BAY AREA REGION
A CALIFORNIA 100 REPORT

CALIFORNIA 100
VISION & STRATEGY FOR THE NEXT CENTURY
ABOUT CALIFORNIA 100

The California 100 Initiative envisions a future that is innovative, sustainable, and equitable for all. Our mission is to strengthen California's ability to collectively solve problems and shape our long-term future over the next 100 years.

California 100 is organized around 5 policy themes and 5 core values, and driven by interrelated stages of work: research, policy innovation, and engagement with Californians. California 100’s work is guided by an expert and intergenerational Commission.

Through various projects and activities, California 100 seeks to move California towards an aspirational vision—changing policies and practices, attitudes and mindsets, to inspire a more vibrant future. This Regional Analysis was produced as part of California 100’s research stream of work.

The California 100 initiative is incubated through the University of California and Stanford.

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The largest cities within each of the counties in the Bay Area include:

- San Jose (Santa Clara County, 983,580)
- San Francisco (San Francisco County, 815,201)
- Oakland (Alameda County, 433,797)
- Santa Rosa (Sonoma County, 176,942)
- Vallejo (Solano County, 124,886)
- Concord (Contra Costa County, 124,074)
- San Mateo (San Mateo County, 102,200)
- Napa (Napa County, 78,818)
- San Rafael (Marin County, 60,769)
Almost 8 million people—7.7 million—live in the nine Bay Area counties, roughly one-fifth of California’s total population. The Bay Area comprises Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties.

The nine counties touch on the 60-mile-long San Francisco Bay, the 10-mile-wide San Pablo Bay, or the smaller Suisun Bay—all formed by the confluence of the San Joaquin and Sacramento Rivers that together run over 800 miles along the length of California’s Central Valley, gathering water from Mt. Shasta and the Klamath, Sierra, and other mountain ranges. The region spans nearly 7,000 square miles—just 4 percent of California’s total land area.

The Bay Area is one of the major metropolitan regions in the state of California, but it has notable rural areas based around growing wine grapes, other forms of intensive agriculture, and recreation and tourism. It is famous throughout the world for San Francisco and its ballet, symphony, opera, museums, views, and cable cars. It is also home to the world-renowned Silicon Valley hub of technology and innovation, where thousands of startups and tech companies have successfully incubated and launched.
Figure 1: The Bay Area Has a Very Racially and Ethnically Diverse Population

Source: U.S. Census Data, 2020
The Bay Area has More Asian Americans and Fewer Latinos Than the Rest of the State

<table>
<thead>
<tr>
<th>County</th>
<th>Hispanic or Latino</th>
<th>Black or African American</th>
<th>Asian or Native Hawaiian and Other Pacific Islander</th>
<th>White</th>
<th>American Indian and Alaska Native</th>
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<td>35%</td>
<td>5%</td>
<td>15%</td>
<td>1%</td>
<td>4%</td>
</tr>
</tbody>
</table>

**SOURCE:** U.S. Census Data, 2020
Compared to the Rest of California, the Bay Area has More Democratic Voters

**Figure 3**

**SOURCE:** California Secretary of State, September 9, 2022 Report of Registration.
The Bay Area was home to various indigenous tribes, including the Ohlone, Bay Miwok, Chochenyo, and Karkin in the East Bay; the Yokuts in the South Bay; the Coast Miwok, Southern Pomo, Kashaya, Patwin, and Mishewal Wappo in the far North Bay; the Ramaytush in San Francisco, and Muwekma spread throughout the region. These tribes had lived in the area for thousands of years and had developed complex societies and cultures. The present-day Muwekma Ohlone Tribe comprises all the known surviving native lineages indigenous to the Bay Area region. The native homeland of the Muwekma Ohlone Tribe includes land across the Bay Area and beyond. Since 2003 the tribe has been in litigation with the U.S. Department of the Interior to receive official recognition on the list of Acknowledged tribes in the United States.

The first successful European exploration of the Bay Area occurred in 1769 and the first Spanish mission in the Bay Area, Mission San
Francisco de Asis, was established in 1776 in what is now the Mission Dolores section of San Francisco. This mission was the sixth mission built in California. During this time, the population of the Bay Area was relatively small, with most residents concentrated in small settlements along the coast and around the Mission San Francisco de Asis. The area was primarily used for agriculture and ranching, with a small amount of trade and shipping taking place in San Francisco.

The discovery of gold in the American River near Coloma in January 1848 sparked a massive influx of people to the region in search of wealth and opportunity. San Francisco, a small village of around 800 residents at the time, quickly became the main point of entry for the thousands of people flocking to the gold fields.

The sudden influx of people and wealth transformed San Francisco into a bustling city. The population of San Francisco grew from 812 in 1848 to 25,000 in 1849 and over 36,000 by the end of 1849. This rapid population growth led to a shortage of housing, food, and other necessities, resulting in high prices and chaos. San Francisco was the 10th largest American city in the 1870 census.

The Gold Rush also led to the development of other towns and cities in the Bay Area, such as Oakland, which became the main port for transporting gold and supplies to the gold fields. The gold rush also led to the construction of roads, canals, and railroads, which helped to connect the Bay Area with the rest of the country.

The Gold Rush also led to the displacement of the indigenous people of the Bay Area, and many of the prospectors were immigrants, including Chinese immigrants, who faced discrimination and violence. After welcoming
immigrants for decades to the Bay Area, Angel Island in San Francisco Bay became the guardpost of the American West in 1910 that enforced the Chinese Exclusion Act of 1882.\textsuperscript{13} This law set a 10-year federal ban—the first of its kind—on Chinese laborers immigrating to the United States that was extended in 1892 and made permanent in 1902.\textsuperscript{14}

In 1906, San Francisco was devastated by a major earthquake and fire during which an estimated 3,000 lives were lost.\textsuperscript{15} The fire that broke out after the earthquake destroyed large parts of the city, leaving over 400,000 people homeless and causing an estimated $400 million in damages (equivalent to over $10 billion in today’s dollars).\textsuperscript{16} The economic impact of the disaster was severe. Many businesses, factories, and warehouses were destroyed, and the city’s transportation and communication infrastructure were severely damaged. The port of San Francisco, a major economic center, was closed for several months, causing a significant loss of trade and commerce. The rebuilding of the city introduced denser housing development in the areas most damaged by the fire to support its existing and growing population quickly.\textsuperscript{17} By the 1920s, San Francisco had been transformed into a modern metropolis with new buildings, transportation, and infrastructure.
The San Francisco Bay Area has a rich history of higher education institutions, dating back to the mid-19th century. Since Santa Clara University was founded in 1851, higher education institutions have played a vital role in the Bay Area economy. Founded in 1868, UC Berkeley is the flagship campus of the University of California system and is considered one of the top public research universities in the world. The university strongly emphasizes science, technology, engineering, and math (STEM) fields and is home to several world-renowned research centers and institutes.

Stanford University is a private research university near Palo Alto founded in 1885 by Leland and Jane Stanford. The university is known for its strong programs in engineering, business, and the sciences and has produced several notable alumni, including several Nobel laureates and MacArthur “geniuses.”

In 1857, Minn’s Evening Normal School—now San Jose State University—became the first of 23 California State Universities. Other CSU campuses in the Bay Area include CSU East Bay in Hayward, Sonoma State in Rohnert Park, Cal Maritime in Vallejo, and S.F. State in San Francisco. In addition to these institutions, the San Francisco Bay Area is also home to many community colleges, including City College of San Francisco, College of Marin, and Solano Community College, which provide affordable and accessible higher education to students in the region. These higher education institutions have long served as centers of knowledge and sources of innovation.

HIGHER EDUCATION INSTITUTIONS
THE BAY AREA REGION

On the eve of World War I in 1915, San Francisco held a highly successful World’s Fair—the Panama-Pacific International Exposition—to celebrate the opening of the Panama Canal and the facilitation of trade by this new route from Europe and the East Coast of America. The San Francisco Marina’s Palace of Fine Arts and Lands Ends’ Legion of Honor are existing legacies of the Exposition.\textsuperscript{27} The fair was emblematic of San Francisco’s role as a commercial and trading hub.

Napa and Sonoma were home to a thriving wine industry, with many small wineries and vineyards producing high-quality wines. However, the ban on alcohol production and sales through Prohibition in 1920 had a devastating effect on the industry.\textsuperscript{28} Many wineries were forced to shut down, and vineyards were left to wither and die. Vintners were forced to find other means of income, and many turned to bootlegging and the illegal production of wine.\textsuperscript{29} Although Prohibition was repealed in
1933, the industry would not fully recover until the 1960s.

Unions in the region have played a significant role in shaping labor and economic policies and social and political issues. One of the most notable examples of unionism in the Bay Area is the San Francisco General Strike of 1934. This strike was a major turning point in the history of the labor movement in the United States and was sparked by a long-standing dispute between the International Longshoremen’s and Warehouse Union (ILWU) and the Pacific Coast Waterfront Employers. The strike brought the city to a standstill and was only resolved after the National Guard restored order. The citywide general strike by 4,000 protesters became the largest and most successful in the country’s history and cemented San Francisco’s reputation as a union town.

Although there was manufacturing in the Bay Area, until 1940, it was focused on processing resources such as food, metals, and lumber. San Francisco’s manufacturing plateaued in the 1930s and moved across the Bay to Alameda and Contra Costa counties. In the South Bay, most of San Jose’s industries were centered on food processing and the manufacturing of orchard supplies and agricultural equipment.

During World War II, the Bay Area became a major port for military activities, and the nation’s leading center for shipbuilding—building a ship a day during the war—with substantial concentrations in San Francisco (Hunter’s Point), Alameda (Oakland, City of Alameda), Contra Costa (Richmond), and Marin (Sausalito) counties. To provide health care for his enormous workforce, shipbuilder Henry J. Kaiser created a new form of prepaid health care that became Kaiser Permanente in 1945.

With ample jobs available during the war, people migrated to the Bay Area from all over the United States. Especially striking is the Great Migration of African Americans, mostly from Louisiana and Texas, that took off in the 1940s and continued into the 1970s.
Following the war, the closure of military-related manufacturing in Oakland led to a loss of jobs and a general strike throughout the city in December 1946. Decades of population decline in Oakland followed, with a loss of about 4 percent of the population in the following decades from 1950 until a low of 337,337 people in 1980.
Following World War II, the Bay Area saw explosive growth in producing durable goods like motor vehicles, aircraft parts, and electrical machinery. A strong union movement centered in these manufacturing industries developed as well.37

THE BAY AREA CULTURE AND CIVIL LIBERTIES

San Francisco in the 1950s was remarkable, not only for its role in the Beat movement but for the number of performers who came to fame in its clubs and cafés: comedian Lenny Bruce and singer Barbra Streisand both had their first successes in North Beach venues.38, 39 The next decade was marked by a popular culture of drugs, hippies, and violent protests against the Vietnam War. The Bay Area was a center for civil rights efforts led by William Byron Rumford, a Berkeley pharmacist and the first African American member of the state Assembly from northern California. In 1955 he led the effort to pass the Fair Employment Practices Act. In 1964 he succeeded in passing a Fair Housing Act that the voters subsequently repealed through Proposition 14, a constitutional initiative, in 1966.40 Ultimately, the proposition was declared unconstitutional by the U.S. Supreme Court.

Aligned with its past progressive successes, the Bay Area became a center for environmentalists and advocates of gay and minority rights. The Save the Bay Association and San Francisco Bay Conservation and Development Commission were formed in the mid-1960s,41, 42 and in 1969 a group of Native Americans, believing they had a right to unused government land, invaded Alcatraz Island and occupied it until 1971.43 Meanwhile, in 1960s Berkeley, student groups, led by Mario Savio and
spurred by anti-Vietnam War protests and the civil rights movement, protested university free-speech restrictions. The movement became known as the Free Speech Movement, and it pushed for free speech rights for students on campus.44

Ethnic student groups from the Afro-American Studies Union, Mexican-American Student Confederation, Native American Students United, and Asian American Political Alliance joined forces to create the Third World Liberation Front (TWLF) at UC Berkeley to add more courses that teach about ethnic histories and cultures.45 Through strategically planned strikes around the university, in partnership with some faculty, the Academic Senate and University President, Charles Hitch, approved the creation of the Department of Ethnic Studies in 1969.46

Efforts at urban renewal in Oakland during the 1960s and 1970s led to the displacement of minority populations without much economic revitalization.47 Oakland experienced significant racial strife and movements for change during the 1960s and 1970s, led by the Black Power movement of the Black Panthers and other groups.48 The Black Panther Party also originated in Oakland in 1966, where founders Bobby Seale and Huey P. Newton met at Merritt College and later wrote the Ten-Point Platform that today’s Black Lives Matter movement still cites today as a basis for racial justice in America.49

As the Bay Area grew and became more nationally recognized, professional sports teams became more prominent. The San Francisco 49ers football team was the first professional sports team established in the Bay Area in 1946.50 The San Francisco Giants followed
in 1958 after moving from New York to the Bay Area to become the region’s oldest Major League Baseball team. In the following decade, the Oakland Athletics baseball and Golden State Warriors basketball teams also moved to the Bay Area from other cities. In the 1990s, San Jose would become home to the San Jose Earthquakes soccer team and San Jose Sharks national hockey team. Several violent acts marked San Francisco in the 1970s. Mayor George Moscone and City Supervisor Harvey Milk were assassinated out of vengeance at City Hall in November 1978 by Dan White for not supporting his reappointment for his seat on the Board of Supervisors. Mayor Moscone and Supervisor Milk were prominent activist leaders for inclusion and diversity, particularly for the LGBTQ movement. The city’s first female mayor, Dianne Feinstein, provided crucial stability after the assassinations. These events became a rallying call for LGBTQ rights and political involvement that continues today.

**GROWTH AND RESISTANCE AROUND THE BAY — THE 1970S TO TODAY**

**SILICON VALLEY**

In the mid-20th century, several key factors and events led to the establishment of Silicon Valley as a region known for its high concentration of technology companies and start-ups. It is often considered the epicenter of the global technology industry and a symbol of innovation and entrepreneurship. During the Cold War, the United States government invested heavily in research and development to keep up with the technological advancements of the Soviet Union. This investment led to the growth of many technology companies and research institutions in the San Francisco Bay Area, including the Stanford Research Institute (now SRI International) and the Lockheed Missiles and Space Company.

In 1958, two men, Robert Noyce in California and Jack Kilby in Texas, independently invented the microchip, a small semiconductor device that could perform the same functions as a traditional vacuum tube but at a much smaller size using transistor (solid-state) technology. This invention led to the development of the first microprocessors and a new industry: microelectronics. This new industry was the foundation of Silicon Valley.

In 1975, the Homebrew Computer Club was founded in Menlo Park, California. The club was made up of hobbyists and early computer enthusiasts who would meet regularly to share information, ideas, and code. Many of the club members, including Steve Wozniak and Steve Jobs, went on to found some of the most successful technology companies in the world, including Apple.
NIMBYISM

“NIMBY” stands for “Not In My Backyard” and refers to the phenomenon where residents or community members oppose the development of certain projects or facilities in their local area, even though they may support the development in general.

The San Francisco Bay Area has a history of NIMBYism concerning housing, transportation, and other developments. One of the main reasons for this is that the area is one of the most desirable places to live in the United States and thus has a high demand for housing, which drives up prices. These NIMBY tendencies have led to a chronic housing crisis in the region, with many people priced out of the market. In addition, NIMBYism has been a factor in the lack of affordable housing development. Local residents have often opposed new developments, particularly in more affluent neighborhoods, to protect their property values and the character of their communities.64

In 1916, Berkeley became the first city in the country to adopt zoning rules that made it illegal to build more than one home per lot. This law launched the beginning of many wins for NIMBY activists to protect their property and interests at the expense of affordable housing. Berkeley passed these laws to push people of color to more crowded, impoverished neighborhoods in the south and west. At this same time, Berkeley also used racist covenants and redlining practices to keep certain neighborhoods as “all-white.”65

Single-family zoning increased exclusivity by allowing developers to charge more for single-family homes. Consequently, the laws became more exclusionary towards minorities who usually rented and could not afford the high cost of home ownership.66 The disproportionate impacts of single-family zoning on minority communities are further exacerbated through redlining, which legalized systematic housing discrimination.

Today, nearly two-thirds of all residences are single-homes, with three-quarters of developable land in the state zoned for single-family housing only, according to UC Berkeley researchers. A 2020 study by the Othering and Belonging Institute found a relationship between the increase in the percentage of single-family zoning and the increase in the percentage of white residents.67 These trends contribute to barriers to homeownership, particularly for Black families. Since homeownership is a driver of wealth for most middle-class Americans, single-family zoning further widens the wealth gap between whites and Blacks.68

Another area where NIMBYism has been an issue in the Bay Area is transportation. The area has long been plagued by traffic congestion, and many proposals over the years have been to build new transportation infrastructure, such as highways and public transit, to alleviate the problem. However, many of these proposals have been met with strong opposition from residents and community groups who do not want new roads or transit lines in their neighborhoods. The fight against development has led to a lack of investment in new
More Than 80 Percent of Residential Land in the Bay Area is Restricted by Single-Family Zoning

**NOTE:** Only 17 percent of residential land is reserved for apartments, condos or duplexes; the rest is restricted by single-family zoning.

transportation infrastructure and a continued reliance on cars as the primary mode of transportation in the region.\textsuperscript{69}

The idea of a rapid transit system for the San Francisco Bay Area was first proposed in the late 1940s, as the region’s population and traffic congestion rapidly increased.\textsuperscript{70} Several plans were proposed, but none gained traction due to a lack of funding and political support. In the 1960s, the region’s traffic congestion and air pollution reached crisis levels, and the need for a rapid transit system became more pressing. In 1962, the San Francisco Bay Area Rapid Transit (BART) District was created to plan and build a rapid transit system for the region. The original plan called for a network of subway and elevated rail lines connecting the major cities of the Bay Area.\textsuperscript{71}

Construction of the BART system began in the early 1970s, with the first segment of the system opening in 1972 between Fremont and Oakland.\textsuperscript{72} However, construction was plagued by cost overruns, delays, and political infighting, and the system was not completed as originally planned.\textsuperscript{73} In the 1980s, the BART system expanded to include additional segments connecting San Francisco, Oakland, Berkeley, and other cities in the Bay Area. Despite some operational and financial challenges, the system was considered a success and helped to reduce traffic congestion and air pollution in the region.

Building and operating a rail system is expensive, and in the early days of BART, there was not enough funding available to extend service to all parts of the Bay Area.\textsuperscript{74} At the time, the focus was on building a rapid transit system that would serve the most densely populated areas with the highest levels of traffic congestion. In the early days of BART, Marin County residents were not as supportive of the system as residents of other Bay Area counties, and there needed to be more political support to secure the funding needed to extend service to Marin.\textsuperscript{75}

The Loma Prieta earthquake of 1989 marked the largest earthquake since 1906 and caused the deadly collapse of a part of the Bay Bridge along with the Nimitz Freeway in Oakland. These infrastructure failures motivated the region to retrofit its highways and bridges to be more earthquake resistant.\textsuperscript{76}
REGIONAL DRIVERS

There are many forces at work in an area as large and complex as the Bay Area, which is larger in population than 37 American states and one of the wealthiest regions in the world. Three fundamental forces seem especially important as we look to the future of the Bay Area: the role of technology and innovation, income inequality and the rising costs of living, and the challenges that come with governing a separate set of counties around a unified region.

THE BAY AREA LEADS THE WAY FOR TECHNOLOGICAL INNOVATION

The Bay Area is home to Silicon Valley, which houses some of the world’s most innovative and forward-thinking companies, such as Google, Apple, Facebook, and Tesla. These companies are at the forefront of developing new technologies and products, and their innovations often serve as the foundation for future advancements in areas such as artificial intelligence, autonomous vehicles, and renewable energy. This innovation has led to the growth of other technology-based companies and startups in the region, further driving economic growth and development.

One of Silicon Valley companies’ primary contributions to the region is creating high-paying jobs. These companies employ thousands of people in the region, and many jobs are in high-demand fields such as technology, engineering, and research and development.
These jobs provide a good income for workers and help attract more talent and businesses to the region, further boosting the economy.80

The number of technology employees in Silicon Valley fluctuates over time. As of 2021, it was estimated that around 600,000 tech employees worked in Silicon Valley.81 Most of these employees work in the software and internet industries, with the largest tech companies, such as Apple, Hewlett Packard, Google, and Meta, employing a significant portion of the tech workforce. Other large tech employers include Intel, Cisco, and Oracle.82 These employees are spread out among the counties that make up the Bay Area, including Santa Clara, San Francisco, San Mateo, and Alameda. In fact, the top 15 tech companies in the region comprised nearly 40 percent of the total workforce in Silicon Valley.83

The Bay Area is known for its entrepreneurial spirit and startup culture. The region is home to many venture capital firms and angel investors, which provide funding and support to early-stage companies. Many of these startups are focused on developing new technologies and products, and some of them go on to become major players in the tech industry.

Silicon Valley has long been a hub for venture capital and angel investing. According to data from PitchBook, a provider of venture capital and private equity data, Silicon Valley has consistently been one of the top regions in the world for venture capital investment.84 Silicon Valley’s concentration of venture capital and angel investors has helped to make it one of the most vibrant startup ecosystems in the world. Angel investors invest their own money in early-stage companies, usually in exchange for equity.
In 2020, Silicon Valley saw $35.5 billion in venture capital investments across 1,768 deals. This total accounted for about 23 percent of all venture capital invested in the United States that year. Moreover, according to data from the Angel Capital Association, there are more than 300,000 angel investors in the United States, many of which are based in Silicon Valley. This abundance of capital has allowed many companies to grow quickly and achieve significant milestones, such as developing new technologies, creating jobs, and generating wealth.

Transitioning from a private company to a public company through an initial public offering (IPO) provides companies with many benefits, including allowing companies to gauge their value and for the market to determine the company’s worth. Silicon Valley IPOs can also be beneficial for the Bay Area more broadly. They can help to stimulate economic growth by providing companies with the capital they need to expand their operations, hire more employees, and invest in new technologies. Furthermore, as companies grow and become publicly traded, they pay more taxes, which can help boost local government revenue. A number of high-profile IPOs have taken place in the Bay Area in recent years, many of them being in the technology sector. Some notable recent IPOs from the Bay Area include DoorDash (December 2020, $3.4 billion), Airbnb (December 2020, $3.5 billion), Uber (May 2019, $8.1 billion), and Lyft (March 2019, $2.3 billion). In 2021, Bay Area companies led the way in raising public funding with 52 IPOs.

Moreover, Silicon Valley receives significant federal research and development (R&D) funding. According to data from the National Science Foundation (NSF), in 2019, the Bay Area received over $3 billion in federal R&D funding. This funding accounted for about 14 percent of all federal R&D funding awarded in the United States that year.

The bulk of this funding comes from the National Institutes of Health (NIH), the National Science Foundation (NSF), the Department of Energy (DOE), and the National Aeronautics and Space Administration (NASA). These agencies fund various research projects in biotechnology, computer science, energy, and space technology.

Universities and research institutions in Silicon Valley also play a significant role in receiving federal R&D funding. In 2021, UC San Francisco ranked second in most federal R&D funding received, while Stanford University was among the top 10 institutions. These institutions often partner with local companies and government agencies to conduct research and develop new technologies.

In summary, Silicon Valley receives a significant amount of venture capital, angel investments, and federal research and development funding, which helps to support the region’s innovation and technology ecosystem. This funding plays a vital role in driving advancements in areas such as biotechnology, computer science, energy, and space technology.
WHY IS SILICON VALLEY SO SUCCESSFUL HERE?

The Bay Area has a large and highly-skilled workforce, which includes engineers, computer scientists, and other experts in advanced technology fields. The region’s universities and colleges also attract some of the brightest minds from around the world, providing a talent pipeline for the technology industry.

TALENT PIPELINE

Prestigious educational institutions in the San Francisco Bay Area, such as Stanford University and UC Berkeley, play a significant role in the future of innovation and technology. In addition to federal R&D funding, these universities are critical for talent development. Universities and colleges in the Bay Area attract some of the brightest minds from all over the world, providing a talent pipeline for the technology industry. These institutions provide students with the knowledge and skills needed to succeed in the technology industry, and many graduates go on to work at some of the region’s most innovative and successful companies.

Many prestigious educational institutions in the Bay Area also provide resources and support to students and alumni who want to start their own companies. Programs such as incubators, accelerators, and entrepreneurship centers provide mentorship, funding, and other resources to help students turn their ideas into successful startups. The presence of prestigious educational institutions in the Bay Area also helps to create an ecosystem of innovation and collaboration. The institutions often partner with local companies, govern-
ments, and other organizations to conduct research, share ideas, and develop new technologies. This ecosystem helps to create a culture of innovation that attracts more entrepreneurs, investors, and companies to the region.

**ECONOMIC INCENTIVES**

Several policies have been implemented in the Bay Area to encourage tech companies and startups to launch or remain in the region. Some cities and counties in the Bay Area have implemented tax incentives to attract and retain tech companies. For example, in 2011, the city of San Francisco implemented a tax break program targeted explicitly towards technology companies, including Twitter, to encourage them to locate and remain in the city. The program, known as the “Twitter tax break,” provided a 6-year payroll tax exclusion for companies that moved into the city’s Mid-Market and Tenderloin neighborhoods. The program was intended to help revitalize these areas, which had been struggling with high crime and poverty rates.93

The tax break applied to companies that moved to the designated neighborhoods and whose payroll expenses for employees working in the neighborhood exceeded $1 million annually. Companies that qualified for the tax break were exempt from paying the city’s 1.5 percent payroll expense tax for six years, which amounted to significant savings for the companies.

The program was controversial and met with mixed reactions. Supporters argue that it helped bring jobs and economic development to neighborhoods that needed it. In contrast, critics argued that it was a giveaway to wealthy companies and would drive up housing costs in the area. However, this tax break successfully kept Twitter in the city rather than relocating to the South Bay, which Twitter previously proposed.

The tax break was set to expire in 2017 but was extended for another five years in 2016. Twitter and other tech companies have since left their Mid-Market locations, and the tax break program ended in 2022.

**INCUBATOR AND ACCELERATOR PROGRAMS**

Cities like San Francisco and San Jose have invested in incubator and accelerator programs that provide funding and resources to startups and small businesses. Specifically, San Jose, the capital of Silicon Valley, has several incubator and accelerator programs for tech startups and entrepreneurs.

For example, **500 Startups** is a venture capital firm that provides funding, mentorship, and resources to tech startups. They have a specific program called 500 FinTech that focuses on fintech startups.95 **Y Combinator** is one of the world’s most prestigious startup accelerator programs, providing funding, mentorship, and resources to early-stage tech startups.96 They invest in a wide range of tech startups, including A.I., biotech, and consumer products. **AngelPad** is an accelerator program that provides funding, mentorship, and resources to early-stage tech startups.97 They focus on startups in software, hardware, and mobile.
HIGHLY SKILLED IMMIGRANTS CONTRIBUTE TO THE TECH TALENT PIPELINE

Immigrants have played a vital role in the development and growth of Silicon Valley and the San Francisco Bay Area. Immigrants have founded and co-founded many technology companies that have helped define Silicon Valley, such as Google, Intel, and Yahoo. According to the National Foundation for American Policy, immigrant-founded companies in the San Francisco Bay Area alone are valued at more than $1.7 trillion and employ over 600,000 people.98

Immigrants also make up a significant portion of the skilled workforce in Silicon Valley. Many have advanced degrees and technical skills and are employed in high-skilled fields, including engineering, computer science, and biotechnology. Immigrants also make significant economic contributions to the San Francisco Bay Area. According to California’s Immigrant Data Portal, immigrants in the Bay Area have a purchasing power of more than $40 billion and pay more than $10 billion in taxes yearly.

It is difficult to provide the exact number of immigrants working at tech companies in Silicon Valley, as companies do not track and report the data. However, it is widely acknowledged that immigrants make a significant contribution to the tech industry in Silicon Valley. According to the National Foundation for American Policy, immigrants make up around half of the engineering and technology workforce in Silicon Valley, and they have started more than half of the region’s tech companies.99 Furthermore, a report by the National Foundation for American Policy found that in 2018, 55 percent of the billion-dollar startups in Silicon Valley were founded by immigrants. Clearly, immigrants play an important role in the tech industry in Silicon Valley, driving innovation and economic growth in the region.

26 THE BAY AREA REGION
INCOME INEQUALITY AND RISING COSTS OF LIVING

Although Silicon Valley companies are a major driver of economic growth and development in the region, they also contribute to the high cost of living and income inequality. One of the main ways these companies contribute to income inequality is through their high-paying salaries and benefits. Tech companies have been criticized for their role in driving up the cost of living in the area. As they grow, they attract more workers, which increases the cost of housing, food, transportation, and other necessities, making it harder for low-income residents to afford the basics. According to data from the Bureau of Labor Statistics, the median annual wage for computer and mathematical occupations in the San Francisco-Oakland-Hayward metro area was $139,650 in 2021, compared to a median annual wage of $53,490 for all occupations. These high wages contribute to the concentration of wealth among a small group of high-income individuals and families while driving up the cost of living for everyone else. One regional report also notes that the top quarter of Silicon Valley earners hold 92 percent of the region’s total wealth.

The Bay Area has one of the highest levels of income inequality in the United States. According to data from the U.S. Census Bureau, the San Francisco-Oakland-Hayward metropolitan area has the highest level of income inequality of any metro area in the country. There has been a growing divide between the wealthy and the working-class residents, making it harder for low-income residents to access basic necessities like housing, healthcare, and education.

The high cost of living also contributes to social and economic inequality, as low-income residents are disproportionately affected by the high cost of housing, healthcare, education, and other necessities. This disparity can lead to a lack of access to basic services and opportunities for many residents in the surrounding counties, exacerbating poverty and other social issues.

Another way these companies contribute to income inequality is through the high cost of housing in the area. As these companies have grown and attracted more workers to the region, the demand for housing has increased, leading to a shortage of affordable housing and skyrocketing home prices and rents. This population growth has made it difficult for low- and middle-income residents to find a place to live, forcing many to commute long distances or leave the area entirely.

AFFORDABLE HOUSING CRISIS

Because the Bay Area’s technology industry and high-paying jobs in the tech sector attract people from all over the world, the housing shortage and affordability crisis is exacerbated by new residents driving the demand for housing and driving up the cost of living. The Bay Area has a severe housing crisis, with rising home prices and rents making it difficult
for many residents to afford a place to live. According to Zillow, the median home value in San Francisco was $1.4 million in May 2022, while the median rent for a one-bedroom apartment was around $3,500.104

According to data from the U.S. Census Bureau, the median home value in the Bay Area was $722,800 in 2020, which is more than double the national median of $269,000. Additionally, the median gross rent in the Bay Area was $1,898 in 2020, significantly higher than the national median of $1,476. Moreover, a report found in February 2022 that, for every 1,200 households earning the median income in the Bay Area, only one home was on the market in their price bracket.105

This high cost of housing is unaffordable for many low-wage workers in the Bay Area. According to a National Low Income Housing Coalition data dashboard, a worker earning the minimum wage in California must work 104 hours per week to afford a two-bedroom apartment at fair market rent.106 In the Bay Area, where rents are significantly higher than other parts of the state due to the housing shortage and demand for housing, many low-wage workers are forced to spend a significant portion of their income on housing, leaving little for other necessities such as food, healthcare, and transportation.

A shortage of affordable housing causes many low- and middle-income residents to struggle to find a place to live and forces others to commute long distances.107 Many people may be forced to live in more affordable areas, such as Marin, Napa, Sonoma, and Solano, and commute long distances to their jobs in the city. These distances can lead to increased traffic congestion, air pollution, and decreased quality of life.

The high cost of living in the San Francisco Bay Area, particularly in the more urban areas such as San Francisco and Silicon Valley, can significantly impact the surrounding counties such as Marin, Napa, Sonoma, and Solano. The high cost of housing in the Bay Area has led to a shortage of affordable housing, making it difficult for low- and middle-income residents to find a place to live.108 This inability to find housing in high-density, urban areas can push people to seek housing in more rural or suburban areas, such as Marin, Napa, Sonoma, and Solano, which can lead to an influx of residents and an increase in housing prices. It can also lead to more competition for rental housing, making it harder for people to find an affordable place to live.

In addition to the high cost of housing, the region is facing a severe shortage of affordable housing. According to the National Low Income Housing Coalition, the Bay Area has a shortfall of over 120,000 affordable and available rental homes for extremely low-income renters.109 High land costs, zoning restrictions, and a lack of new construction drive this shortage. This affordable housing shortage further exacerbates the region’s housing affordability crisis for low-wage workers.

In summary, Silicon Valley tech companies have had a significant impact on increasing income inequality in the San Francisco Bay Area. They offer high-paying jobs but also contribute to the high cost of living, the shortage of affordable housing, and drive up the
prices of necessities. These combined factors have led to a growing divide between the wealthy and working-class residents, making it harder for low-income residents to access basic necessities like housing, healthcare, and education.

**HOMELESSNESS AMIDST RISING COSTS**

Homelessness has been a persistent problem in the region for decades, with rising housing costs and a shortage of affordable housing as major contributing factors. The high cost of living in the Bay Area, including skyrocketing housing prices and rents, has made it increasingly difficult for low- and moderate-income residents to find and maintain stable housing.

The lack of affordable housing in the Bay Area has also contributed to the region’s homelessness crisis. According to a report on Bay Area homelessness by the Bay Area Council Economic Institute, there were an estimated 35,100 homeless individuals in the Bay Area in 2020, with the majority of them living in San Francisco and Santa Clara Counties. Between 2017 and 2020, the share of the Bay Area’s homeless population without access to basic shelter increased from 67 percent to 73 percent, which is the highest rate in the U.S. This number has increased over the years in part due to the high cost of living and lack of affordable housing.

It is difficult to provide an exact number of homeless individuals in the San Francisco
Bay Area, as the population of homeless people is constantly changing and often difficult to count. However, the most recent data from the San Francisco Bay Area shows that as of February 2022, there were an estimated 35,000 homeless individuals in the region on a given night. The majority of the homeless population in the Bay Area are unsheltered, living in tents, cars, and on the streets. According to the report of the 2021 point-in-time count, Santa Clara county had the highest number of homeless individuals (8,012), followed by San Francisco (8,011), Alameda (6,902), San Mateo (2,252), and Contra Costa (1,922).

**Figure 6**

Sheltered and Unsheltered Homelessness in Bay Area with Percent Change Since 2010

<table>
<thead>
<tr>
<th>County</th>
<th>Unsheltered</th>
<th>Sheltered</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Clara</td>
<td></td>
<td></td>
<td>+36%</td>
</tr>
<tr>
<td>San Francisco</td>
<td></td>
<td></td>
<td>+40%</td>
</tr>
<tr>
<td>Alameda</td>
<td></td>
<td></td>
<td>+87%</td>
</tr>
<tr>
<td>Sonoma</td>
<td>+18%</td>
<td>+39%</td>
<td>-18%</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>-17%</td>
<td>+1%</td>
<td>+39%</td>
</tr>
<tr>
<td>San Mateo</td>
<td></td>
<td>+6%</td>
<td>+3%</td>
</tr>
<tr>
<td>Solano</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marin</td>
<td></td>
<td>+1%</td>
<td></td>
</tr>
<tr>
<td>Napa</td>
<td></td>
<td>+3%</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** HUD Point-in-Time Count 2020; Bay Area Council Economic Institute
Homelessness, in particular, has been a prevalent public health issue in the Bay Area, with prevalence increasing by 30 percent between 2010 and 2020, nearly four times faster than the general population. However, its impact is unevenly distributed. For instance, there was an 87 percent spike in Alameda County but an 18 percent drop in Sonoma County. These statistics are alarming due to the increase in unsheltered homelessness and defunding of emergency shelters to increase permanent housing production. Moreover, local governments often hinder the development of affordable housing while community members resist ways to provide homeless individuals with housing. Between 1999 and 2023, the Bay Area will have built 97,000 fewer housing units than recommended by the state. Though this trend parallels national trends, the Bay Area has been unable to scale production to match the rate at which residents become homeless.

While many think of San Francisco as a place with high homelessness rates, San Jose is no exception. Though the city has committed itself to addressing homelessness, its promises are contradicted by increasing efforts to clear encampments and deter people from staying in public spaces. These patterns result from uncoordinated government anti-homelessness programs and deprioritization of housing for those at risk of becoming homeless in the state legislature.

With homelessness also comes the intersection with criminal justice reform, particularly with the “defund the police” movement that
came from May 2020 during George Floyd protests that emerged across the country. It is commonly thought that homeless populations are causing increasing crime rates, though this has been refuted. Traditionally, it is the police that respond to reported disturbances by unhoused persons (as well as other nonviolent calls and crisis interventions). Recently, however, programs across the country have been initiated that instead bring unarmed crisis workers to address nonviolent calls, rather than the police.114 This prioritization system could enable police enforcement to respond better to more urgent situations. Oakland, in particular, became the first U.S. city to institute this, the Mobile Assistance Community Responders of Oakland, which trains community members to handle calls related to mental health and homelessness.115

**Figure 7**  
Racial and Ethnic Representation in Bay Area Homeless Population, 2019

<table>
<thead>
<tr>
<th>Racial Group</th>
<th>Homeless Population</th>
<th>Bay Area Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>29%</td>
<td>6%</td>
</tr>
<tr>
<td>Latino</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>White</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Mixed/Other</td>
<td>18%</td>
<td>5%</td>
</tr>
<tr>
<td>Asia</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

**SOURCE:** HUD Point-in-Time Count 2019; Bay Area Council Economic Institute
The Bay Area is made up of nine counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. Each county has its own government, responsible for providing services such as law enforcement, education, and infrastructure within its borders. While the Bay Area is known for its strong economy, high-income residents, and innovative businesses, it also has a history of fragmented governance. These disparate governmental entities mean that decision-making and the provision of services are often divided among different levels of government and many public agencies, resulting in a lack of coordination and inefficiency.

DREAMS OF MOBILITY - FAILED ATTEMPTS TO CONNECT THE BAY AREA THROUGH TRANSIT

There is a lack of regional planning and coordination among the different counties in the Bay Area. Each county operates independently, which can lead to conflicting land-use policies and infrastructure decisions.

Transportation is a significant issue in the Bay Area. While the BART system connects many of the counties, it does not serve all of them, and transportation infrastructure is often left to individual counties and municipalities to plan and fund. In fact, more than 10 different local players are involved in transit operations in the Bay Area. Caltrain is a commuter rail service between San Francisco and San Jose, with connections to other regions’ cities. The Peninsula Corridor Joint Powers Board, a government agency, operates Caltrain. Muni is the San Francisco Municipal Transportation Agency responsible for the city’s buses, light rail, and cable cars. A.C. Transit operates buses in Alameda and Contra Costa counties; VTA operates buses and light rail in Santa Clara County.

All these local players have different missions, goals, and objectives to provide transportation services to Bay Area residents and visitors. They also have different funding sources, governance, and labor agreements. They work together with coordinating agencies like the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) to plan and coordinate transportation services in the region.

The Bay Area is also dealing with significant traffic congestion and transportation issues. According to the Texas A&M Transportation Institute, the San Francisco-Oakland area has the worst traffic congestion in the United States. The Bay Area Rapid Transit (BART) system and other public transportation options struggle to keep up with the demands of the population, leading to longer commute times and more stress for residents.

Although BART provides rail service across a vast area, it is just one player on a crowded
stage of transit providers and agencies. From large operators such as the San Francisco Municipal Transportation Agency, Alameda-Contra Costa Transit District, and Caltrain to much smaller ones such as the Golden Gate Transportation District and the Rio Vista Delta Breeze, each agency essentially functions as an independent fiefdom with its own planning, operations, and fare payment concerns. The Bay Area is unique in the U.S. for being a massive metropolitan area without one central transit operator, in contrast with the Metropolitan Transportation Authority in New York City, the Los Angeles County Metropolitan Transportation Authority, or Regional Transportation District in Denver.\textsuperscript{116,117} This fragmentation results from the state’s historically \textit{laissez-faire} approach to regulating the region’s transportation coordination.\textsuperscript{118}
Transit research and advocacy groups such as Seamless Bay Area have advocated for the integration and regional coordination of transit agencies in the Bay Area. State representatives such as David Chiu (D-San Francisco), and other legislators, have been collaborating with advocacy groups to propose legislation that would make regional coordination a reality. However, these efforts require more political support from Sacramento to establish regional transit governance, such as what Seamless Bay Area proposed.

**UNIFYING THE BAY AREA AGAINST MONOPOLIES**

**HEALTHCARE**

The COVID-19 pandemic brought a surge of healthcare consolidation, under which larger hospitals and provider networks buy out smaller ones. Sutter Health is a large, non-profit healthcare organization in Northern California, including the San Francisco Bay Area. The organization, which is dominant in the Bay Area market, operates 24 hospitals and more than 5,000 physicians in the region.

Sutter Health has a significant market share in the healthcare market in the Bay Area, with an extensive network of hospitals, clinics, and physicians. This size and scope also gives it significant market power, which it can use to control prices and negotiate with insurance companies. Sutter Health has also been criticized for charging higher prices for healthcare services than other regional providers. For example, a study by the California Office of the Patient Advocate found that Sutter Health charged more for common procedures than other providers in the area. Specifically, caring for a premature baby in Northern California is about $605,000 compared to $343,000 in Southern California. The increased quality of care or cost of living cannot explain these skyrocketing prices.

Sutter Health has been involved in several lawsuits related to its market power and pricing practices. In 2019, the California Attorney General filed a lawsuit against Sutter Health, alleging that the company engaged in anti-competitive behavior and overcharged consumers, although the court ultimately ruled in Sutter’s favor. Consequently, Sutter’s monopoly power will likely continue to dominate and drive up healthcare costs for all patients in the Bay Area.

**PUBLIC UTILITIES**

Monopolistic practices are not unique to the healthcare industry, and can also be observed in the region’s public utilities. Historically, public utilities are considered natural monopolies because of the significant capital and infrastructure investments needed to provide these services that the government cannot do as efficiently. Pacific Gas and Electric Company (PG&E) is a utility company that provides electricity and natural gas to much of Northern California, including the Bay Area. The company is considered to have a monopoly in the region because it is the only provider of these services to many customers.

PG&E has been criticized for charging high prices for energy services, particularly electricity. The company’s rates are among the
highest in the state and nation, which puts a strain on many customers’ budgets, particularly low-income households. PG&E’s dominance in the energy market limits competition in the region, making it difficult for other energy providers to enter the market and compete on price or quality of service. This dominance can lead to customers having fewer choices of energy providers and being forced to pay higher prices for services. Additionally, PG&E has a history of power shut-offs and blackouts. The company has been criticized for its decision to shut off power during periods of high fire risk, which can be disruptive and dangerous for customers.

In response to PG&E’s high prices and adverse safety practices, some Bay Area municipalities have formed Community Choice Aggregation (CCA) programs, which allow them to purchase electricity from other providers on behalf of residents and businesses, bypassing PG&E and giving customers more choices for their energy supply. Others have sought to take over PG&E’s assets and operate their own utility services, giving them more control over prices and service quality. Some municipalities have collaborated with other communities, non-profits, and private companies to address some of the challenges related to PG&E’s monopoly.124

These trends call to question the efficiency of monopolies, particularly government-protected ones, and the government’s role in protecting consumer choice.

CONCLUSION

Looking to the future, the Bay Area must find a way to balance its thriving tech and innovation industries with growing income inequality. Although the Bay Area has a split history of success uniting its nine counties together to combat pervasive issues, the issues of rising costs of living, housing shortages, and homelessness may require the region to collaborate more to find solutions.
ENDNOTES

2  Bay Area Equity Atlas, Indigenous Populations in the Bay Area.
4  Ibid.
9  St. Clair, op. cit. 7.
11 Ibid.
18 Santa Clara University, History.
19 UC Berkeley, History and Discoveries.
20 UC Berkeley, Centers and Institutes.
21 Stanford University, History.
22 Stanford University, Research.
23 San Jose State University, Library History.
24 The California State University, History.
25 The California State University, Campuses.
26 Bay Area Community College Consortium, Colleges.
29 UC Davis Library, "A Short History on Winemaking in California."
32 Walker, Richard, "Industry Builds out the City: The Suburbanization of Manufacturing in San Francisco 1850-1940."
33 National Park Service, "World War II Shipbuilding in the Bay Area."
34 Debley, Tom, "Kaiser: How It All Started."


Save the Bay, About Us.

San Francisco Bay Conservation and Development Commission, About Us.


UC Berkeley, Free Speech Movement.

UC Berkeley, Center for Race and Gender. Third World Liberation Front Research Initiative.


Oakland Public Library. Gentrification and Displacement.


NFL. San Francisco 49ers History.

MLB. San Francisco Giants History.

MLB. Oakland Athletics Franchise History.

City and County of San Francisco. History of Golden State Warriors Franchise.

San Jose Earthquakes, History.

NHL. San Jose Sharks, History.

Miguel, K. “Murder at City Hall: The killing of Mayor George Moscone and Supervisor Harvey Milk.” June 3, 2022.


SRI International. History.

Lockheed Martin. History.


Metcalf, J. Berkeley may get rid of single-family zoning as a way to correct the arc of its ugly housing history. Berkeleyside. February 17, 2021.


Ibid.


Bay Area Rapid Transit. A History of BART: The Concept is Born.

Ibid.

Bay Area Rapid Transit. *A History of BART: The Project is Rescued*.

Ibid.

Moffitt, M. *Marin County could have had BART, but backroom politics got in the way*. SFGATE. September 2019.


Census.

Business Insider. *It’s home to tech giants Facebook, Apple and Google, but where in the US is Silicon Valley, who are its richest billionaires – and why are so many people on a diet?* June 2020.

CompTIA. *State of the Tech Workforce: Bay Area Metro Area*.

Ibid.

Swartz, J. *Big Tech is swallowing the rest of Silicon Valley*. MarketWatch. February 2021.

McClure, Olivia. *65 Silicon Valley Companies to Watch This Year*. Built in SF. Updated December 2022.

Swartz, op. cit. 81.


Ibid; Ioannou, L. *Silicon Valley’s share of venture capital expected to drop below 20% for the first time this year*. CNBC. January 2021.


Levy, A. *Three of the 10 biggest tech IPOs have happened in 2020 — including two in the last week*. CNBC. December 2020.


National Science Foundation. *Rankings by total R&D expenditures*.

Ibid.

Ibid.


500 Global.


Y Combinator

AngelPad


Ibid.


DeFeliciantonio, C. *New report shows Silicon Valley’s huge wealth gap: 25% of population holds 92% of wealth*. San Francisco Chronicle. February 2022.


National Low Income Housing Coalition. *Out of Reach Data Dashboard: California*.
Robertson, M. Stunning increase in Bay Area 'super commuters' in the last decade amid housing crisis. San Francisco Chronicle. April 2018.

Hepler, L. Poll finds more than half of Bay Area residents plan to leave for good. Why? 'It's housing, stupid.' San Francisco Chronicle. October 2021.

National Low Income Housing Coalition. The Gap Data Dashboard: California.


Ibid.

Ibid.

“Bay Area Homelessness | Bay Area Council Economic Institute.”


