, Advertising & Public Relations. Other Manufacturing includes Primary & Fabricated Metal Manufacturing; Machinery & Related Equipment Manufacturing; Other Manufacturing; Transportation Manufacturing including Aerospace & Defense; Food & Beverage Manufacturing; Textiles, Apparel, Wood & Furniture Manufacturing; and Petroleum and Chemical Manufacturing (Not in Life Sciences). Occupational segmentation into tiers has been recently adopted by the California Employment Development Department (EDD), and implemented over the last several years by BW Research for regional occupational analysis. Occupational segmentation allows for the in-depth examination of the quality and quantity of jobs in a given economy. This occupational segmentation technique delineates the majority of occupations into one of three tiers. Tier 1 Occupations include managers (Chief Executives, Financial Managers, and Sales Managers), professional positions (Lawyers, Accountants, and Physicians) and highly-skilled technical occupations, such as Scientists, Computer Programmers, and Engineers, and are typically the highest-paying, highest-skill occupations in the economy. Tier 2 Occupations include sales positions (Sales Representatives), teachers, and librarians, office and administrative positions (Accounting Clerks and Secretaries), and manufacturing, operations, and production positions (Assemblers, Electricians, and Machinists). They have historically provided the majority of employment opportunities and may be referred to as middle-wage, middle-skill positions. Tier 3 Occupations include protective services (Security Guards), food service and retail positions (Waiters, Cooks, and Cashiers), building and grounds cleaning positions (Janitors), and personal care positions (Home Health Aides and Child Care Workers).

Average Wages for Full-Time Workers, by Gender

Data is from the United States Census Bureau, American Community Survey Public Use Microdata (PUMS), and includes all full-time (35 or more hours per week) workers over age 15 with earnings. Silicon Valley data includes Santa Clara and San Mateo counties.

Median Household Income

Data for Median Household Income are from the U.S. Census Bureau American Community Survey 1-Year Estimates, 2020 data are from the 2020 1-Year Public Use Microdata (PUMS) with experimental weights. Data for San Francisco for the year 2000 is from the Decennial Census. All income values have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley and San Francisco data, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics. Silicon Valley data include Santa Clara and San Mateo Counties. Median household income for Silicon Valley from 2000 - 2005 was estimated using a weighted average based on the county population figures from the California Department of Finance E-4 Population Estimates for Cities, Counties, and the State.

Investment Income

Data for the share with household income heavily reliant on employer-provided stock gains are from the 2022 Silicon Valley Poll (www.joinventure.org/spoll) and represent weighted responses from 1,278 Bay Area respondents who answered the relevant questions, and represent estimates using a non-probability based sample. The percent of households does not include those who chose "prefer not to answer" to the question about their income reliance on employer-provided stock options and/or purchase plans. Ones' Tech Employees include weighted responses where the respondent indicated that they (or another person in the household) were a current employee of a tech company. Shares of individual tax returns with investment income are based on the number of individual income tax returns filed with the United States Internal Revenue Service paying investment income tax. Investment income generally includes items such as "interest, dividends, capital gains, rental and royalty income, non-qualified annuities, income from businesses involved in trading of financial instruments or commodities and businesses that are passive activities to the taxpayer." Gains can come from the sale of stocks, bonds, and mutual funds; capital gain distributions from mutual funds; the sale of investment real estate (including gain from the sale

of a second home that is not a primary residence); and gains from the sale of interests in partnerships and S corporations (see: www.irs.gov/newsroom/questions-and-answers-on-the-net-investment-income-tax). Silicon Valley includes Santa Clara and San Mateo Counties.

Wealth

2022 data are from Claritas, Claritas Income Producing Assets Indicators model based on the Survey of Consumer Finances, 5-Year data. Silicon Valley includes Santa Clara and San Mateo counties. Investable Assets include education/custodial accounts, individually-owned retirement accounts, stocks, options, bonds, mutual funds, managed accounts, hedge funds, structured products, ETFs, cash accounts, annuities, and cash value life insurance. Extreme billionaire wealth includes those listed on the Forbes 2022 World Billionaires List with wealth of more than \$10 billion (as of 12/5/2022), and includes an assumed 18.1% liquid assets based on the technology-industry billionaire estimate from the Altrata 2022 Billionaire Census. Segment distributions are approximations. 2018 market sizing estimates from Phoenix Global Wealth Monitor (which utilizes Claritas data) were used to estimate 2022 market sizes for \$3-4.99 million, \$5-9.99 million, and \$10+ million. The distribution of wealth among households with less than \$25,000 in investable assets was calculated by applying the national breakdown (U.S. Census Bureau, Survey of Income and Program Participation 2018 for 2018 data, and 2019 for 2020 and 2022 data). The Phoenix Wealth and Affluent Monitor (W&AM) U.S. Sizing Report is intended to provide estimates of the number of affluent and High Net Worth households in the country. Sizing estimates are provided at the state level as well as by Core-Based Statistical Areas (CBSAs), which are comprised of Metropolitan and Micropolitan Statistical Areas (933 in the country). The W&AM sizing estimates are developed using a combination of sources including the Survey of Consumer Finance, as well as Nielsen-Claritas. National data and closely linked variables are used to obtain estimates at the local level; thus, the county-level data are approximations only. The wealth segment labeled "<\$100,000" does not include the estimated share of households that are unbanked. Unbanked households were estimated using the weighted average share of unbanked households in Santa Clara & San Mateo counties from estimates published by ProsperityNow (data year 2018). According to the FDIC National Survey of Unbanked and Underbanked Households 2021, more than 40% of survey respondents cited that they did not have enough funds to meet a bank's minimum opening deposit requirements; eight out of ten unbanked households were unbanked long-term. Extreme billionaires (count and total wealth) were estimated based on data reported in the Forbes 2022 World's Billionaire List, as of December 29, 2022. Billionaires listed as residing in the United States were researched individually, and were included in the Silicon Valley region if a city-defined Silicon Valley city/town was listed as a place of primary residence. A comparison of the regional total wealth reported by Claritas and the total wealth calculated here (given the assumptions in this estimation methodology) supports the idea that the Claritas data does not include outlier households with wealth \$30 million or more.

Income Inequality

Data are from the U.S. Census Bureau, American Community Survey Public Use Microdata (2005+) and the Decennial Census (1990 and 2000). Silicon Valley data include Santa Clara and San Mateo counties. The Absolute Gini Coefficient is determined by the product of the Relative Gini and the inflation-adjusted mean household income. The Relative Gini Coefficient indicates the degree to which incomes are concentrated. A Relative Gini of zero corresponds to no concentration, or incomes that are the same across all households. A Relative Gini of 100 indicates that all income is concentrated in a single household. Figures between 0 and 100 indicate proximity to either endpoint. Income data used to calculate the relative Gini Coefficient were inflation-adjusted to 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley and Bay Area data, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics. The Absolute Gini is scaled to equal the Relative Gini in 1990. The Intermediate Gini is the product of the Relative and Absolute Gini Coefficients. Data for 2020 are estimates from the 1-year American Community Survey microdata with experimental weights.

Poverty Status

Data for the percentage of the population living in poverty are from the U.S. Census Bureau, American Community Survey (ACS) 1-Year Estimates; 2020 data are from the 2020 1-Year Public Use Microdata (PUMS) with experimental weights. Silicon Valley includes San Mateo and Santa Clara counties. Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If the total income for a family or unrelated individual falls below the relevant poverty threshold (e.g., household income of \$26,500 for a family of four in 2021 within the 48 contiguous states and the District of Columbia), then the family (and every individual in it) or unrelated individual is considered in poverty. Multiple and Other includes Some Other Race Alone, Two or More Races, and Native Hawaiian and Other Pacific Islander alone (Santa Mateo County only), and American Indian and Alaska Native alone (Santa Clara County only). White is not-Hispanic or Latino. Asian ancestries are not mutually exclusive (i.e., a person of mixed-ancestries would be counted in both/all).

Self-Sufficiency

Data are from the Self-Sufficiency Standard for California, from the Center for Women's Welfare at the University of Washington School of Social Work. Silicon Valley data includes Santa Clara and San Mateo counties; Bay Area includes the 9-county region; California is a statewide county average. Developed by Dr. Diana Pearce, the Self-Sufficiency Standard defines the amount of income necessary to meet basic needs (including taxes) without public subsidies (e.g., public housing, food stamps, Medicaid or child care) and without private/informal assistance (e.g., free babysitting by a relative or friend, food provided by churches or local food banks, or shared housing). The family types for which a Standard is calculated range from one adult with no children, to one adult with one infant, one adult with one preschooler, and so forth, up to three-adult households with six teenagers. Asian/Pacific Islander, Black, and White are non-Hispanic or Latino. Lanix is the term used in the Self-Sufficiency Standard analyses corresponding to "Hispanic or Latino" in the U.S. Census Bureau survey data. 2022 data were based on the regional household compositions from the 2021 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) by the U.S. Census Bureau and an inflation-adjusted Self-Sufficiency Standard for California calculated for 2022. Self-Sufficiency wages are for 2022, using inflation-adjusted 2021 Self-Sufficiency Standard wages. The Portland, Oregon share of households below Self-Sufficiency Standards includes Multnomah County and is from Overlooked and Undercounted 2021: Struggling to Make Ends Meet in Oregon (Center for Women's Welfare and Worksystems, September 2021). The New York City share of households below Self-Sufficiency Standards comes from Overlooked and Undercounted 2021: Struggling to Make Ends Meet in New York City (Annie Kuecklick & Lisa Manzer, June 2021). Denver includes the City/County of Denver; Phoenix includes Maricopa County; San Diego data comes from the County of San Diego, Health and Human Services Agency San Diego County Self-Sufficiency Standard Dashboard. South Manhattan represents the highest Self-Sufficiency Wages for New York City in 2021. Data for Hourly Self-Sufficiency Wages for a Single Adult with a Preschooler (ages 3-5) and a School-Aged Child (ages 6-12) for 2021 data were inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for San Diego, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data for Portland and South Manhattan. Federal Poverty Threshold is an estimate based on the 2022 Federal Poverty Limit for a family of three in the 48 contiguous states and Washington, D.C., assuming a 40 hour work week, year-round. California minimum wage is for Employers with 26 Employees or More in 2022.

Households At Risk of Food Insecurity

Data are from the Self-Sufficiency Standard for California, from the Center for Women's Welfare at the University of Washington School of Social Work. Silicon Valley data include Santa Clara and San Mateo counties. Developed by Dr. Diana Pearce, the Self-Sufficiency Standard defines the amount of income necessary to meet basic needs (including taxes) without public subsidies (e.g., public housing, food stamps, Medicaid or child care) and without private/informal assistance (e.g., free babysitting by a relative or friend, food provided by churches or local food banks, or shared housing). The family types for which a Standard is calculated range from one adult with no children, to one adult with one infant, one adult with one preschooler, and so forth, up to three-adult households with six teenagers. 2022 data were based on the regional household compositions from the 2021 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS) by the U.S. Census Bureau and an inflation-adjusted Self-Sufficiency Standard for California calculated for 2022. Self-Sufficiency wages are for 2022, using the 2021 Self-Sufficiency Standard wages inflation-adjusted and reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August. Federal Poverty Threshold is an estimate based on the 2022 Federal Poverty Limits for each family type in the 48 contiguous states and Washington, D.C., assuming a 40 hour work week, year-round. CalFresh eligibility is based on 185% of the Federal Poverty Level; the region's nonprofit food bank, Second Harvest of Silicon Valley, serves residents earning up to 275% of the Federal Poverty Limit. Example households presented include Single Adult (a one-adult household); Two Adults (a household with two adults); Adult + Preschooler (one working adult and preschooler); Two Adults, Two Young Kids (two adults, one preschooler, one school-aged child); Family of Six (two adults, two school-aged children, two teenagers); and Single-Adult

APPENDIX A

ECONOMY *CONTINUED*

Family of Four (one adult, one preschooler, and two school-aged children). Preschoolers are defined as ages 3-4, school-age children as 5-12, and teenagers as 13-18.

Number of Meals Provided by Food Assistance Programs; Millions of Meals Distributed

Data for food assistance provided was compiled by Silicon Valley Institute for Regional Studies' Senior Fellow, Drew Starbird (Santa Clara University's Levey School of Business, Center for Food Innovation and Entrepreneurship) and Affiliated Researchers Isabelle Foster and Charlie Hoff. Data include the largest sources of public and private food assistance in Santa Clara and San Mateo counties, including Senior Nutrition, Summer Meals, School Meals (Free and Reduced Price Breakfast and Lunch), WIC (Women, Infants, and Children), Supplemental Nutrition Assistance Program (CalFresh, formerly Food Stamps), Child and Adult Care Food Program (CACFP), Second Harvest of Silicon Valley (Food Bank), and other sources. Data was obtained via publicly available digital resources, or provided directly by staff at Second Harvest of Silicon Valley, the California Department of Education, the California Department of Social Services, the Health Trust, Peninsula Volunteers, the San Mateo County Health Department, the County of Santa Clara Social Services Agency, and Sourcewise Community Resource Solutions. Beginning in the 2019-20 fiscal year, Pandemic EBT (a new federal program administered by the California Department of Social Services), CACFP snacks, and CACFP Day Care Home (DCH) program meals were included. Also, in FY 2019-20 the costs were adjusted using the Regional Price Parity Index computed by the Bureau of Economic Analysis at the U.S. Department of Commerce. Caution should be used when comparing FY 2019-20 and subsequent data to that of previous years. Numbers are rounded to the nearest 10,000 meals. San Mateo County Senior Nutrition estimated for 2019-20, 2020-21, and 2021-22; WIC estimated for 2020-21 and 2021-22. There are an unknown number of smaller private efforts to serve the food insecure members of the Silicon Valley community; therefore, the numbers reported represent a conservative estimate of the true availability of food assistance within the region.

INNOVATION & ENTREPRENEURSHIP

Productivity

Value added per employee is calculated as gross domestic product (GDP) divided by the total employment. GDP estimates the market value of all final goods and services. Data are from Moody's Economy.com. The employment estimates use historical data through 2020 (counties) and 2021 (California and U.S.), and forecasts updated on 11/9/2021 (U.S. data), 10/19/2021 (California data), and 11/11/2021 (Silicon Valley and San Francisco); the GDP estimates use historical data through 2020 and forecasts updated on 11/8/2022 (U.S. data), 11/15/2022 (California data) and 11/30/2022 (Silicon Valley and San Francisco). All GDP values have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data.

Patent Registrations

Patent data is provided by the United States 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 filed by residents of the Silicon Valley city-defined region. Other Includes: Teaching & Amusement Devices, Transportation/Vehicles, Motors, Engines and Pumps, Dispensing & Material Handling, Food, Plant & Animal Husbandry, Furniture & Receptacles, Apparel, Textiles & Fastenings, Body Adornment, Nuclear Technology, Ammunition & Weapons, Earth Working and Agricultural Machinery, Machine Elements or Mechanisms, and Superconducting Technology. The technology area categorization method was slightly modified in 2012, resulting in minor changes to the proportion of patents in each technology area relative to previous years. Population estimates used to calculate the number of patents granted per 100,000 people were from the California Department of Finance, E-1: City/County Population Estimates with Annual Percent Change. Beginning in 2015, the USPTO stopped classifying patents in the United States Patent Classification (USPC) and began using the Cooperative Patent Classification (CPC), so some USPC codes were unavailable. In those cases, unofficial routing classifications were used in place of the missing USPC classifications. This process may create some minor inconsistencies between the 2015 and previous years' data sorted by Technology Area. Data by technology area was not available for 2019-22 at the time of analysis. 2022 estimate based on data through November 30.

Venture Capital Investment; Top Venture Capital Deals; Megadeals

Venture Capital data for 2000-2016 are from the MoneyTree™ Report from PricewaterhouseCoopers and the National Venture Capital Association, using data from CB Insights (beginning with Q4 2015) and Thomson Reuters (prior to Q4 2015). Megadeal data form 2013-2016 is from Thomson ONE (accessed January 1, 2022). Data for 2017 and subsequent years are from CB Insights (as of January 23, 2023). Silicon Valley includes the city-defined region. All values have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data. Megadeals include those over \$100 million each. Top Venture Capital Deals were cross-referenced with Pitchbook, Crunchbase, and FactSet. Redwood City-based Altos Labs launched in January 2022 announcing a \$3 billion round with numerous investors, including Venture Capital firms; this was confirmed by multiple sources, but additional details (including dates of those deals) are unknown. The Brex deal announcement was in January 2022, although sources suggest that the term sheet was signed in 2021. Brex is based in Draper, UT but has a location in San Francisco. Xpansive is a Series D Venture-backed company, although the \$400 million deal in 2022 is listed as Private Equity because Blackstone Energy Partners is a private equity firm. The SandboxAQ deal was a venture-backed spin-off from Alphabet.

Unicorns & Decacorns

Unicorn and Decacorn data are from CB Insights, as of 1/15/21, 12/31/21, and 12/31/22. Unicorns include private companies with valuations of \$1 billion or more; Decacorns include private companies with valuations of \$10 billion or more. The count and total valuation of Unicorns is inclusive of Decacorns.

Venture Capital by Industry

Venture Capital by Industry Data are from the MoneyTree™ Report from PricewaterhouseCoopers and the National Venture Capital Association (with data from CB Insights prior to 2019, and from CB Insights for 2019+). Greater Silicon Valley includes the San Jose-San Francisco-Oakland Combined Statistical Area. Industries include the following: Agriculture (all aspects of farming, including crop production and health, animal production and wellness, as well as machinery, products, and related activities); Automotive and Transportation (all elements of travel by air, automobile, train, trucking, and other forms of transportation; also addresses manufacturing, parts, and maintenance); Business Products and Services (All business needs and associated services: advertising, PR, HR, staffing, training records keeping, legal services, consulting, office supplies and furniture, information services, hardware, facilities, and more; also covers associated services like commercial printing, outsourcing, and packaging); Computer Hardware & Services (Physical computing devices and related services, though specifically not the software used on those machines; includes personal and business computers, networking equipment, leasing companies, peripherals, handhelds, servers, supercomputers, gaming devices, and IT services); Consumer Products and Services (all goods and services for personal use, not Business or Industrial, including but not limited to: appliances, automotive services, rentals, consumer electronics, clothes, home furnishings, jewelry, pet products, tobacco, toys and games); Electronics (Concerned mainly with electronic components like chips, semiconductors, switches, motors, testing equipment, and scientific instruments; also related manufacturing services); Energy and Utilities (energy production, distribution, and storage, including fossil fuels, renewables, electric power companies, companies focused on energy efficiency, as well as companies researching new energy sources or technologies); Environmental Services & Equipment (companies that deal with repairing damage after an environmental event has occurred or aim to help limit the negative ecological impact of an event or company; this includes environmental and energy consulting, hazardous waste services, recycling, cleanup, and solid waste); Finance (companies dealing with wealth in any form, including but not limited to: accounting, banking, credit and collections, investments, online payments companies, and lending); Food & Beverages (food and drink of all kinds: retail and wholesale, fresh ingredients, prepared and canned items, and foodservice, but not restaurants - see Leisure; also includes food safety, flavoring and condiments, alcoholic products, and distribution); Healthcare (all aspects of medical care and wellness: diagnosis, drug development and distribution, medical products and facilities, healthcare plans, and alternative treatments and elective procedures); Industrials (equipment and facilities that are neither commercial nor residential/consumer and all related applications; mainly concerned with materials, facilities, heavy machinery, and construction); Internet (online applications, but neither the hardware on which they are run nor the ISPs that make transactions possible; all ecommerce sites are included, as are webhosting services, browser software, online advertising, email, online communications platforms of all kinds, online learning, video, and more); Leisure (in-person entertainment like movie theaters, casinos, lodging, restaurants of all kinds, sporting events, gyms, and recreation facilities); Traditional Media (all forms of non-Internet entertainment that is also not in-person - see Leisure; includes film, video, music,

publishing, radio, and television); Metals & Mining (companies involved with extracting raw materials from the earth and their processing; larger categories contained herein include aluminum, coal, copper, diamonds and precious stones, precious metals, and steel; additionally the brokering and distribution of these items); Mobile & Telecommunications (communications companies and associated technologies, from overarching categories like fiber optics, telecom equipment, infrastructure, towers, and RFID systems to applications like mobile software, mobile commerce, and the telecom companies that facilitate communication over their networks); Non-Internet/Mobile Retail (brick-and-mortar retail locations of all kinds: clothes, electronics, appliances, physical media, grocery, office supplies, and every other item purchased in person that is not a leisure activity - see Leisure); Risk & Security (Security services and products that operate primarily in the physical world and encompass personal protective equipment, security and surveillance equipment, security guard companies, consultants, and more); and Non-Internet/Mobile Software (Software not covered under "Mobile" or "Internet"; It can be hosted on a user's machine or accessed remotely and can be used for any application; in this category, the software itself is the user's primary concern, not the delivery method as in Internet and Mobile categories).

Angel Investment

Data are from CB Insights and include the entire city-defined Silicon Valley region, San Francisco, California, and the United States. The analysis includes disclosed financing data for Angel deals and seed-stage deals involving at least one Angel investor (individual or Angel group). Angel Deals are typically pre-seed and are not necessarily tied to equity; Data through 2021 were extracted January 30, 2022; data for 2022 (and investor data back to 2011) were extracted January 23, 2023. Investment amounts have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data. Locations are by investee company location as (not the location of the investor); share of California and U.S. investments are by total dollar amounts (as opposed to the number of deals).

Startups

Data for the total number of startup companies is from CB Insights, accessed January 30, 2022 (for 1998-2021 data) and January 24, 2023 (for 2022 data), and include companies less than three years old and receiving Angel, Seed, or early-stage (Series A) funding in any particular year. Silicon Valley includes the city-defined region. Startup companies for 5-year periods include those founded and funded within that period, and represent the number of unique startups. The share of startups founded by women is from Crunchbase, and include those with Headquarters location in the city-defined Silicon Valley region or in San Francisco. The share of startups with one or more woman(en) and/or gender non-conforming founder(s) is from Crunchbase, and include those with headquarters location in the city-defined Silicon Valley region or in San Francisco. It includes companies where at least one founder is listed as Female or gender non-conforming, divided by the number of startups founded by any listed gender except Other (which is rare, and often refers to groups of people). Gender in the Crunchbase database does not appear to be self-identified. Gender non-conforming includes (as listed in the Crunchbase database) Agender, Androgyne, Androgyne, Bigender, Female to Male, Male to Female, Gender Fluid, Gender Nonconforming, Gender Questioning, Gender Variant, Genderqueer, Non-Binary, Neurois, Pangender, Transgender Person, Transgender Female, Transgender Woman, Transgender Male, Transfeminine, Transmasculine, Transsexual Person, Transsexual Female, Transsexual Woman, Transsexual Male, Transsexual Man, and Two-Spirit. Individuals identified as gender non-conforming in the database were researched individually to confirm how they self-identify; there may be founders who were listed as Male in the database but are actually gender non-conforming, in which case they were not included in the numerator. Data as of January 2022 (1997-2010) and January 2023 (2011-2022).

Initial Public Offerings

Data is from Renaissance Capital. Locations are based on the corporate address provided to Renaissance Capital. Silicon Valley includes the city-defined region. Rest of California includes all of the state except Silicon Valley for 2007-2012, and all of the state except Silicon Valley and San Francisco for 2013 and subsequent years. Average IPO return rates are from the time of the IPO through the end of 2022 (12/30/22). Data include traditional IPOs and direct listings with a market cap of \$50 million or more; exclude Special Purpose Acquisition Companies (SPACs) and closed-end funds.

Mergers & Acquisitions

Data are from FactSet Research Systems, Inc. and are based on M&A Activity in Joint Venture's zip code-defined Silicon Valley region. Transactions include full acquisitions, majority stakes, minority stakes, club-deals and spinoffs. Silicon Valley and San Francisco deals include those involving one or more Silicon Valley or San Francisco company. 2019, 2020, 2021, and 2022 data accessed January 11, 2023; previous years were as of January 3, 2021.

COMMERCIAL SPACE

Commercial Space, Leasing, Vacancy, Rents, and Occupancy

Data are from JLL. Commercial space includes Office, Industrial, R&D and Lab. The JLL statistical inventory and all related reports include Office, Flex/R&D, and Lab buildings above 30,000 square feet in Santa Clara County (plus Fremont and Newark) and 20,000 square feet in San Mateo County, and all industrial developments above 10,000 square feet; any attached retail space is not included in total square footage. Silicon Valley data includes San Mateo County, Santa Clara County, and the cities of Fremont and Newark. Bay Area data includes all San Francisco Bay Area Submarkets, including Silicon Valley, North Bay, Mid-Peninsula, Oakland, and East Bay Suburbs. The vacancy rate is the amount of unoccupied space, and is calculated by dividing the direct and sublease vacant space by the building base. The vacancy rate does not include occupied spaces presently being offered on the market for sale or lease. Lease transactions include New to Market (tenant moves into a new market from another market), Relocation (tenant moves from one location to another in the same market), Renewal (tenant renews its existing lease at its current location), Expansion (when a tenant expands its current premises to include new premises outside of its currently leased premises), Blend-and-extend (tenant's remaining lease term, usually one to three years, is extended and the current rental rate is "blended" with a newly negotiated one), and New Lease (when it is unclear if the tenant is new to market, relocating, expanding, or renewing, to indicate that a new lease transaction has taken place). Average office space asking rents are "Full Service Gross" (FSG), which is the monthly rental rate and includes common area maintenance fees, utility fees, and taxes/insurance fees. Industrial, R&D, and Lab asking rents are quoted "triple net" (NNN), which is the monthly base rental rate in which common area maintenance fees, utility fees, and taxes/insurance fees are excluded. Average asking rents have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley and San Francisco data, 2022 estimate based on data through August. Near transit is defined as located within a 10-minute walk of a Caltrain, BART, or VTA station. In an effort to provide more accurate data and reporting, JLL Silicon Valley redefined inventory classifications for Office and Flex/R&D properties. Beginning with the Q3 2020 data, the definition of a property as Office or Flex/R&D was altered to focus more on the structure of the building rather than the use. Apart from downtown areas, the El Camino and Sand Hill Road Corridors, and other office-only pockets, Office is now defined as any building with at least four stories in Santa Clara County (plus Fremont and Newark) and at least three stories in San Mateo County. Flex/R&D properties are defined as buildings that have three or fewer stories in Santa Clara County (plus Fremont and Newark) and one to two stories in San Mateo County. Additionally, as of Q3 2020, owner-occupied buildings are included in the JLL statistical inventory and reports. As of Q4 2020, Lab buildings were included as a separate category from R&D.

Hotel Development

Data is from the Atlas Hospitality Group annual California Hotel Development Surveys. Data for 2009-2013 was unavailable, as reports were not published due to lack of significant hotel development. New Hotels include those that opened within a given year. Rest of Silicon Valley includes Fremont, Newark, Union City, and Scotts Valley.

Amount of Commercial Space Occupied by Major Tech Tenants

Data are from Colliers International Silicon Valley, and represent the aggregate amount of space owned or leased by six major tech tenants, including Amazon, Apple, Meta (formerly Facebook), Google, LinkedIn, and Netflix in Silicon Valley (including Santa Clara County, Fremont, and Menlo Park). Not all space is currently occupied (some has been leased but involves redevelopment or was under construction at the time the leases were executed).

APPENDIX A

SOCIETY

PREPARING FOR ECONOMIC SUCCESS

Graduation and Dropout Rates; College Preparation

Students meeting UC/CSU requirements include all 12th grade graduates completing all courses required for University and/or California State University entrance. Ethnicities were determined by the California Department of Education. Any student ethnicity pools containing 10 or fewer students were excluded in order to protect student privacy. Multi/None includes both students of two or more races, and those who did not report their race. All races/ethnicities other than Not-Hispanic or Latino are non-Hispanic. Silicon Valley includes all students attending public high school in San Mateo and Santa Clara Counties, as well as those in Scotts Valley Unified School District, New Haven School District, Fremont Unified School District, and Newark Unified School District. Dropout and graduation rates are four-year adjusted rates. The adjusted rates are derived from the number of cohort members who earned a regular high school diploma (or dropped out) by the end of year 4 in the cohort divided by the number of first-time grade 9 students in year 1 (starting cohort) plus students who transfer in, minus students who transfer out, emigrate, or die during school years 1, 2, 3, and 4. Years presented are the final year of a school year (e.g., 2011–2012 is shown as 2012). Dropout and graduation rates do not add up to 100% due to GED completions, those in the cohort who are still enrolled, and also due to suppressed data in some counties/districts for certain racial/ethnic groups. Due to the changes in the methodology for calculating the 2016–17 Adjusted Cohort Graduation Rate and subsequent years, the California Department of Education strongly discourages comparing the 2016–17 and subsequent years' Adjusted Cohort Graduation Rate with the cohort outcome data from prior years.

Math Proficiency

Data for 2015–2022 are from the California Department of Education, California Assessment of Student Performance and Progress (CAASPP). Data for 2020–2021 include a lower share of enrolled students with scores than typical (39% in Santa Clara and San Mateo Counties combined, compared to 98% in 2018–19 and 96% in 2021–22); 2019–20 school year data was unavailable due to the suspension of CAASPP testing as a result of the COVID-19 pandemic. Data for American Indian or Alaska Native was not available in 2021–22 on the county level for privacy reasons (due to fewer than ten students receiving scores). Beginning with the 2013–14 school year, CAASPP became the new student assessment system in California, replacing the Standardized Testing and Reporting (STAR) system. 2022 CAASPP Test Results are from tests administered in 2022. The share of eighth-graders meeting or exceeding the standard includes students who have made progress and met or exceeded the grade standard, and who appear to be ready for future coursework. Data for 2006 through 2013 are from the California Department of Education, California Standards Tests (CST) Research Files for San Mateo and Santa Clara Counties, and California. In 2003, the CST replaced the Stanford Achievement Test, ninth edition (SAT/9). The CSTs in English-language arts, mathematics, science, and history-social science were administered only to students in California public schools. Except for a writing component that was administered as part of the grade four and grade seven English-language arts tests, all questions were 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. Through the 2012–13 school year, the Algebra I 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 school year, including during the previous summer. In order to protect student confidentiality, no scores were reported in the CST research files for any group of ten or fewer students. The following types of scores are reported by grade level and content area for each school, district, county, and the state: % Advanced, % Proficient, % Basic, and % Far Below Basic, and are rounded to the nearest one place.

Computer & Internet Access

Data for Silicon Valley include Santa Clara and San Mateo counties, and are from the United States Census Bureau, American Community Survey 5-Year Estimates. For the Share of Households Without Internet Access at Home, by Income Range table, low-income includes households with an annual income of less than \$35,000, and high-income households include those with an annual income of \$75,000 or more. Children include residents ages 18 and under. For the Share of Households with Computer and Broadband Internet, by Race & Ethnicity, Multiple and Other includes American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or More Races. White is Not Hispanic or Latino.

Average Internet Speeds

Data is from Measurement Lab (M-Lab), an open source project with contributors from civil society organizations, educational institutions, and private sector companies led by teams based at Code for Science & Society, New America's Open Technology Institute, Google, and Princeton University's PlanetLab. Speeds are represented in Network Diagnostic Tool (NDT), and are in Megabits per second. NDT is a diagnostic test that measures using a single TCP stream. The single stream "speed" metric doesn't measure link capacity, but rather how well a single TCP stream can take advantage of that capacity. The Silicon Valley numbers are weighted averages based on the number of speed tests performed, by city. A total of 38 million speed tests were performed in Silicon Valley cities in 2020, and 197 million in 2021, and 98 million in 2022 through December 7.

EARLY EDUCATION & CARE

Preschool Enrollment

Data for preschool enrollment are for San Mateo and Santa Clara counties, California, and the United States. The data are from the United States Census Bureau, American Community Survey 1-Year Estimates. 2020 data for the U.S. are from the United States Census Bureau, Current Population Survey. The 2020 data for Santa Clara, San Mateo and San Francisco counties are from the ACS 1-Year Estimates and are based on experimental weights. Percentages were calculated from the number of children ages three and four that are enrolled in either public or private school, and the number that are not enrolled in school. Data for race and ethnicity are from the United States Census Bureau, American Community Survey 5-Year Estimates. Multiple and Other include American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, More than one race, and Some other race; White is Not Hispanic or Latino. Lower-income is defined as below 200 percent of the federal poverty level (below \$52,735); higher-income is defined as above 501 percent of the federal poverty level (above \$132,765); the federal poverty level was \$26,500 for a family of four in 2021; income level is based on household income.

English Language Arts Proficiency

Data are from the California Department of Education, California Assessment of Student Performance and Progress (CAASPP). Data for the 2019–20 school year are unavailable due to the suspension of CAASPP testing in March 2020, due to COVID-19. Beginning with the 2013–14 school year, CAASPP became California's new student assessment system, replacing the Standardized Testing and Reporting system (STAR). The 2021–22 school year CAASPP Test Results are from tests administered in 2022. The share of third-graders meeting or exceeding the standard includes students who have made progress, met or exceeded the grade standard, and appear to be ready for future coursework. Data for American Indian or Alaska Native were not available from 2018–19 through 2021–22 on the county level due to fewer than ten students receiving scores. Economically disadvantaged students include those who qualify for free or reduced-price school meals.

Average Annual Cost of Childcare

Data is from the California Department of Education (before 2021) and California Department of Social Services (2021+), Regional Market Rate Survey of California Child Care Providers. In mid-2021, the state transferred programs relating to child care and development (including the regional market rate survey) from the Department of Education to the Department of Social Services. Data for 2009, 2012, and 2014 were obtained through kidsdata.org. 2009 data were inflation-adjusted to 2010, and 2021 data were inflation-adjusted to 2022 using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data (2022 estimate using data through August) and the California consumer price index for all urban consumers from the California Department of Finance (May 2022) for California data. Note that the sampling and analysis methodologies utilized for the 2018 and previous market rate surveys were criticized for equity and transparency issues; furthermore, the use of market rates to subsidize care were found to be inequitably paying more in areas where market rates were higher (because residents could afford to pay more), and paying less in areas where market rates were lower (and families could not afford to pay higher rates). While the state's market rate reform process moves toward the implementation of a cost-based reimbursement system for subsidized and licensed exempt care, the regional market rate survey provides a measure for the cost of care to date. State Assembly Bill 131 (signed into law on July 23, 2021) established that licensed providers in 2022 would be reimbursed at the 75th percentile of the 2018 Regional Market Rate survey or the Regional Market Rate ceilings as they existed on December 31, 2021, whichever is greater. Childcare centers are facilities that provide care for infants, toddlers, preschoolers, and/or school-age children during all or part of the day. Family Child Care Homes are child care centers located in the home of a licensed provider, and have no more than 14 children in total. Infants include children under two years old. Preschoolers include children ages two to five. Silicon Valley is calculated as the average of Santa Clara and San Mateo County child care costs. California is a statewide county average. Child care costs have been inflation-adjusted and are reported in 2022 dollars, using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for the Silicon Valley and

San Francisco data, estimate based on data through August, and the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data. Percent who think the Bay Area cost of living is a serious problem is from the 2022 Silicon Valley Poll (www.jointventure.org/svpoll); Serious includes those who responded "serious" or "extremely serious"; parents include guardians.

Average In-Home Childcare Costs

Data for Silicon Valley, San Antonio, Phoenix, and Portland are from the Care.com Cost of Childcare Calculator, accessed December 2022; Silicon Valley represents an unweighted average of the city-defined region. Costs include care for one child, and are based on Care.com hourly rates offered in jobs posted by families seeking full-time child care. The national average is from the Care.com Cost of Childcare Survey: 2022 Report. Data for San Francisco and California are from Care.com Cost of Childcare as of December 22, 2022. Monthly and annual cost estimates have been rounded to the nearest \$100. In-Home Childcare Costs by city and census-designated place are by zip code. The cost for two children is based on the price of a "Nanny Share" multiplied by two (assuming both children live in the same household).

ARTS & CULTURE

Economic Impacts of Arts & Culture Industries

Data are from IMPLAN. All amounts are reported in 2021 dollars. Local Government Tax Revenues include County, Sub-County General, and Sub-County Special Districts. IMPLAN categories used include those used in the creative economy as defined by ACPA-Arts and Cultural Production Satellite Account in coordination with the BEA. Creative Economy Industries include Core (Specialized design services; Custom computer programming services; Advertising, public relations, and related services; Photographic services; Elementary and secondary schools; Junior colleges, colleges, universities, and professional schools; Performing arts companies; Independent artists, writers, and performers; Promoters of performing arts and sports and agents for public figures; and Museums, historical sites, zoos, and parks) and Supporting (Printing; Support activities for printing; Photographic film and chemical manufacturing; Pottery, ceramics, and plumbing fixture manufacturing; Other pressed and blown glass and glassware manufacturing; Glass product manufacturing made of purchased glass; Gypsum product manufacturing; Ornamental and architectural metal work manufacturing; Optical instrument and lens manufacturing; Nonupholstered wood household furniture manufacturing; Custom architectural woodwork and millwork; Jewelry and silverware manufacturing; Office supplies except paper manufacturing; Musical instrument manufacturing; Newspaper publishers; Periodical publishers; Book publishers; Directory, mailing list, and other publishers; Sound recording industries; Radio and television broadcasting; Cable and other subscription programming; Wired telecommunications carriers; Wireless telecommunications carriers except satellite; Internet publishing and broadcasting and web search portals; Video tape and disc rental; and Fitness and recreational sports centers). Core arts and cultural production industries are originators of ideas and content associated with the creation of arts and culture. Supporting industries produce and disseminate arts and cultural commodities. For more information on the Arts and Cultural Production Satellite Account, including an overview, concepts, and methodology, see the U.S. Bureau of Economic Analysis (BEA) and the National Endowment for the Arts (NEA) "U.S. Arts and Cultural Production Satellite Account, 1998–2012" (BEA Briefing, January 2015).

Nonprofit Arts Organizations

2012 data are from the National Center for Charitable Statistics (NCCS) at the Urban Institute, via the Americans for the Arts Local Index. Arts nonprofits are defined by 43 different categories of several major arts-related groups in the National Taxonomy of Exempt Entities (NTEE), and only include organizations that filed the IRS Form 990 in 2009. Arts Establishments include businesses and artists serving the community, and are defined by 44 North American Industrial Classification System (NAICS) codes representative of arts and culture. 2022 data are from the IRS Exempt Organizations Business Master File Extract (EO BMF), updated 08/08/2022. Field Service Organizations include the variety of nonprofit organizations who support arts organizations, providing technical assistance, professional membership, research, and resource development. They include Management & Technical Assistance; Professional Societies & Associations; Research Institutes and/or Public Policy Analysis; Single Organization Support; Fundraising and/or Fund Distribution; Nonmonetary Support Not Elsewhere Classified; Arts Council/Agency; and Arts Service Activities/ Organizations. Media Arts Organizations includes Media, Communications Organizations; Film, Video; Television; Printing; Publishing; and Radio. Performing Arts Organizations includes Performing Arts Organizations; Performing Arts Centers; Dance; Ballet; Theater; Music; Symphony Orchestras; Opera; Singing Choral; Music Groups, Bands, Ensembles; Commemorative Events; and County/Street/Civic/Multi-Arts Fairs and Festivals. Humanities & Heritage Organizations includes Cultural/Ethnic Awareness; Humanities Organizations; and Historical Societies and Related Activities. Collections-Based Organizations include Museum & Museum Activities; Art Museums; Children's Museums; History Museums; Natural History, Natural Science Museums; Science & Technology Museums; Libraries; Botanical Gardens and Arboreta; and Zoos and Aquariums. Arts Education Organizations include Arts Education/Schools; and Performing Arts Schools.

Arts & Culture Employment

Data includes annual industry employment data for the city-defined Silicon Valley region from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Data are for Q2 of each year. Q2 2022 was estimated at the industry level by BW Research using Q2 2022 reported growth and totals, and modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Arts, Entertainment, and Recreation industry jobs include NAICS 71: Independent Artists, Writers, and Performers; Performing Arts Companies; Promoters of Performing Arts, Sports, and Similar; Museums, Arts Galleries, Historical Sites, and Similar; Spectator Sports; Bowling Centers; Other Amusement, Gambling, and Recreation Industries. Part-time is defined as working less than 30 hours per week.

Consumer Spending on Arts & Culture Consumption

Data are derived from a panel of over 6.5 million U.S. consumers, normalized by the Earnest Consistent Shopper Methodology, and includes consumer spending on Arts & Entertainment, Home Entertainment, and Hobbies. 4-Week Trailing Average Year-Over-Year Spending. Events & Attractions include Booking Platforms, Casinos, Indoor Entertainment Centers, Movie Theaters, Outdoor Attractions, Stadiums & Arenas, and Theme Parks; Home Entertainment includes Book Retailers, E-Books, Education Resources, Gaming, Music Streaming & Audio, News & Print Media, Social Media, and Video Streaming; and Hobbies include Arts & Crafts and Music. Silicon Valley includes the city-defined region. Percent change in arts and culture spending 2019–2020 is the average of weekly year-over-year percent change. 2022 data as of December 19.

Cultural Diversity

Universe of Arts Nonprofits was manually coded by SV Creates to capture mission statement and target audience. Organizations with specifically noted cultural targets were coded as cultural organizations. Traditional western European performing arts (symphony, ballet, theatre) were coded as Western European.

Sporting Event Home Game Attendance

Data for Sporting Event Home Game Attendance is from multiple sources, including the National Collegiate Athletic Association (NCAA), ESPN, WorldFootball.net, and The Baseball Cube, StatsBroadcast, as well as from the sports team websites themselves. Teams include the San Jose Sharks, San Jose Earthquakes, San Francisco 49ers, San Francisco Giants, San Jose Giants, San Jose Barracuda, Stanford Football, Stanford Basketball, Santa Clara University Basketball, San Jose State Football, and San Jose State Basketball. The 2020 attendance estimate does not include San Jose Barracuda, as the franchise did not begin until 2015.

QUALITY OF HEALTH

Healthcare Coverage

Data for those with health insurance are from the U.S. Census Bureau, American Community Survey, 1-Year Estimates for the civilian non-institutionalized population. Silicon Valley data includes Santa Clara and San Mateo counties. 2020 data are from the 2020 1-Year Public Use Microdata (PUMS) with experimental weights. Data for April, August, and December, 2022 are from the U.S. Census Bureau Household Pulse Survey (weeks 41–52) and include individuals of all ages. The Household Pulse Survey is an experimental survey designed to quickly and efficiently deploy data collected on how people's lives have been impacted by the coronavirus pandemic. Data collection began on April 23, 2020 (Phase 1 through July 21; Phase 2 through August 19; Phase 3 October 28, 2020 through March 29, 2022, and Phases 5.1 to 3.7 from April 14 through December 19, 2022). Bay Area includes the San Francisco-Oakland-Berkeley Metro Area (San Francisco, Alameda, Marin, Contra Costa, and San Mateo counties).

Adults and Teens at a Healthy Body Mass Index

Silicon Valley data include Santa Clara and San Mateo Counties. The California Health Interview Survey (CHIS) is conducted via telephone survey of more than 20,000 Californians across 58 counties each year. The data includes adults 18 years of age and older.

APPENDIX A

SOCIETY *CONTINUED*

Calculated using reported height and weight, a Body Mass Index (BMI) value of 18.5 - 24.9 is categorized as Normal. Starting in 2011, CHIS transitioned from a biennial survey model to a continuous survey model, which enables a more frequent (annual) release of data.

Infant and Maternal Mortality Rates

Data for maternal mortality (1999-2020), infant mortality by race and ethnicity (2017-2020), and infant mortality rate (2007-2020) are from the United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS), as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program, on CDC WONDER online database. Data for infant mortality rate for 2019-2022 are from the California Department of Public Health, Center for Health Statistics and Informatics, California Vital Data database (Cal-ViDa). Silicon Valley data include San Mateo and Santa Clara counties. Greater Silicon Valley includes Santa Clara and San Mateo Counties, Alameda County, and San Francisco. Infant mortality is the death of an infant before his or her first birthday. The infant mortality rate is the number of infant deaths per every 1,000 live births. Data by race and ethnicity indicate the infant's race/ethnicity (not the race/ethnicity of the mother). Maternal mortality includes deaths due to a variety of causes related to pregnancy, childbirth, and the puerperium, and the rate is expressed as the number of deaths per 100,000 live births. Unless specified as Hispanic or Latino, all sub-population categories are not Hispanic or Latino. Births and deaths are based on place of residence.

Cesarean Section Rate

Cesarean Section delivery data are from the United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS) Natality public-use data on CDC WONDER Online Database. Silicon Valley data include San Mateo and Santa Clara Counties. Data by race and ethnicity is for Santa Clara and San Mateo Counties, 2016-2019, and only includes First Birth, Low-Risk (excludes any births where one or more maternal risk factors were present), and births at term (gestational age was 37+ weeks). Other and Multiple includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, More than one race, and unknown. Other and Multiple, Asian, Black or African American, and White are all non-Hispanic or Latino. Data by race and ethnicity is for First Birth and Low-Risk (includes births with no maternal risk factors present, a gestational age of 37 or more weeks, and head-down fetal presentation).

Mental Health

Data are from the U.S. Census Bureau Household Pulse Survey, smoothed over a four survey-week period (approximately one month, although survey "weeks" varied in duration). The Household Pulse Survey is an experimental survey designed to quickly and efficiently deploy data collected on how people's lives have been impacted by the coronavirus pandemic. Data collection began on April 23, 2020 (Phase I through July 21; Phase 2 through August 19; Phase 3 October 28, 2020 through January 2021). Bay Area includes the San Francisco-Oakland-Berkeley Metro Area (San Francisco, Alameda, Marin, Contra Costa, and San Mateo counties). Share Experiencing Anxiety and/or Depression is calculated by dividing the survey responses to four questions (Frequency of feeling nervous, anxious, or on edge; Frequency of not being able to stop or control worrying; Frequency of having little interest or pleasure in doing things; and Frequency of feeling down, depressed, or hopeless) including "Nearly Every Day" or "More than half the days" over the last seven days by the total number who answered the questions. This definition is aligned with the usage of this data at the CDC; however, the CDC uses microdata and a scoring criteria/composite methodology to combine responses to the four questions that is not possible using the public data file (so data are not directly comparable). The 2019 reference point represents national data from Terlizzi EP, Schiller JS. Estimates of mental health symptomatology, by month of interview: United States, 2019 (National Center for Health Statistics, March 2021).

Students' Mental Health

Data are from the California Public Schools Dashboard (CalSCHLS), Developed by WestEd for the California Department of Education (accessed 2/5/23), and include Santa Clara and San Mateo counties' public and nontraditional schools. Elementary school students experiencing frequent sadness include those who responded "Yes, most of the time" or "Yes, all of the time" to "Do you feel sad?" Those who responded that they have caring adult relationships some of the time or less. High school data include public and nontraditional schools (such as Continuation High Schools, County Community Schools, District Community Day Schools, Juvenile Court Schools, Opportunity Schools, and Special Education Schools, as defined by the California Department of Education). Middle/high school student data was sporadic with the grade levels and schools responding in each of the years included; as such, the grade levels were combined as were public and nontraditional schools. Students lacking caring adult relationships include those who indicated that they had them only some of the time or less. Santa Clara County data included Grade 7 (chronic sadness/hopelessness) and nontraditional schools only; San Mateo County includes grades 7, 9, and 11, and 11, and included nontraditional schools for 2020-21 only.

Deaths by Suicide, by Age Group

Data are from the State of California, Department of Public Health, California Vital Data (Cal-ViDa), accessed February 5, 2023. 2022 data are through November.

Deaths, by Cause; Deaths by Race & Ethnicity

Data are from the State of California, Department of Public Health, California Vital Data (Cal-ViDa), accessed February 5, 2023. 2022 data are through November. For death rate calculations by race and ethnicity, <11 was assumed to be 5. Deaths are by place of residence, not place of death. Leading causes of death include Accidents (unintentional injuries); Alzheimer's Disease; Assault (Homicide); Cerebrovascular diseases (Stroke); Chronic liver disease and cirrhosis (Liver Disease); Chronic Lower Respiratory Diseases; Diabetes mellitus (Diabetes); Diseases of heart (Heart Disease); Essential hypertension and hypertensive renal disease (Hypertension); Influenza & Pneumonia; Intentional self-harm (Suicide); Malignant neoplasms (Cancer); Nephritis, nephrotic syndrome and nephrosis (Nephritis); and Parkinson's Disease. COVID-19 deaths are from the California COVID-19 State Dashboard via the CalHHS Open Data Portal (accessed 2/5/23). Deaths by race and ethnicity and adjusted to the population of each racial and ethnic group using the U.S. Census Bureau, American Community Survey 1-Year Estimates for 2021. COVID deaths for each racial and ethnic group were not age-adjusted due to lack of available data. The reporting of COVID data by race and ethnicity does not specifically state whether racial groups are non-Hispanic or Latino, or if they are exclusive categories; as such, analyses of the Multiple & Other share of population-adjusted deaths from COVID should be used cautiously with this in mind.

SAFETY

Crimes

Data is from the California Department of Justice, Office of the Attorney General, Interactive Crime Statistics. Violent Crimes include homicide, rape (including attempted rape), robbery, and aggravated assault. Data for Silicon Valley includes the city-defined Silicon Valley region. Population data used to calculate per capita rates are from the California Department of Finance E-4 Population Estimates. Property crimes include burglary, motor vehicle theft, and larceny-theft, as well as attempted burglary/theft. The share of the population that thinks crime is a serious problem is from the 2022 Silicon Valley Poll (www.joinventure.org/svpoll). Republicans and Democrats include "leaners."

Felony Offenses

Data is from the California Department of Justice, Office of the Attorney General, Interactive Crime Statistics. Data for Silicon Valley includes San Mateo and Santa Clara Counties. Population data is from the California Department of Finance, Mid-Year Annual Interpersonal Population Estimates by Race/Ethnicity with Age and Gender Detail and Population Projections by Age. Juveniles include children ages 10-17, and adults include the at-risk population (ages 18-69). Felony offenses include Violent, Property Offenses, Drug Offenses, Sex Offenses, Weapons, Driving Under the Influence, Hit and Run, Escape, Bookmaking, Manslaughter Vehicular, and Other Felonies. In November 2014, California voters passed Proposition 47 which reduced numerous state statutes from felonies to misdemeanors. Caution should be used when comparing felony and misdemeanor arrest data to prior years. Additionally, in November 2016, California voters passed Proposition 64 which legalized the possession and use of marijuana for individuals 21 years of age and older and reduced the offense degree for numerous state statutes. Caution should be used when comparing drug offense arrests to prior years.

Gun Violence

Data is from the Gun Violence Archive online database, accessed January 29, 2023. Gun Violence Archive (GVA) is a not for profit corporation formed in 2013 to provide online public access to accurate information about gun-related violence in the United States. Data for Silicon Valley include the city-defined region. A Mass Shooting is defined as "four or more killed or injured in a single event [incident], at the same general time and location not including the shooter."

Adults Feeling Safe

Data for feelings of safety are from the California Health Interview Survey (CHIS), which asked respondents "Do you feel safe in your neighborhood all of the time, most of the time, some of the time, or none of the time?" Feeling safe includes those who responded all or most of the time. Breakdown by percent Federal Poverty Level (FPL) includes <200%, 200-300%, and 400% or more (in 2021, the FPL for a family of four was \$26,500). All racial subgroups are not Hispanic or Latino. The share of Bay Area residents that think crime is a serious problem are from the 2022 Silicon Valley Poll, and include those who responded that it is an "extremely serious" or "very serious" problem. Democrats and Republicans are defined by respondents' answer to "Generally speaking, do you think of yourself as" with response options Democrat, Republican, or Independent/Other.

Public Safety Officers

All data are from the California Commission on Peace Officer Standards and Training. The total number of Public Safety Officers accounts for all sworn full-time and reserve personnel, which may include (but is not limited to) Police Chiefs, Deputy Chiefs, Commanders, Corporals, Lieutenants, Sergeants, Police Officers, Detectives, Detention Officers/Supervisors, Sheriffs, Undersheriffs, Captains, and Assistant Sheriffs; it does not include Community Service Officers or other non-sworn (civilian) police department personnel. All city, county and school district departments in Silicon Valley are included. Data do not include California Highway Patrol officers. 2022 data were as of July 6, 2022. The San Mateo County Sheriff's Office share of Silicon Valley public safety officers includes those serving Half Moon Bay, Millbrae, Portola Valley, San Carlos, and Woodside; the Santa Clara County Sheriff's Department share of Silicon Valley public safety officers includes those serving Cupertino, Los Altos Hills, and Saratoga.

Police Use of Force

Data are from the California Department of Justice, and include Santa Clara & San Mateo counties. Racial and ethnic groups apply to the civilians involved in the incident, and are alone or in combination with one another. Injuries exclude those listed as caused by a prior condition. Population data by race and ethnicity used to calculate per capita values were from the U.S. Census Bureau, American Community Survey 1-Year Estimates (for 2017-2019, and 2021) and 5-Year Estimates (for 2020).

Bike & Pedestrian Safety

Data are from the Statewide Integrated Traffic Records System (SWITRS) via the Transportation Injury Mapping System (TIMS) accessed 1/30/23, and only include those collisions in which an injury or fatality occurred. Data include the number of injuries and fatalities associated with Pedestrian Crashes and Bicycle Crashes; it is possible that some of the injuries were to drivers, passengers, or bystanders.

PHILANTHROPY

Individual Giving

Data are from the IRS SOI Tax Stats County Data. Charities receiving donations may be located anywhere. Individual donations to charity are grouped by tax return, so include both individual and joint filers. Data are limited to those who itemize deductions on their tax returns (45% in 2017, 24% in 2018, 23% in both 2019 and 2020 for Santa Clara and San Mateo counties, combined); however, while only 23% of 2020 returns were itemized, those returns represented 46% of the regional adjusted gross income.

Silicon Valley Community Foundation Donor-Advised Grants

Data are from the Silicon Valley Community Foundation and include donor-advised grants from 2015 through 2018 as of November 2018, and 2019 grants as of January 2021, 2020 grants as of January 2022, and 2021 grants as of January 2023. Data includes all donor-advised grants through the Silicon Valley Community Foundation, with the exception of a \$550 million grant in 2016 to the Chan Zuckerberg Biohub, Inc, and a \$25 million grant in 2021 to the Give Foundation. Annual totals also include grants to Stanford University (\$21 million in 2015, \$8.4 million in 2016, \$24.1 million in 2019, \$9.9 million in 2020, and \$16.1 million in 2021) as well as Santa Clara College (\$25 million in 2019, \$1.6 million in 2020, and \$6.4 million in 2021), \$3.7 million to the Los Altos Community Foundation in 2019, and donations to various local Community Foundations (\$1.6 million in 2020, and \$3 million in 2021).

Local Giving by Top Corporate Philanthropists

Amounts include the total of the top 50 corporate philanthropists in Silicon Valley to local organizations, as self-reported to the *Silicon Valley Business Journal* and only including companies which chose to participate. Data are for the fiscal year. Amounts may include donations of products or services. Two notable companies that did not participate/self-report are Facebook and Kaiser Permanente.

Corporate-Advised Grants

Data are from the Silicon Valley Community Foundation and include corporate-advised grants from 2015 through 2021. Silicon Valley includes Santa Clara & San Mateo Counties; from 2015 to 2020, Rest of Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, Santa Cruz, Solano, and Sonoma counties.

Foundation Grants

Data for active grantmaking foundations are from Candid as of February 6, 2023. Grants to academic institutions and hospitals were excluded, to the extent possible, as were foundation grants to other foundations. Foundations include Non-governmental organizations including Community foundations, Community trusts, Foundations, and Public charities participating in active grantmaking between 2020 and 2022. Foundation grants to universities/colleges, hospitals, and to other foundations were excluded from the totals whenever possible. Note that some of the foundation grants may have been donor-advised, but they are not excluded from the analysis. Silicon Valley includes Santa Clara and San Mateo Counties.

Silicon Valley Community Foundation Discretionary Grants

Data are from the Silicon Valley Community Foundation and include discretionary grants from 2015 through 2019 (accessed January 14, 2021), 2020 (accessed February 5, 2022), and 2021 (provided January 12, 2023). Bay Area includes the 9-county region. Silicon Valley includes Santa Clara & San Mateo Counties.

Nonprofit Organizations

Data are from the IRS Business Master File (September 8, 2022), National Center for Charitable Statistics Business Master File (September 8, 2022), and Tax Exempt World 990 Downloads. Data include all exempt 501c3 organizations whose Employer Identification Number (EINs) was registered in Santa Clara or San Mateo Counties if they filed Form 990 within 36 months and reported \$100,000 or more in revenues (on the most recently-filed 990). Primary National Taxonomy of Exempt Entities (NTEE) codes that were missing from the IRS Business Master File were researched using Guidestar. Subregions were determined by zip code associated with each EIN. The Board of Trustees of Stanford University EIN is registered in Redwood City, but for this study was considered within the Santa Clara County, Palo Alto subregion. Data do not include fiscally sponsored projects or chapters of organizations with an EIN not registered in Silicon Valley. NTEE Major 12 expands 10 Major NTEE categories into 12 categories, with Higher Education (B4 & B5) separate from other education organizations (B), and Hospitals (EH) separate from other health organizations (E). This research was conducted in partnership with the Silicon Valley Council of Nonprofits and Thrive, The Alliance of Nonprofits for San Mateo County. Donations to 501c3 organizations are generally tax deductible, except in circumstances of testing for public safety (see www.irs.gov/charities-non-profits/charitable-organizations/exemption-requirements-501c3-organizations).

APPENDIX A

PLACE

HOUSING

Median Home Sale Prices; Number of Homes Sold

Data are from CoreLogic (provided by DQ News for 2000 - 2020 data). Silicon Valley includes San Mateo and Santa Clara counties. Median sale prices have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data. Based on public property records, for transactions recorded in each period. Data reflect sales of all new and resale single-family detached houses and condos combined. 2022 estimates are based on data through August 1.

Residential Building

Data are from the Construction Industry Research Board and California Homebuilding Foundation, and includes Santa Clara and San Mateo Counties. Data includes the number of single family and multi-family units included in building permits issued. Single-Family housing units include detached, semi-detached, row house and townhouse units. Multi-family housing includes duplexes, 3-4 unit structures and apartment type structures with five units or more. 2022 estimate based on data through November.

Regional Housing Need Allocation (RHNA)

Data are from the California Department of Housing & Community Development, Housing Element Annual Progress Report data (updated December 8, 2022), and include the number of new housing units for which Silicon Valley and Bay Area jurisdictions issued permits in calendar years 2015 through 2021. In some cases, 2014 permits are included in the case where Bay Area jurisdictions opted to apply them toward the current RHNA cycle. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its Housing Element. AMI stands for Area Median Income. Silicon Valley data include Santa Clara and San Mateo counties, and the cities of Fremont, Union City, and Newark. Bay Area includes the 9-county region. Affordability levels indicated on the chart include Very Low Income (0-50% of the Area Median Income, AMI), Low Income (50-80% AMI), Moderate Income (80-120% AMI), and Above Moderate Income (120%+ AMI).

Affordable Share of Newly Approved Residential Units

Data are from Joint Venture Silicon Valley's annual land-use survey of all cities within Silicon Valley. The 35 cities/counties included in the FY 2021-22 Building Affordable Housing analysis include Belmont, Burlingame, Campbell, Colma, Cupertino, Daly City, East Palo Alto, Foster City, Fremont, Gilroy, Half Moon Bay, Hillsborough, Los Altos, Los Altos Hills, Menlo Park, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Newark, Pacifica, Palo Alto, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Francisco, Santa Clara, Santa Clara County, Saratoga, South San Francisco, Sunnyvale, Union City, and Woodside. Most recent data are for fiscal year 2021-22 (July 2021 through June 2022). 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. Beginning in 2018-19, the total number of newly approved units included accessory dwelling units (ADUs) issued a permit in lieu of a planning approval.

Average Multifamily Rental Rates

Data are from CBRE, and include average rental rates for multifamily housing (residential structures with more than one dwelling unit in the same building). Silicon Valley includes the city-defined region, excluding Union City. Rental rates are rounded to the nearest \$10. They have been inflation-adjusted and are reported in 2022 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley and San Francisco data, 2022 estimate based on data through August, the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data, and the U.S. city average consumer price index for all urban consumers from the Bureau of Labor Statistics based on January through October data. Silicon Valley average rental rates represent an unweighted average of Santa Clara and San Mateo County sub-markets; California rental rates are an average of all available CBRE California submarkets (San Jose, Los Angeles, Oakland, Orange County, Riverside, Sacramento, San Diego, San Francisco, and Ventura).

Housing Burden

Data for owners' and renters' housing costs are from the United States Census Bureau, American Community Survey 5-Year (2010, 2015, and 2020) and 1-Year (2021) Estimates. This indicator measures the share of owners and renters spending 30% or more of their monthly household income on housing costs. Renters data are calculated percentages of gross rent to household income in the past 12 months. Owner data are calculated percentages of selected monthly owner costs to household income in the past 12 months. Owners data are solely based on housing units with a mortgage; Renters data are based on the share of those who pay rent. According to the U.S. Department of Housing and Urban Development, housing costs greater than 30% of household income pose moderate to severe financial burdens. Data for housing burden by industry of employment were from the American Community Survey 1-Year estimates for 2021. Tech workers include Software, Computer Hardware Design & Manufacturing, and Internet & Information Services.

Percentage of Potential First-Time Homebuyers That Can Afford to Purchase a Median-Priced Home

Data are from the California Association of Realtors' (CAR) First-time Buyer Housing Affordability Index, which measures the percentage of households that can afford to purchase an entry-level home in California based on the median price of existing single family homes sold from CAR's monthly existing home sales survey. Beginning in the first quarter of 2009, the Housing Affordability Index incorporates an effective interest rate that is based on the one-year, adjustable-rate mortgage from Freddie Mac's Primary Mortgage Market Survey. 2022 averages include Q1-3.

Housing Affordability Index, by Race and Ethnicity

Data are from the California Association of Realtors' (CAR) Housing Affordability Index by Ethnicity and include the percentage of households that can afford to purchase a median-priced, single-family home in Santa Clara and San Mateo counties, California, and the United States by race and ethnicity.

Housing Units by Occupancy, and Vacant Housing Units

Data are from the United States Census Bureau, American Community Survey 5-Year Estimates Public Use Microdata (for High/Low-Occupancy Households) and 1-Year Estimates (for Vacant Housing Units). Silicon Valley includes Santa Clara and San Mateo counties. The share of high-occupancy housing units is calculated by determining the total number of housing units (excluding group quarters) with fewer than 1 bedroom per person, with the exception of married/unmarried couple households in which the couple is presumed to share a room. The share of low-occupancy housing units are those that have more than one bedroom per person plus an extra "spare" room, excluding couples who share a room (and may also have a spare room). Available vacant units exclude units for migrant workers and those that are for sale.

Inadequate or Deficient Housing Units

Data are from the 2021 United States Census Bureau, American Housing Survey. Silicon Valley includes the San Jose-Sunnyvale-Santa Clara MSA; San Francisco includes the San Francisco-Oakland-Hayward MSA. The AHS publishes information in the statistical reports on the physical adequacy of occupied housing units. Occupied units are classified as adequate, having moderate physical problems, or having severe physical problems. A unit is considered severely inadequate if any of the following criteria apply: 1) Unit does not have hot and cold running water; 2) Unit does not have a bathtub or shower; 3) Unit does not have a flush toilet; 4) Unit shares plumbing facilities; 5) Unit was cold for 24 hours or more and more than two breakdowns of the heating equipment have occurred that lasted longer than 6 hours; 6) Electricity is not used; 7) Unit has exposed wiring, not every room has working electrical plugs, and the fuses have blown more than twice; 8) Unit has five or six of the following structural conditions: a) Unit has had outside water leaks in the past 12 months; b) Unit has had inside water leaks in the past 12 months; c) Unit has holes in the floor; d) Unit has open cracks wider than a dime; e) Unit has an area of peeling paint larger than 8 by 11 inches; f) Rats have been seen recently in the unit. Cold units include those that were "Uncomfortably cold for 24 hours or more." Water Leakage includes units with any leakage from inside or outside the unit. Water Stoppages include "Any stoppage in the last 3 months." Non-Functioning Toilet includes "None working some time in last 3 months."

Multigenerational Households

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates, using the University of Minnesota Population Center IPUMS for Silicon Valley, San Francisco, and California. Silicon Valley data include Santa Clara and San Mateo counties. Data for the United States are from the Pew Research Center report by Richard Fry (July 2022) using data from the Annual Social and Economic Supplement of the Current Population Survey (CPS). The definition of multigenerational households used for this

analysis goes beyond the Census Bureau's traditional definition, and includes all households with two or more adult generations, where an adult is defined as age 25 and over. The definition is modeled after the methodology developed by the Pew Research Center, published in a report entitled "In Post-Recession Era, Young Adults Drive Continuing Rise in Multi-Generational Living" by Richard Fry and Jeffrey Passel, July 2014. In the definition used, a multigenerational household includes those with two adult generations (a parent or parent-in-law and adult child/children, where either generation is the head of household), three generations (parent or parent-in-law, adult child/children, grandchildren), skipped generations (grandparents living with grandchildren where no parent is present), and more than three generations. Due to the use of different survey data and the possible slight differences between the methodology used by the Pew Research Center and the Silicon Valley Institute for Regional Studies, caution should be used in comparing the Silicon Valley, San Francisco, and California estimates to those for the United States as a whole.

Young Adults Living With a Parent

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates, using the University of Minnesota Population Center IPUMS. Silicon Valley data includes Santa Clara and San Mateo Counties. Young Adults include residents ages 18 to 34, and only those who live with a parent who is the householder (not including parents who live with their young adult children, where the child is the householder). United States data points are estimates created by approximating the percentages of young adults ages 18-34 living with their parent(s) from 2000, 2010, 2019, 2020, and 2022 data for young adults ages 25-24 and ages 18-29, using population estimates from the U.S. Census Bureau, American Community Survey. Data used for these estimates came from 2019 and 2020 January-July averages for young adults ages 18-29 (in "A majority of young adults in the U.S. live with their parents for the first time since the Great Depression," Pew Research Center, September 4, 2020), by Richard Fry, Jeffrey S. Passel, and D'Vera Cohn, 2000 (annual) and 2022 (July) for young adults ages 18-29 (from Diplo Fadeyi and Juliana Menasce Horowitz, "Americans more likely to say it's a bad thing than a good thing that more young adults live with their parents," Pew Research Center, August 24, 2022), and a linear estimation in between those years.

Homelessness

The Santa Clara County data are from the 2022 Homeless Census & Survey, conducted on February 23 and 24, 2022. In the weeks following the street count, a survey was administered to unsheltered and sheltered individuals experiencing homelessness in order to profile their experience and characteristics. The San Mateo County data are from the 2022 One Day Homeless Count and Survey, which was conducted on February 24, 2022 followed by the survey period between February 24 and March 3, 2022. The population share was calculated using January 1 population estimates from the California Department of Finance, E-4 Historical Population Estimates for Cities, Counties, and the State. Data for the Estimated Number of Homeless Individuals in the San Jose/Santa Clara City & County Continuum of Care, 2021-22, are from the U.S. Department of Housing and Urban Development. Number of Units Funded through Project Homekey are from the State of California Department of Housing & Community Development. Project Homekey funding rounds 1 and 2.

Evictions

Data are from the Judicial Council of California, Public Access to Judicial Administrative Records (PJAR), and include unlawful detainer filings by fiscal year. An eviction happens when a landlord expels people from property he or she owns. Evictions are landlord-initiated involuntary moves that happen to renters. Per the Superior Court of California, County of Santa Clara, "An Unlawful Detainer action is a special court proceeding. It's a legal way to evict someone from the place where they live or work. This usually happens when a tenant stays after the lease is up, the lease is canceled, or the landlord thinks the tenant hasn't paid their rent."

TRANSPORTATION

Vehicle Miles Traveled

Freeway Vehicle Miles Traveled (VMT) data are from Caltrans PeMS (Performance Measurement System) which collects, filters, processes, aggregates and examines traffic data from the Caltrans network of roadway traffic sensors. Data include California State Freeways only (not all state highways). Silicon Valley includes Santa Clara & San Mateo counties. The Bay Area includes the 9-County San Francisco Bay Area. Data for 2012 through November 2021 accessed December 27, 2021; 2022 data accessed January 26, 2023. Data include California State Freeways only (not all state highways). California Department of Finance's E-4 Population Estimates were used to compute per-capita values.

Transportation-Related Injury Crashes

Data are from the California Highway Patrol, Statewide Integrated Traffic Reporting System (SWITRS) via the U.C. Berkeley Transportation Injury Mapping System (TIMS), accessed January 21, 2022 (2011-2016 data) and January 29, 2023 (2017-2021 data). Data include injury crashes involving a vehicle only, and only those occurring on state roads. Vehicle miles traveled are considered a measure of exposure to transportation-related vehicle crashes. Bay Area data include Alameda, Contra Costa, Marin, Santa Clara, San Francisco, and San Mateo Counties. 2021 and 2022 data are provisional and subject to change; 2022 data are from the Statewide Integrated Traffic Records System (SWITRS).

Autonomous Vehicle Mileage & Collisions

Data are from the California Department of Motor Vehicles (DMV), Autonomous Vehicle Deployment and Collision Statistics (accessed 12/17/2021 for 2019, 2020, and 2021 data; accessed 1/4/2023 for 2022 data). Silicon Valley includes the city-defined region. As of December 2, 2022, there were 43 Autonomous Vehicle Testing Permit holders within the state. Injuries include those reported to the DMV, and include passengers, drivers, and bicyclists. 2021 total miles driven is estimated using data through November.

Transportation Costs

Costs of transportation needs are estimated using the 2018 and 2021 Self-Sufficiency Standard for California from the Center for Women's Welfare at the University of Washington School of Social Work, with the latter inflation-adjusted to 2022 using the change in transportation costs from the from the U.S. Bureau of Labor Statistics (Bay Area) and the California consumer price index for all urban consumers from the California Department of Finance (California). Silicon Valley is an average of Santa Clara and San Mateo counties; Bay Area includes the 9-County region; California represents an unweighted California county average. Developed by Dr. Diana Pearce, the Self-Sufficiency Standard defines the amount of income necessary to meet basic needs (including taxes) without public subsidies (e.g., public housing, food stamps, Medicaid or child care) and without private/informal assistance (e.g., free babysitting by a relative or friend, food provided by churches or local food banks, or shared housing). The Standard assumes private transportation (a car) in counties where less than 7% of workers commute within the county by public transportation. Only Alameda County and San Francisco are calculated using public transportation costs in the 2021 Standard. Private transportation costs are based on the average costs of owning and operating a car. It is understood that the car(s) will be used for commuting five days per week, plus one trip per week for shopping and errands. In addition, one parent in each household with young children is assumed to have a slightly longer weekday trip to allow for "linking" trips to a daycare site. Costs are described as transportation "needs" because they do not represent the average amount of money spent on transportation, but rather the cost of basic transportation needs based on family type and county of residence. Costs reported for a family of four are based on a two-adult household. Relative change in transportation costs uses the Bay Area Consumer Price Index, monthly costs for Gasoline, Transportation, and All Items; they are shown relative to February 2018.

Means of Commute; Mean Travel Time to Work

Data are from the United States Census Bureau, American Community Surveys (ACS), 5-Year Estimates for 2010, 2015, and 2020 via Social Explorer; 2020 and 2021 data are from the 2021 ACS Public Use Microdata (2020 using experimental weights). 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 weeks 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 categories, "Drove Alone" and "Carpool" include 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, and other means that are not identified separately within the data distribution. Percentages may not add up to 100% due to rounding. Total Commuters and mean travel time to work excludes those who Worked At Home.

APPENDIX A

PLACE *CONTINUED*

Megacommuters

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates, Public Use Microdata (PUMS). Silicon Valley data include commuters who work in San Mateo or Santa Clara Counties. The Bay Area includes workers in Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. Megacommuters include workers ages 16 or older with one way commutes of more than 90 minutes; analysis excludes those working from home. California megacommuters are based on place of residence, and thus may include those who are commuting out of state. 2020 data are from the 2020 1-Year Public Use Microdata (PUMS) with experimental weights.

Commute Patterns

Data for Commute Patterns are from the United States Census Bureau, American Community Survey, 1-Year Public Use Microdata Samples (PUMS) using the Place of Work PUMA for San Francisco, San Mateo, Santa Clara and Alameda Counties. Workers include civilian residents over age 16 who were employed and at work.

Bicycle Commuters

Data are from the United States Census Bureau, American Community Survey 1-Year Estimates, and include 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. Bicyclists include people who biked to work as their most common means of commute (the greatest number of days per week) and/or for the longest distance during the work trip (if they used more than one means of transportation to get to work each day). The number of commute trips is estimated as the number of commuters multiplied by two (assuming each commuter has one two-way commute).

Share of Jurisdictions with a Bicycle or Pedestrian Master Plan

Data are for cities within the city-defined Silicon Valley region, and the Counties of Santa Clara and San Mateo. Data include all bicycle and pedestrian master plans that were created since 2011, and were approved, planned or in-progress as of December 2022.

Bicycle Collisions

Data are from the Statewide Integrated Traffic Records System (SWITRS) via the Transportation Injury Mapping System (TIMS), and only include those collisions in which an injury or fatality occurred.

Bicycle Facilities

Data for 2022 are from the County of Santa Clara Valley Transportation Authority, and from San Mateo city and town engineering and public works departments (South San Francisco, Half Moon Bay, and Hillsborough) are not included due to lack of data. Starting in 2022, data include bicycle facilities in unincorporated areas of San Mateo County. Data for 2018 were compiled from MTC, VTA, and Google Streets, and include Santa Clara and San Mateo counties. Bicycle facility classes have been defined by Caltrans and include Class I (Shared-use Path), Class II (Bike lanes), Class III (Bike Route/Boulevard), and Class IV (Protected Bikeway). Beginning in 2017, the data for Class I (Shared-use Path) included pathway networks in parks, as well as parallel measurements for pathways that run along both sides of waterways (the metric does not include unpaved paths in mountainous state park areas that are mostly used for mountain bike recreation); the data for Class II (Bikeway) included parallel lane measurements for bike lanes that occur on roadways with medians that restrict passage from one side of the road to the other, as well as roadway that have shoulders that are treated as bike lanes but may not have stenciling; the data for Class III (Bike Route/Boulevard) included additional bike routes that were not included in the 2016 data.

Daily Vehicle Hours of Delay Due To Congestion

Data are from Caltrans PeMS (Performance Measurement System) which collects, filters, processes, aggregates and examines traffic data from the Caltrans network of roadway traffic sensors. Data include California State Freeways only (not all state highways). Silicon Valley includes Santa Clara & San Mateo Counties. Bay Area includes the 9-County San Francisco Bay Area. The reported traffic delays data are based on the detector coverage and health at the time that the data was collected by PeMS. Accordingly, actual traffic delays experienced in each county may be higher than those reported. One vehicle hour of delay reflects one vehicle stuck in traffic for one hour. Delay refers to speeds less than 60 miles per hour. Data for 2012 through 2017 accessed December 27, 2021; data for 2018+ accessed January 26, 2023. The share of Bay Area residents who think traffic congestion is a serious issue include those who responded that it is "very serious" or "extremely serious"; those likely to move out of the Bay Area within the next few years include those who answered "strongly agree", and those unlikely to move include those who responded "strongly disagree" or "somewhat disagree".

Per Capita Transit Use

Estimates are the sum of annual ridership on the light rail and bus systems in Santa Clara and San Mateo Counties (from SamTrans and Santa Clara Valley Transportation Authority), and rides on Caltrain and Altamont Corridor Express (ACE). Data does not include paratransit, such as SamTrans Redi-Wheels program. The California Department of Finance E-4 Population Estimates were used to compute per-capita values. FY 2022-23 ridership estimated using FY 2022-23 year-to-date ridership numbers (through September for Caltrain and SamTrans, October for VTA, and November for ACE). FY 2022-23 per capita ridership calculated using 2022 population estimates.

Caltrain Ridership

Caltrain data through FY 2019 are from the Annual Passenger Counts report, and include average weekday daily ridership (through FY 2016) and average mid-weekday daily ridership (FY 2017+). Data for FY 2020 and subsequent years are from board meeting agendas. Years indicate the end of the fiscal year (e.g., 2018 includes data for FY 2017-18). FY 2022-23 ridership based on data through November 2022.

Registered Shuttle-Type Buses

Vehicle registration data include common shuttle bus manufacturers (Van Hool, Motor Coach Industries, Novabus, Evobus, Man Truck and Bus Corporation, Prevost, NEOPLAN, Proterra), and are as each of the available California Department of Motor Vehicles publicly-available datasets (dated October 2018, January 2020, January 2021, and January 2022). Silicon Valley includes the city-defined region; Rest of Bay Area includes the 9-county region minus Silicon Valley. Registered Out of Service vehicles are statewide.

Land Use

Residential Density

Data are from Joint Venture Silicon Valley's annual land-use survey of all cities within Silicon Valley. The 34 cities/counties included in the FY 2021-22 Residential Density analysis are Belmont, Burlingame, Campbell, Brisbane, Colma, Cupertino, East Palo Alto, Fremont, Gilroy, Half Moon Bay, Hillsborough, Los Altos, Los Altos Hills, Los Gatos, Menlo Park, Millbrae, Milpitas, Monte Sereno, Morgan Hill, Mountain View, Newark, Pacifica, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Mateo County, Santa Clara, Saratoga, South San Francisco, Sunnyvale, Union City, and Woodside; ADU count for 2021-22 also includes Palo Alto, Daly City, Foster City, and the County of Santa Clara. Other cities/counties were not included because they either did not respond to the survey or they left the acreage question blank. Most recent data are for fiscal year 2022 (July 2021 through June 2022). Residential density was calculated as the average residential density of the participating cities/counties for each year. Beginning with FY 2014-15 the residential density calculation included accessory dwelling units (ADUs), and starting in 2018-19 they also included ADUs that were issued a building permit in lieu of a planning approval.

Housing Near Transit

Data are from Joint Venture Silicon Valley's annual land-use survey of all cities within Silicon Valley. The 30 cities/counties included in the FY 2021-22 Housing Near Transit analysis were Belmont, Burlingame, Campbell, Colma, Cupertino, Daly City, East Palo Alto, Foster City, Fremont, Gilroy, Hillsborough, Los Altos, Menlo Park, Millbrae, Milpitas, Morgan Hill, Mountain View, Newark, Palo Alto, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Mateo County, Santa Clara, Santa Clara County, South San Francisco, Sunnyvale, and Union City. Only cities containing rail stations or major bus corridors were included in the analysis for the share of housing near transit. Most recent data are for fiscal year 2022 (July 2021 through June 2022). The number of new housing units within one-third mile of transit are reported directly for each of the cities and counties participating in the survey. Places with one-third of a mile of transit are considered "walkable" (i.e., within a 5- to 10-minute walk for the average person). Transit oriented data prior to 2012 is reported within one-quarter mile of transit.

Non-Residential Development

Data are from Joint Venture Silicon Valley's annual land-use survey of all cities within Silicon Valley. Most recent data are for fiscal year 2022 (July 2021 through June 2022). The amount of commercial development within one-third of a mile of transit are reported directly for each of the cities and counties participating in the survey. Places with one-third of a mile of transit are considered "walkable" (i.e., within a 5- to 10-minute walk for the average person). Transit oriented data prior to 2012 is reported within one-quarter mile of transit. The 35 cities/counties included in the FY 2021-22 Non-Residential Development Approvals analysis were Belmont, Brisbane,

Burlingame, Campbell, Colma, Cupertino, Daly City, East Palo Alto, Foster City, Fremont, Gilroy, Half Moon Bay, Hillsborough, Los Altos, Los Altos Hills, Menlo Park, Millbrae, Milpitas, Morgan Hill, Mountain View, Newark, Pacifica, Palo Alto, Redwood City, San Bruno, San Carlos, San Jose, San Mateo, San Mateo County, Santa Clara, Saratoga, South San Francisco, Sunnyvale, Union City, and Woodside.

Planned Hotel Development

Data is from the Atlas Hospitality Group annual California Hotel Development Surveys. Planned hotels are in various stages, and have not necessarily received planning approvals. 2021 data as of the end of the year. Silicon Valley includes the city-defined region.

ENVIRONMENT

Water Resources

Data for Santa Clara County was provided by Santa Clara Valley Water District (SCVWD). Scotts Valley Water District (SVWD) provided Scotts Valley data. Bay Area Water Supply & Conservation Agency (BAWSCA) provided data for member agencies servicing San Mateo County and for Alameda County Water District, which services the Cities of Fremont, Union City and Newark. These agencies include Brisbane/GVMID, Estero, Burlingame, Hillsborough, CWS - Bear Gulch, Menlo Park, CWS - Mid Peninsula, Mid-Peninsula, CWS - South SF, Millbrae, Coastside, North Coast, Redwood City, Daly City, San Bruno, East Palo Alto, and Westborough. Cordilleras serves residents in San Mateo County, but is not a BAWSCA member and therefore was not included in this analysis. Data for FY 2021-22 is preliminary. Population figures used to calculate per capita values include the population served by each water agency, and are provided by the agencies directly. Total water consumption figures are the sum of all retailer numbers, and do not include consumption by private well-owners in the SCVWD data; some consumption for urban agriculture may be included, but the amount is negligible. In the BAWSCA data, the small number of agricultural users in the service area are treated as a class of commercial user and so are included in the consumption figures. Scotts Valley Water District does not serve agricultural customers, so total water consumption figures used to compute both the per capita consumption and the recycled percentage of total water used are the same. The year listed represents the fiscal year (e.g., 2022 represents the 2021-2022 fiscal year).

Local Solid Waste Disposal

Data for Local Solid Waste Disposal are from the CalRecycle Landfill Tonnage Reports by County. Silicon Valley includes San Mateo and Santa Clara Counties. Bay Area includes the 9-county region. Data represent waste disposal, not production/origin. 2021 estimate based on Q1-3.

Surplus Food Recovered from Businesses & Institutions

Santa Clara County data are from the Santa Clara County Food Recovery Program, administered by the Joint Venture Silicon Valley Food Recovery Initiative. Data reflect self-reported values related to compliance with California Senate Bill 1383 (SB 1383), gathered by the Food Recovery Initiative in its role administering the Santa Clara County Food Recovery Program. Figures for 2019-2021 are from a 2021 online capacity survey of food recovery organizations/services. Figures for 2022 are from 2022 reporting by food recovery organizations/services headquartered in Santa Clara County (100% reporting), and Tier 1 businesses located in Santa Clara County (89% reporting). San Mateo County data are from the County of San Mateo Office of Sustainability and are based on amounts reported FROM local edible food generators (2019-2021) and recovered BY San Mateo County food recovery organizations/services (2022). Due to reporting differences between the two counties, it is possible that some recovered food is in both datasets and is therefore represented twice in each chart column - see data file for disaggregation. Data are based on reports from Second Harvest of Silicon Valley (pounds of food recovered from local generators) and include the majority of food recovery efforts within the county, but do not capture the amount of food recovered from San Mateo County generators by organizations outside of the Second Harvest network or any recovered by a Second Harvest partner organization outside of the edible food recovery program. 2021 and 2022 figures represent estimates based on Jan-Aug 2021 and Jan-June 2022 (Santa Clara County) and Jan-July 2022 (San Mateo County). SB 1383 (effective January 1, 2022 for Tier 1 businesses and January 1, 2024 for Tier 2 businesses/institutions) set goals for decreasing the disposal of organic waste to landfills in order to reduce greenhouse gas emissions. Specifically, businesses/institutions are required to recover the maximum amount of surplus edible food for human consumption. Tier 1 Commercial Edible Food Generators typically include those with large quantities of fresh produce/grocery items as well as shelf-stable food (e.g., wholesale food vendors, food service providers, food distributors, and grocery stores/supermarkets); Tier 2 typically include those with more prepared foods, often requiring food safety (time and temperature control) measures (e.g., hotels, restaurants, health facilities, state agency cafeterias, educational institutions with food facilities, and large venues/events). The data track pounds recovered BY food recovery organizations/services and FROM businesses/institutions separately because of the impact of geographic boundaries. Pounds reported by food recovery organizations/services headquartered in Santa Clara County may capture food recovered from businesses/institutions in surrounding counties; likewise, pounds reported by businesses/institutions located in Santa Clara County may capture pounds donated to food recovery organizations/services located outside of the county.

Wildfires

Data are from the California Department of Forestry and Fire Protection (CAL FIRE) wildfire activity statistics and events data. Silicon Valley includes San Mateo and Santa Clara counties; Rest of Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco (although there is no State Responsibility Area located within San Francisco), Solano, and Sonoma Counties; Northern California includes Amador, El Dorado, Butte, Humboldt, Del Norte, Lassen, Modoc, Mendocino, Nevada, Yuba, Placer, Santa Cruz, Shasta, Trinity, Siskiyou, Lake, Tehama, and Glenn counties. California data includes those managed by CAL FIRE and other partner agencies. 2022 fire data for Northern California is from the 2022 fire season all incident data. 2020 and 2021 totals are preliminary. Bay Area 2022 data include 15 fire incidents. The share of Bay Area residents that think the increasing frequency of wildfires and/or the impacts of climate change are serious problems are from the 2022 Silicon Valley Poll, and include those who responded that it is an "extremely serious" or "very serious" problem. Remote workers include those who work remotely all, most, or some of the time. Democrats and Republicans include "leaners."

Air Quality

Data are from the United States Environmental Protection Agency, Outdoor Air Quality Data, and include Santa Clara and San Mateo Counties. Unhealthy days are based on an Air Quality Index (AQI) of >100 for sensitive groups, and >150 for the general population in one or both of the two counties. The AQI includes Air Quality Index (AQI) for all AQI pollutants including carbon monoxide, ozone, particulate matter, nitrogen dioxide, sulfur dioxide, and lead. The PM2.5 monitoring network was phased in between 1999 and 2001 in most areas, so earlier years do not include PM2.5 (a type of particulate matter).

Electricity Consumption & Productivity

Electricity Consumption data is from the California Energy Commission. Gross Domestic Product (GDP) data is from Moody's Economy.com. GDP values have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley and San Francisco data, and the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2022) for California data. Silicon Valley data includes Santa Clara and San Mateo counties. Per capita values were computed from the California Department of Finance's E-4 Population Estimates.

Emissions Intensity for Power Providers; Share of Electricity Customers Served, by Provider; Share of Electricity, by Generation Sources

In Silicon Valley, all electricity consumers receive power sourced by either PG&E (an investor-owned utility), one of the two municipal utilities (Silicon Valley Power in the City of Santa Clara, or Palo Alto Utilities), or one of the locally-controlled public agencies sourcing clean electricity. These community choice energy options are relatively new to the region, and include Silicon Valley Clean Energy which serves 13 communities in Santa Clara County; Peninsula Clean Energy which serves 20 San Mateo County cities and the unincorporated portion of the county; and San Jose Clean Energy, the newest of the three, serving residents and businesses in San Jose since February 2019. The remaining Silicon Valley communities outside of the two counties are served by Monterey Bay Community Power (Scotts Valley) and East Bay Community Energy (Fremont and Union City); Newark opted out of joining the community choice energy program and thus remains served by PG&E. Neither Monterey Bay Community Power or East Bay Community Energy are included in this analysis, although bundled PG&E customers in Fremont, Newark, Union City, and Scotts Valley are included. The three locally-controlled public-agency electricity providers in Santa Clara and San Mateo Counties have served customers since October 2016 (Peninsula Clean Energy), April 2017 (Silicon Valley Clean Energy), and February 2019 (San Jose Clean Energy). Palo Alto Utilities has provided 100% carbon-neutral electricity since 2013. PG&E's emissions factor is from the PG&E Corporation CDP Climate Change Questionnaire 2021, and customer counts were from publicly available data on PG&E's website (including bundled customers only) for December 2021; Other emissions intensities and customer counts were provided directly by Silicon Valley's energy providers. Data are for 2020 except California and the U.S. Average (2018). The analysis does not include Direct Access (DA) electricity customers. Green-e® Energy is the leading certification program for voluntary renewable energy in North America. The 2020 Green-e®

APPENDIX A

PLACE *CONTINUED*

Residual Mix Emissions Rates are "greenhouse gas (GHG) emissions associated with untracked and unclaimed U.S.-based sources of electricity, based on location of consumption." The "residual mix" is what is leftover on the grid after all the Green-e® certified renewable energy credits that have been purchased – either alone or bundled with the power itself – are removed. These emissions rates are used to calculate the carbon dioxide (CO₂) equivalent emissions associated with unspecified purchased or acquired electricity, classified as "Scope 2" emissions for carbon accounting purposes. Data for the share of electricity by generation sources are from the 2020 Power Content Labels, through the California Energy Commission's Power Source Disclosure Program for Silicon Valley providers. California and U.S. generation by sources are from the U.S. Environmental Protection Agency (EPA) Emissions & Generation Resource Integrated Database (eGRID) fuel mix for 2020. The Silicon Valley Average shares of electricity by generation source are approximations for illustrative purposes only, calculated as un-weighted averages of all power plans available to residential and non-residential customers.

Solar and Storage Installations

Data are from Palo Alto Municipal Utilities, Silicon Valley Power, and Pacific Gas & Electric, and include the entire city-defined Silicon Valley region. Years listed correspond to when the systems were interconnected. The category Non-Residential includes Commercial, Non-Profit, Government, Industrial, Utility, Military, and Educational. Cumulative installed solar capacity does not include installations prior to 1999. All systems included in the analysis are Net Energy Metered (including RES-BCT and Virtual Net Energy Metering) and Non-Export PV. PG&E data are from the California Solar Statistics, which publishes all IOU solar PV net energy metering (NEM) interconnection data per CPUC Decision (D)14-11-001. Energy storage data for PG&E includes net-energy metered systems only.

2022 data are through June for Palo Alto Utilities, August for Silicon Valley Power, and October for PG&E. Silicon Valley Power energy storage data prior to 2019 is unavailable.

Electric Vehicle Infrastructure

Data for public electric vehicle stations and outlets are from the U.S. Department of Energy, and include the city-defined Silicon Valley region. Annual data are as of 12/28/2022; 11/22/2021; 11/19/2020; 12/6/2019; 11/13/2018; 12/18/2017; 12/6/2016; 11/2/2015; and 11/14/2014.

Electric Vehicle Adoption

Vehicle population data are from the California Energy Commission Zero Emission Vehicle and Infrastructure Statistics (last updated April 29, 2022 for light-duty vehicles). Silicon Valley includes the city-defined region. Electric vehicles include battery electric, plug-in hybrid, and hydrogen fuel cell. Share of registered light-duty electric vehicles in 2022 by make and city are from the California Department of Motor Vehicles registration data including registered light-duty vehicles only, as of January 2022 (regardless of model year). Palo Alto includes East Palo Alto and Stanford. City data are by zip code, so do not represent exact city-boundaries. Share of Silicon Valley electric vehicles by make and model are from the California Energy Commission Zero Emissions Vehicle and Infrastructure Statistics as of 2021, and include Santa Clara and San Mateo counties.

GOVERNANCE

LOCAL GOVERNMENT ADMINISTRATION

Local Government Finances

Data were obtained from the audited annual financial reports from the Counties of Santa Clara and San Mateo, and cities within the Silicon Valley city-defined region. Reports included Annual Comprehensive Financial Reports, Comprehensive Annual Financial Reports, Annual Financial Statements for the Year End, Annual Financial Reports, Basic Financial Statements Reports, and Annual Basic Financial Statements Reports, as well as the State of California annual year-end financial report from the California State Auditor. FY 2019-20 totals include estimates for Atherton and Portola Valley; 2021 represent estimates using audited annual financial reports for the Counties of Santa Clara and San Mateo and 22 cities, and budgeted amounts for the rest. Data for City Finances include both Government and Business-Type Activities (where applicable). Whenever possible, data were obtained from the following year report (e.g., the 2010 report for 2009 figures) because following year reports sometimes reflect revisions/corrections. Years represent the end of the Fiscal Year (e.g., 2019 data are for FY 2018-19). All amounts have been inflation-adjusted and are reported in 2021 dollars using the Bay Area consumer price index for all urban consumers from the Bureau of Labor Statistics for Silicon Valley data, 2021 estimate based on January-August the California consumer price index for all urban consumers from the California Department of Finance May Revision Forecast (April 2021) for California data. Values are significant to the nearest \$1 million due to rounding in the city and state reports. Revenues Minus Expenses is reported before Transfers or Extraordinary Items. Other Revenues include any revenue other than Property Tax, Sales Tax, Investment Earnings, or Charges for Services. Other Revenues includes the following (as categorized by the various cities in Silicon Valley): Incremental Property Taxes; Public Safety Sales Tax; Business tax; Municipal Water System Revenue; Waste Water Treatment Revenue; Storm Drain Revenue; Transient occupancy tax Business, Hotel & Other Taxes; Property transfer tax; Property Taxes In-Lieu; Vehicle license in-lieu fees or Motor Vehicle In-Lieu; Licenses & Permits; Utility Users Tax; Development impact fees; Franchise fees; Franchise Taxes Franchise & Business Taxes; Rents & Royalties; Net Increase (decrease) in Fair Value of Investments; Equity in Income (losses) of Joint Ventures; Miscellaneous or Other Revenues; Cardroom Taxes; Fines and Forfeitures; Other Taxes; Agency Revenues; Interest Accrued from Advances to Business-Type Activities; Use of Money and Property; Property Transfer Taxes; Documentary Transfer Tax; Unrestricted/Intergovernmental Contributions in Lieu of Taxes; Gain (loss) of disposal of assets.

Public Capital

Aggregate City Net Position is for cities in Santa Clara & San Mateo Counties, and is the sum of amounts in each city's audited Annual Comprehensive Financial Report (ACFR). 2022 data include estimated aggregate city net position using FY 2020-21 ACFRs and latest available year ACFRs for Atherton and Portola Valley. Net Position includes the sum of assets, minus liabilities. Total Household Wealth data are from Claritas, Claritas Income Producing Assets Indicators model based on the Survey of Consumer Finances, 5-Year data. Silicon Valley includes Santa Clara and San Mateo Counties. Investable Assets include education/custodial accounts, individually-owned retirement accounts, stocks, options, bonds, mutual funds, managed accounts, hedge funds, structured products, ETFs, cash accounts, annuities, and cash value life insurance. Ultra High Net Worth (UHNW) households include those with net investable assets of \$30 million or more. Data represent estimates. Extreme billionaire wealth include those listed on the Forbes 2022 World Billionaires List with wealth of more than \$10 billion, and includes an assumed 18.1% liquid assets based on the technology-industry billionaire estimate from the Altrata 2022 Billionaire Census. Extreme billionaires (count and total wealth) were estimated based on data reported in the Forbes 2022 World's Billionaire List, as of December 29, 2022. Billionaires listed as residing in the United States were researched individually, and were included in the Silicon Valley region if a city-defined Silicon Valley city/town was listed as a place of primary residence. A comparison of the regional total wealth reported by Claritas and the total wealth calculated here (given the assumptions in this estimation methodology) supports the idea that the Claritas data does not include outlier households with wealth \$30 million or more.

City/County Manager Turnover

Annual count of city/county managers are a snapshot in time, taken in August of each year since 2013 from individual city and county websites. Data include Silicon Valley cities, as well as the counties of Santa Clara and San Mateo. Percent Women include all those whose gender expression is feminine.

CIVIC ENGAGEMENT

Partisan Affiliation

Data are from the California Secretary of State, Elections Division. Silicon Valley data are for Santa Clara and San Mateo counties. Other includes Green, Libertarian, Natural Law, Peace & Freedom/Reform, and Other. No Party Preference was formerly called Declined to State.

Eligible Voter Turnout and Absentee Voting

Registration and turnout data are from the California Secretary of State, Elections Division. The eligible population is determined by the Secretary of State using Census population data provided by the California Department of Finance. Eligible Voter Turnout and Vote-By-Mail ballots include data for the even-year November General Elections.

Eligible Voter Turnout, by Age

Eligible Voter Turnout by Age data are from the Center for Inclusive Democracy at the USC Sol Price School of Public Policy, using data from the Statewide Database (the Redistricting Database for the State of California) and California Department of Finance (for voting age population estimates). Silicon Valley includes Santa Clara and San Mateo Counties. Eligible voter turnout is defined as the percentage of adult citizens who voted. 2016 General Election turnout for California does not include Yuba County. The eligible turnout rate in San Francisco increased significantly in 2020 due to an estimated decline in the citizen voting age population ages 25-34. Eligible voter turnout data by age for the November, 2022 General Election are not yet available.

REPRESENTATION

Local Elected Officials

The L2 Voter and Demographic data includes demographic and voter history tables for all 50 states and the District of Columbia. The dataset is built from publicly available government records about voter registration and election participation. These records indicate whether a person voted in an election or not, but they do not record for whom that person voted. Voter registration and election participation data are augmented by demographic information from outside data sources. Silicon Valley includes the city-defined region. Local elected officials include any person elected through a city-wide or county-wide election to represent at either the Municipal, Mayoral or Supervisory level. Race/ethnicity of elected officials are based on publicly available documentation that those officials self-identify with a particular racial/ethnic group. Other party affiliation includes American Independent, Green, Libertarian, Natural Law, Peace & Freedom/Reform, and Other. Data for Share of Local Elected Officials by Gender and Partisan Affiliation are through the end of the year. Local elected officials included 227 Councilmembers, Mayors, and County Supervisors in 2022 (Councilmembers in all 39 Silicon Valley cities across Santa Clara, San Mateo, Alameda and Santa Cruz Counties, the 10 County Supervisors for Santa Clara and San Mateo Counties, the District 2 Supervisor for Alameda County, and the District 5 Supervisor for Santa Cruz County).

Trial Court Justices and Judges

Data reflect responses from justices and judges that were active and serving on the bench as of December 31 of the data year (2011, 2016 and 2021). The tables do not include demographic information for justices that were appointed but not yet confirmed, nor for judges that were appointed but had not yet taken their oaths of office as of December 31 of the data year. Race and ethnicity sub-population descriptions were adapted from the definitions used by the U.S. Census Bureau in the 2000 and 2010 Decennial Census. Multiple and Other includes American Indian and Alaskan Native, Native Hawaiian and Other Pacific Islander, Some Other Race and More than One Race. Gender data for judges and justices include all three court levels within the California court system including the California Supreme Court, six Court of Appeal districts, and 58 Superior Courts - one in each county.

ENDNOTES

- Manuel Pastor, Rhonda Ortiz, Marlene Ramos, and Mirabai Auer. *Immigrant Integration: Integrating New Americans and Building Sustainable Communities*. University of Southern California Program for Environmental and Regional Equity (PERE) & Center for the Study of Immigrant Integration (CSI) Equity Issue Brief, December, 2012.
- Margaret O'Mara. *The Code: Silicon Valley and the Remaking of America*, pp. 83-84. Penguin Press, 2019.
- Net domestic outmigration estimates from the U.S. Census Bureau on the calendar year (2020 and 2021) indicate a total that is nearly double in magnitude (at approximately -178,000). This may be due to the time period difference in calendar year data (which includes several months immediately following the onset of the pandemic and omits several months in 2022) in addition to differences in estimation methodologies.
- American Immigration Council, Fact Sheet, "An Overview of U.S. Refugee Law and Policy," (September 20, 2021).
- U.S. Department of State, Bureau of Population, Refugees, and Migration. *Refugee Arrivals by Placement State and Nationality*, October 1, 2021 through March 31, 2022.
- Katherine Anne Long. "Take a look inside Google's unusual new office, the first building on its South Lake Union campus." *The Seattle Times* (October 19, 2019).
- Goda, T., & Torres García, A. (2019). *Inequality and Property Crime: Does Absolute Inequality Matter?* *International Criminal Justice Review*, 29(2), 121-140.
- United States Bureau of Economic Analysis, *State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods*. September 2022.
- Payscale, *2022 State of the Gender Pay-Gap Report*.
- Thomas Goda, Chris Stewart, & Alejandro Torres García. (2016). "Absolute Income Inequality and Rising House Prices." *Documentos de Trabajo CIEF*.
- United States Bureau of Economic Analysis, *State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods*. September 2019 (www.bea.gov/resources/methodologies/spi).
- Bandyopadhyay, S. (2018). The absolute Gini is a more reliable measure of inequality for time dependent analyses (compared with the relative Gini). *Economics Letters*, 162, 135-139.
- U.S. Department of Agriculture, Economic Research Service. "Food Prices and Spending," updated 11/8/2021, accessed 11/29/2021.
- World Bank, 2021 GDP All Countries & Economies. World Bank national accounts data, and OECD National Accounts data files.
- U.S. and Western Europe data from the World Inequality Lab, World Inequality Database (2021).
- U.S. Department of Health and Human Services, 2021 Poverty Guidelines.
- U.C. Berkeley Labor Center, Inventory of U.S. City and County Minimum Wage Ordinances.
- A message from Pedro. Pedro Franceschi, 10/11/2022 (www.brex.com/journal/message-from-pedro).
- Rick Osterloh (May 4, 2022). "Company Announcements: Google acquires Raxium," (<https://blog.google/inside-google/company-announcements/google-acquires-raxium>).
- CB Insights.
- Dylan Field, Figma Blog (September 15, 2022). "A new collaboration with Adobe."
- Twitter Investor Relations (@TwitterIR), October 4, 2022.
- Sarah Perez, "Twitter 'acqui-hires' the team from subscription news app, Brief," *Tech Crunch* (July 27, 2021).
- CB Insights.
- George Avalos, "Massive tech campus construction project emerges in downtown San Jose," *Bay Area News Group* (October 5, 2022).
- Santa Clara County Office of Education. (www.scoee.org/covid-19/digital-divide/Pages/digital-equity.aspx)
- California Department of Social Services, Rate Reform and Quality. (www.cdss.ca.gov/inforesources/child-care-and-development/rate-reform-and-quality)
- California Department of Social Services, Rate Reform and Quality. "Rate and Quality Workgroup Final Report August 15, 2022," (www.cdss.ca.gov/inforesources/child-care-and-development/rate-reform-and-quality)
- GG Weisenfeld, "Impacts of Covid-19 on Preschool Enrollment and Spending," *National Institute for Early Education Research* (March 2021).
- U.C. Berkeley Labor Center, *California City and County Minimum Wage Rates through December 2022*.
- California Department of Social Services and California Department of Education, Rate and Quality Workgroup Final Report (August 15, 2022).
- California Department of Health, Hypertension & Health Equity Issue Brief 2017.
- Juanita J. Chinn, Iman K. Martin, and Nicole Redmond, "Health Equity Among Black Women in the United States." *Journal of Women's Health* (Vol. 30, No. 2, Special Issue Articles, Pages: 212-219). Published Online: 25 November 2020.
- Boerma, Ties, et al. "Optimizing cesarean section use I: Global epidemiology of use of and disparities in cesarean sections." *The Lancet*, Volume 392 (October 13, 2018).
- Robin A. Cohen, et al. U.S. Department of Health & Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. "Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, July 2021-Sept. 2022" (1/2023).
- Latoya Hill, et al. Kaiser Family Foundation. "Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them," November 1, 2022.
- Ibid.
- United States and world estimates, by country, are from the UN Inter-agency Group for Child Mortality Estimation: UNICEF, WHO, World Bank, UN DESA Population Division. Accessed February 8, 2023.
- California's Let's Get Healthy Initiative, 2018 (<https://letsgethealthy.ca.gov/goals/healthy-beginnings/reducing-first-birth-cesarean-birth-rate-ntsv>).
- United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Quarterly Provisional Estimates, Q2 2022.
- Drakulich, K., J. Robles, E. Rodriguez-Whitney, and C. Pereira. 2023. "Who Believes That the Police Use Excessive Force? Centering Racism in Research on Perceptions of the Police." *Journal of Research in Crime and Delinquency* 60 (1): 112-164-164
- Alexa Cortes Culwell and Heather McLeod Grant. "The Giving Code: Silicon Valley Nonprofits and Philanthropy." *Open Impact*, 2016.
- Jonathan Meer, David Miller, and Elisa Wulfsberg. "The Great Recession and charitable giving." *Applied Economics Letters*, 2017.
- National Philanthropic Trust, *2022 Donor-Advised Fund Report*.
- National Philanthropic Trust, *2022 Donor-Advised Fund Report*.
- The top four include the Board of Trustees of the Leland Stanford Junior University, Stanford Health Care 227, Silicon Valley Community Foundation, and the Lucile Salter Packard Children's Hospital at Stanford; the remainder of the top 20 include the President-Board of Trustees Santa Clara College, San Andreas Regional Center, Electric Power Research Institute Inc., SRI International, Second Harvest of Silicon Valley, Satellite Healthcare Inc., Verity Health System of California Inc., Lucile Packard Foundation for Children's Health, North East Medical Services, Sobrato Foundation, Planned Parenthood Mar Monte Inc., Rocketship Education, Packard Children's Health Alliance, Real Estate Trust at Silicon Valley Community Foundation, The Harker School, and The Skoll Fund.
- Freddie Mac, Primary Mortgage Market Survey. Current Mortgage Rates Data Since 1971, accessed February 10, 2023.
- U.S. Department of Housing and Urban Development, Low-Income Housing Tax Credit Property Data 1987-2020. Accessed January 22, 2023.
- California Tax Credit Allocation Committee, 2021 Annual Report.
- Richard Fry, Jeffrey S. Passel, and D'Vera Cohn. "A majority of young adults in the U.S. live with their parents for the first time since the Great Depression," Pew Research Center (September 4, 2020).
- Michelle Huang. "Fact Sheet: Preventing Eviction and Indebtedness in California," Bay Area Equity Atlas, March 2021. (<https://bayareaequityatlas.org/analyses/factsheets>)
- 2022 Silicon Valley Poll (www.jointventure.org/svpoll).
- U.S. Department of Housing and Urban Development (HUD), 2022 Annual Homeless Assessment Report, December 2022.
- National Highway Traffic Safety Administration (NHTSA), Traffic Safety Facts 2020.
- Tesla Vehicle Safety Report, Q3 2022 data (accessed 1/18/23).
- www.waymo.com
- CB Insights
- Tim De Chant, "Lyft co-founder says autonomous vehicles won't replace drivers for at least a decade." *TechCrunch* (October 20, 2022).
- Kevin Fang. *Surveying Silicon Valley on Cycling, Travel Behavior, and Travel Attitudes*. San Jose State University, Mineta Transportation Institute, California State University Transportation Consortium, Silicon Valley Bicycle Coalition, and Sonoma State University (August 2020).
- Ibid.
- Ibid.
- California Government Code, §65852.2, subd. (a)(1)(C)
- City of Half Moon Bay, Public Works City Projects – Carter Park Improvements. Accessed January 23, 2023.
- Google Project SunRoof, Data Explorer
- According to the United States Department of Energy, Alternative Fuels Data Center Fueling Station Locator (as of 2/11/23).
- Lee, I. W. & Lee, Y. (1994). City Manager Turnover Revisited: Effects of the Institutional Structure and Length of Tenure on City Manager Turnover. *Urban Affairs Review*, 57(2), 552-582-582.
- Watson, D. J., & Hassett, W. L. (2003). Long-Serving City Managers: Why Do They Stay? *Public Administration Review*, 63(1), 71-78.
- Mani, B. G. (2014). Determinants of a City Manager's Tenure in Office: The Person, Job, Municipality, and Election System. *SAGE Open*, 4(1).
- Caldéron, C., Servén, L., & World Bank. (2014). "Infrastructure, growth, and inequality: An overview." Washington, D.C.: World Bank.
- In Alvarado, F., In Chancel, L., In Piketty, T., In Saez, E., & In Zucman, G. (2018). *World inequality report 2018*.
- Chancel, L., Piketty, T., Saez, E., & Zucman, G. (2022). *World Inequality Report 2022*.
- Douglas J. Watson and Wendy L. Hassett (ICMA, 2015). *The 20-Year Manager: Factors of Longevity*.
- National estimate in 2020, from Archeson, J. (2022, February 1). SheLeadsGov: ICMA's Continuing Dedication to Advancing Women in the Profession. *Public Management*, 104(2), 22.
- California Legislative Information, 9/28/2021.
- Executive Order on Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce*. White House Briefing Room (June 25, 2021).
- The Leadership California Institute, *Women 2014: The Status of Women in California* (www.grassrootslab.com/sites/all/files/Women2014FullReport.pdf).
- California State Library, Demographics in the California Legislature (via California Research Bureau, "Legislative Demographics, 2023-24 General Election Results" updated 1/11/2023).

APPENDIX B - Silicon Valley

	EMPLOYMENT Q2 2022	PERCENT OF TOTAL SILICON VALLEY EMPLOYMENT	PERCENT CHANGE		
			2010-2022	2019-2022	2021-2022
TOTAL EMPLOYMENT	1,718,580	100.0%	33%	1%	5%
COMMUNITY INFRASTRUCTURE & SERVICES	824,230	48.0%	25%	-3%	6%
HEALTHCARE & SOCIAL SERVICES ¹	203,930	11.9%	64%	15%	10%
RETAIL	120,010	7.0%	-2%	-11%	-2%
ACCOMMODATION & FOOD SERVICES	122,360	7.1%	23%	-11%	18%
EDUCATION ¹	124,270	7.2%	30%	-6%	1%
CONSTRUCTION	79,820	4.6%	62%	-3%	1%
LOCAL GOVERNMENT ADMINISTRATION ²	46,710	2.7%	6%	-1%	3%
TRANSPORTATION	35,260	2.1%	9%	-11%	8%
BANKING & FINANCIAL SERVICES	21,260	1.2%	27%	6%	-5%
ARTS, ENTERTAINMENT & RECREATION	17,970	1.0%	0%	-10%	25%
PERSONAL SERVICES	15,110	0.9%	22%	-14%	17%
FEDERAL GOVT. ADMINISTRATION	10,720	0.6%	-34%	-1%	-5%
NONPROFITS	8,960	0.5%	-11%	-11%	6%
INSURANCE SERVICES	8,390	0.5%	9%	-4%	5%
STATE GOVERNMENT ADMINISTRATION ²	2,860	0.2%	9%	2%	3%
WAREHOUSING & STORAGE	4,390	0.3%	90%	55%	103%
UTILITIES ¹	2,220	0.1%	-19%	10%	7%
INNOVATION AND INFORMATION PRODUCTS & SERVICES	485,570	28.3%	56%	8%	3%
COMPUTER HARDWARE DESIGN & MANUFACTURING	187,670	10.9%	71%	3%	3%
SEMICONDUCTORS & RELATED EQUIPMENT MANUFACTURING	42,990	2.5%	-10%	0%	4%
INTERNET & INFORMATION SERVICES	84,400	4.9%	241%	7%	1%
TECHNICAL RESEARCH & DEVELOPMENT (INCLUDES LIFE SCIENCES)	51,420	3.0%	56%	29%	11%
SOFTWARE	37,210	2.2%	70%	15%	7%
TELECOMMUNICATIONS MANUFACTURING & SERVICES	14,250	0.8%	-26%	-7%	-1%
INSTRUMENT MANUFACTURING (NAVIGATION, MEASURING & ELECTROMEDICAL)	22,780	1.3%	22%	33%	29%
PHARMACEUTICALS (LIFE SCIENCES)	14,490	0.8%	14%	-1%	-21%
OTHER MEDIA & BROADCASTING, INCLUDING PUBLISHING	5,500	0.3%	-37%	-30%	0%
MEDICAL DEVICES (LIFE SCIENCES)	9,040	0.5%	43%	29%	12%
BIOTECHNOLOGY (LIFE SCIENCES)	15,210	0.9%	152%	29%	-4%
I.T. REPAIR SERVICES	610	0.0%	-77%	-54%	-4%
BUSINESS INFRASTRUCTURE & SERVICES	269,960	15.7%	23%	-1%	5%
WHOLESALE TRADE	55,850	3.2%	-2%	-7%	3%
PERSONNEL & ACCOUNTING SERVICES	39,150	2.3%	15%	12%	17%
ADMINISTRATIVE SERVICES	28,740	1.7%	44%	-11%	3%
FACILITIES	31,430	1.8%	33%	9%	9%
TECHNICAL & MANAGEMENT CONSULTING SERVICES	23,440	1.4%	17%	-3%	0%
MANAGEMENT OFFICES	24,110	1.4%	53%	-15%	-6%
DESIGN, ARCHITECTURE & ENGINEERING SERVICES	22,910	1.3%	38%	6%	6%
GOODS MOVEMENT	15,910	0.9%	60%	18%	4%
LEGAL	10,940	0.6%	12%	-3%	3%
INVESTMENT & EMPLOYER INSURANCE SERVICES	14,820	0.9%	58%	2%	3%
MARKETING, ADVERTISING & PUBLIC RELATIONS	2,670	0.2%	6%	-20%	33%
OTHER MANUFACTURING	58,870	3.4%	1%	-3%	6%
PRIMARY & FABRICATED METAL MANUFACTURING	15,160	0.9%	5%	1%	5%
MACHINERY & RELATED EQUIPMENT MANUFACTURING	12,740	0.7%	16%	-5%	-8%
OTHER MANUFACTURING	11,830	0.7%	35%	10%	15%
TRANSPORTATION MANUFACTURING INCLUDING AEROSPACE & DEFENSE	8,340	0.5%	-28%	-9%	14%
FOOD & BEVERAGE MANUFACTURING	7,520	0.4%	-11%	-10%	15%
TEXTILES, APPAREL, WOOD & FURNITURE MANUFACTURING	3,160	0.2%	9%	-8%	5%
PETROLEUM AND CHEMICAL MANUFACTURING (NOT IN LIFE SCIENCES)	120	0.0%	-87%	-66%	-16%
OTHER	79,960	4.7%	65%	10%	9%

1. Includes government jobs (state and local).

2. Excludes government jobs in Healthcare & Social Services, Education, and Utilities.

Note: Table includes annual industry employment data for Silicon Valley from the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW) for 2007, 2010, 2021 and 2022, modified slightly by JobsEQ, which removes suppressions and reorganizes public sector employment. Data for Q2 of 2022 was estimated at the industry level by BW Research using Q2 2022 reported growth and totals, and modified slightly by JobsEQ. Due to rounding, individual industry employment may not sum to industry group or overall job total. Due to rounding, individual industry employment totals may not sum to industry group or overall total. | Data Sources: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages; JobsEQ | Analysis: BW Research

APPENDIX B - San Francisco

	EMPLOYMENT Q2 2022	PERCENT OF TOTAL SAN FRANCISCO EMPLOYMENT	PERCENT CHANGE		
			2010-2022	2019-2022	2021-2022
TOTAL EMPLOYMENT	741,640	100.0%	36%	-3%	9%
COMMUNITY INFRASTRUCTURE & SERVICES	412,860	55.7%	28%	-4%	11%
HEALTHCARE & SOCIAL SERVICES ¹	103,600	14.0%	114%	13%	7%
RETAIL	36,780	5.0%	-4%	-19%	-3%
ACCOMMODATION & FOOD SERVICES	63,520	8.6%	-3%	-26%	30%
EDUCATION ¹	43,540	5.9%	-3%	-12%	1%
CONSTRUCTION	23,310	3.1%	73%	9%	19%
LOCAL GOVERNMENT ADMINISTRATION ²	28,060	3.8%	16%	-1%	1%
TRANSPORTATION	19,820	2.7%	147%	11%	40%
BANKING & FINANCIAL SERVICES	22,550	3.0%	50%	23%	16%
ARTS, ENTERTAINMENT & RECREATION	15,520	2.1%	14%	-8%	41%
PERSONAL SERVICES	8,230	1.1%	25%	-19%	18%
FEDERAL GOVT. ADMINISTRATION	9,230	1.2%	-14%	-3%	-3%
NONPROFITS	13,340	1.8%	24%	-4%	12%
INSURANCE SERVICES	8,990	1.2%	-11%	1%	7%
STATE GOVERNMENT ADMINISTRATION ²	8,800	1.2%	10%	15%	5%
WAREHOUSING & STORAGE	480	0.1%	60%	151%	-52%
UTILITIES ¹	7,090	1.0%	60%	53%	38%
INNOVATION AND INFORMATION PRODUCTS & SERVICES	122,480	16.5%	212%	11%	8%
COMPUTER HARDWARE DESIGN & MANUFACTURING	65,880	8.9%	296%	16%	12%
SEMICONDUCTORS & RELATED EQUIPMENT MANUFACTURING	200	0.0%	150%	216%	185%
INTERNET & INFORMATION SERVICES	30,910	4.2%	685%	3%	-7%
TECHNICAL RESEARCH & DEVELOPMENT (INCLUDES LIFE SCIENCES)	3,550	0.5%	228%	31%	20%
SOFTWARE	7,070	1.0%	218%	46%	25%
TELECOMMUNICATIONS MANUFACTURING & SERVICES	3,020	0.4%	-23%	-4%	16%
INSTRUMENT MANUFACTURING (NAVIGATION, MEASURING & ELECTROMEDICAL)	2,510	0.3%	4017%	30%	71%
PHARMACEUTICALS (LIFE SCIENCES)	310	0.0%	37%	-27%	-7%
OTHER MEDIA & BROADCASTING, INCLUDING PUBLISHING	6,800	0.9%	-25%	-12%	1%
MEDICAL DEVICES (LIFE SCIENCES)	270	0.0%	145%	82%	60%
BIOTECHNOLOGY (LIFE SCIENCES)	1,870	0.3%	9%	4%	1%
I.T. REPAIR SERVICES	100	0.0%	1%	-28%	-8%
BUSINESS INFRASTRUCTURE & SERVICES	172,210	23.2%	37%	-2%	11%
WHOLESALE TRADE	12,960	1.7%	36%	-17%	6%
PERSONNEL & ACCOUNTING SERVICES	19,950	2.7%	26%	-1%	12%
ADMINISTRATIVE SERVICES	17,060	2.3%	40%	9%	31%
FACILITIES	15,100	2.0%	33%	-8%	17%
TECHNICAL & MANAGEMENT CONSULTING SERVICES	27,050	3.6%	123%	18%	27%
MANAGEMENT OFFICES	17,680	2.4%	21%	-25%	-3%
DESIGN, ARCHITECTURE & ENGINEERING SERVICES	14,940	2.0%	44%	1%	7%
GOODS MOVEMENT	8,200	1.1%	114%	22%	13%
LEGAL	14,400	1.9%	6%	1%	4%
INVESTMENT & EMPLOYER INSURANCE SERVICES	16,410	2.2%	4%	2%	5%
MARKETING, ADVERTISING & PUBLIC RELATIONS	8,460	1.1%	27%	-12%	3%
OTHER MANUFACTURING	7,130	1.0%	14%	2%	19%
PRIMARY & FABRICATED METAL MANUFACTURING	440	0.1%	-25%	-21%	-25%
MACHINERY & RELATED EQUIPMENT MANUFACTURING	250	0.0%	346%	-1%	-13%
OTHER MANUFACTURING	1,530	0.2%	117%	59%	86%
TRANSPORTATION MANUFACTURING INCLUDING AEROSPACE & DEFENSE	370	0.1%	-36%	4%	2%
FOOD & BEVERAGE MANUFACTURING	2,840	0.4%	55%	-10%	12%
TEXTILES, APPAREL, WOOD & FURNITURE MANUFACTURING	1,640	0.2%	-32%	-1%	21%
PETROLEUM AND CHEMICAL MANUFACTURING (NOT IN LIFE SCIENCES)	60	0.0%	-26%	239%	1%
OTHER	26,970	3.6%	-48%	-28%	-26%

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