



Photo: MTC Archive



Photo: Noah Berger



## 6 | Outcomes



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## OUTLINING A SHARED VISION FOR THE FUTURE

From the beginning, public input and engagement have fundamentally shaped Plan Bay Area 2050. Work for this regional plan started by talking to Bay Area residents in 2018 to understand their priorities looking out to 2050, resulting in the adopted vision and guiding principles for Plan Bay Area 2050: to ensure an affordable, diverse, connected, healthy and vibrant region for all.

In the three years that followed, much has changed for the Bay Area — the COVID-19 pandemic upended everyday life; a period of unprecedented economic growth turned to a recession; wildfires cast an orange haze over our skies; and social movements for racial justice gained momentum. As a plan rooted in resilience to uncertainty as well as equity, Plan Bay Area 2050 is well positioned to advance the priorities identified by Bay Area residents, even in this unpredictable time.

The prior chapters outlined 35 strategies across four elements: housing, the economy, transportation and the environment. This chapter delves into the Bay Area’s forecasted future in 2050 with the strategies in place, and it is organized by guiding principle. Strategies are interrelated and often have impacts across and beyond their designated topic areas; for example, a housing strategy to allow more housing in Transit-Rich Areas also impacts transportation and the natural environment, and the “connected” and “healthy” guiding principles both capture these overlapping impacts. For a full breakdown of the performance outcomes of Plan Bay Area 2050’s strategies, as well as analysis of how these outcomes differ from a regional trajectory where no new policies or investments are made to tackle our cross-cutting crises, refer to the Draft Plan Bay Area 2050 Performance Report.

Photo: Karl Nielsen

## AN UNCERTAIN FUTURE

### Forecasting Equity and Performance Outcomes

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The plan's strategies are designed to be resilient and have been tested under multiple scenarios, as previously discussed, through the Horizon initiative in 2018 and 2019. While state law requires Plan Bay Area 2050 to develop a singular projection of the future, this type of forecasting, especially in 2021, is clouded by uncertainties. Economic and population growth, emerging trends, shifting cultural preferences for different types of homes or travel, and the viability of new technologies like autonomous vehicles will all impact how effectively Plan Bay Area 2050's strategies can be carried out. Rather than striving for a false sense of precision, this chapter focuses on the overall magnitude and direction of changes for certain key indicators to understand Plan Bay Area 2050's effectiveness — highlighting areas where the strategies move the region in the right direction but also acknowledging where outcomes fall short of the visionary aims established for the plan by the public.

## MEASURING EQUITY OUTCOMES

### Race, Household Income and Home Location

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Historical and present-day policies have led to disparate outcomes for many people of color, in the Bay Area and beyond, ranging from higher mortality rates from COVID-19 to persistently lower wages for the same work. While the strategies in Plan Bay Area 2050 cannot address all past wrongs, they have been crafted to support more equitable outcomes than past regional plans and to advance the priorities of communities that have long been shut out of decision-making.

One major limitation of Plan Bay Area 2050, and of this chapter's analysis of the plan's outcomes, is a lack of data by race. Because there is limited data available on transportation patterns by race, MTC and ABAG's simulation models are not able to project how transportation behavior varies by race in the future — a constraint to explore in future regional plans. Instead of racial analysis, the plan's equity outcomes rely on two proxies: household income and home location.

While not all people of color have low incomes, analyzing outcomes by income level can shed light on how residents with the fewest resources — many of whom are people of color — would benefit from the plan's strategies. The other lens used for equity analysis is geographic in nature. MTC and ABAG define Equity Priority Communities using data that includes race, income and other demographics of individual neighborhoods at the census tract level. MTC and ABAG use this national census data to identify neighborhoods with concentrations of people whose lives may have been affected by discriminatory policies and practices. Where applicable, this chapter highlights outcomes for residents of these communities in 2050, providing another proxy for race where direct analytical tools are lacking.

For more information on Plan Bay Area 2050's equity outcomes, see the Draft Plan Bay Area 2050 Equity Analysis Report.

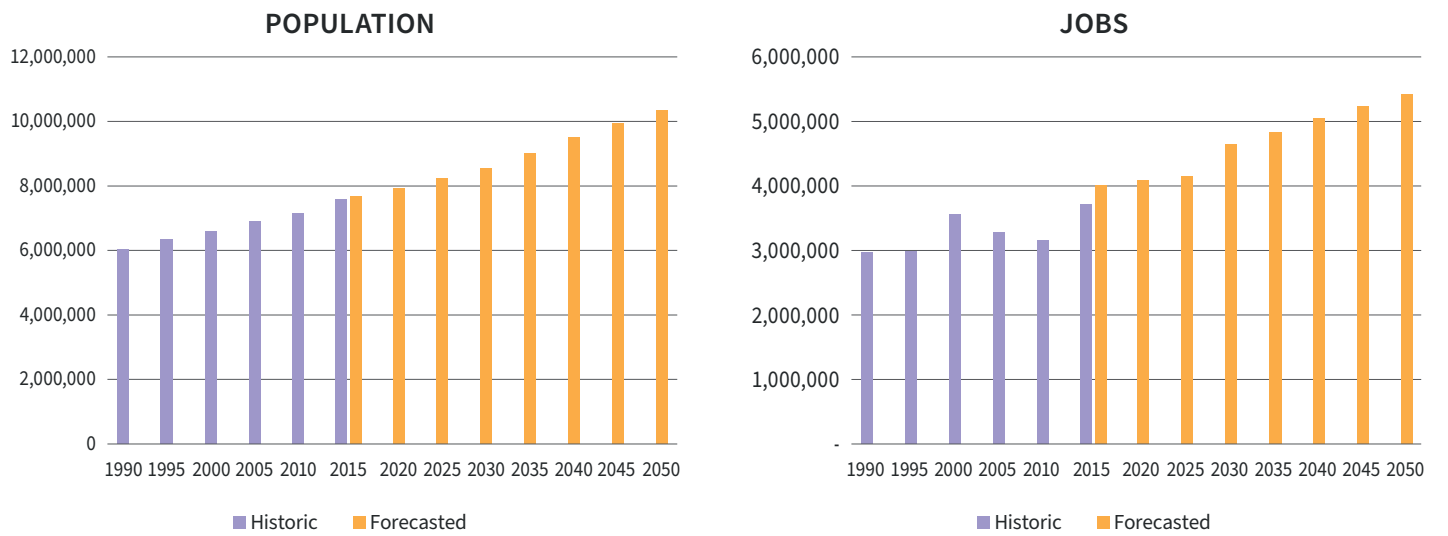




## Growing to Accommodate the Bay Area of 2050

The Bay Area in 2020 was in the midst of unprecedented economic growth before the COVID-19 pandemic hit, bringing with it an economic recession. More booms and busts can be expected over the next three decades, and despite these economic ups and downs, the number of households and jobs in the region is projected to grow through 2050.

Figure 6-1. Historic and forecasted population and job growth



Between 2015 and 2050, the region is forecasted to add 1.4 million new jobs, for a total of 5.4 million Bay Area workers. Household growth is anticipated to roughly follow pace, adding slightly fewer than 1.4 million new households for a total of 4 million households by 2050. This growth would bring the Bay Area’s population to an estimated 10.3 million residents by 2050, up from around 7.8 million today.

To accommodate new families and meet the needs of those living in the Bay Area today, Plan Bay Area 2050 plans for sufficient housing growth (i.e., growth in the number of homes available) to ensure that strong job growth is not met with an increase in long-distance commuters traveling to the Bay Area from outside of the region. In total, the region would need to build another 1.4 million new homes by 2050 to meet forecasted future demand.



## Regional Growth Trends

New jobs and housing, as shaped by Plan Bay Area 2050's strategies, would grow in locations that support transit and advance access to opportunities like jobs, well-resourced schools, healthcare and open spaces for health and recreation. A number of strategies play a direct role in shaping the trajectory of growth, from allowing more housing density in growth areas to maintaining present-day urban growth boundaries to limit sprawl.

As a result of the plan's strategies, housing growth is forecasted to cluster in defined Growth Geographies, with 85% of new households locating to these areas deemed well positioned for growth due to their proximity to existing or planned transit and/or their location in state-defined High-Resource Areas.<sup>1</sup> In particular, Transit-Rich Areas would see the lion's share of new household growth, with over 80% of new households located in Transit-Rich Areas. Meanwhile, historically exclusive High-Resource Areas are projected to house nearly 30% of new households.

**Table 6-1.** Household growth by location

	NUMBER OF HOUSEHOLDS 2015	NUMBER OF HOUSEHOLDS 2050	PERCENTAGE CHANGE (2015-2050)	SHARE OF REGIONAL GROWTH (2015-2050)
<b>Growth Geographies</b>	1,018,000	2,178,000	+114%	85%
<b>Priority Development Areas</b>	687,000	1,672,000	+143%	72%
<b>Transit-Rich Areas</b>	1,343,000	2,460,000	+83%	82%
<b>High-Resource Areas</b>	1,144,000	1,526,000	+33%	28%
<b>REGION</b>	<b>2,667,000</b>	<b>4,043,000</b>	<b>+51%</b>	<b>100%</b>

**NOTE:** Numbers do not sum to 100% because Priority Development Areas, Transit-Rich Areas and High-Resource Areas are not mutually exclusive.

While not as focused as housing growth, the majority of all job growth would be concentrated in Growth Geographies, with 60% of jobs expected to be located within walking distance of high-quality transit. The co-location of household and job growth in these areas is critical to enabling shorter and more sustainable commutes, as well as providing much-needed services to new residents. A smaller share of job growth is predicted for High-Resource Areas; job growth is a lower priority in these areas, many of which are already located near major employment centers in the Peninsula and South Bay.

**Table 6-2.** Job growth by location

	NUMBER OF JOBS 2015	NUMBER OF JOBS 2050	PERCENTAGE CHANGE (2015-2050)	SHARE OF REGIONAL GROWTH (2015-2050)
<b>Growth Geographies</b>	2,382,000	3,156,000	+32%	55%
<b>Priority Development Areas</b>	1,882,000	2,561,000	+36%	48%
<b>Transit-Rich Areas</b>	2,504,000	3,386,000	+35%	63%
<b>High-Resource Areas</b>	1,332,000	1,530,000	+15%	14%
<b>REGION</b>	<b>4,005,000</b>	<b>5,408,000</b>	<b>+35%</b>	<b>100%</b>

**NOTE:** Numbers do not sum to 100% because Priority Development Areas, Transit-Rich Areas and High-Resource Areas are not mutually exclusive.

1 See the Growth Geographies section in the Introduction chapter for more information on the Plan Bay Area 2050 Growth Geographies.

## Local Growth Trends

Plan Bay Area 2050's strategies would also shift how people, homes and jobs are distributed across the Bay Area's nine counties. Santa Clara County, currently the region's most populous county, is expected to lead the counties in household growth, with 1 in every 3 new households located in the county. Santa Clara County, home to large employment clusters, is also anticipated to lead in job growth, as prominent industries like information and technology are poised to see further growth, and as services like education, healthcare and business services are expected to expand to support a growing population. In total, just under 35% of new jobs in the region are projected to be located in Santa Clara County.

The East Bay, comprised of Alameda and Contra Costa counties, is expected to take on another one-third of housing growth, distributed across urban and suburban Growth Geographies. The two counties combined are projected to accommodate around one-third of the region's job growth. Alameda County is expected to have the second highest share of both household and job growth after Santa Clara County. Because so much of the Bay Area's housing is already located in Alameda County, with many of its residents commuting to other counties for work, intensified job growth in Alameda County could help to address the jobs-housing imbalance and associated transportation challenges, such as congested roads and crowded trains.

On the Peninsula, San Francisco and San Mateo counties are the forecasted home to one-quarter of new regional households and jobs. Intensified growth in these counties that historically have been slow to grow would make it possible for more people to live near their workplaces. Major new transit investments, ranging from frequency improvements to the Caltrain system to the Link21 new transbay rail crossing between the East Bay, San Francisco and points south, would be essential to support this growth in a sustainable manner.

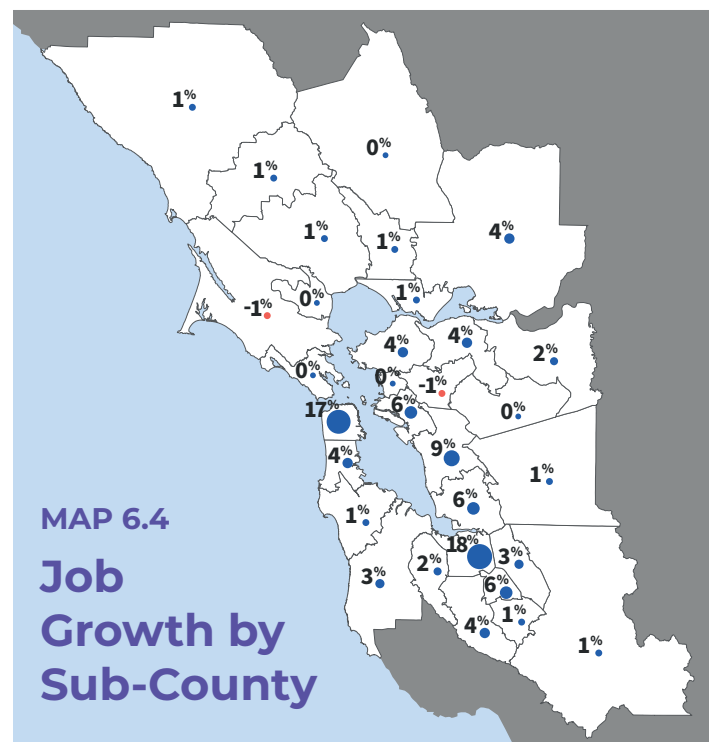
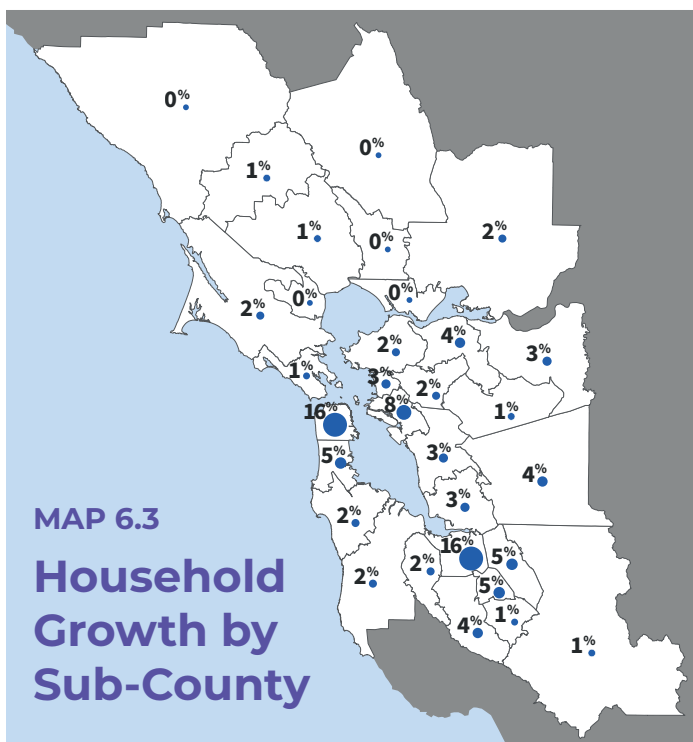
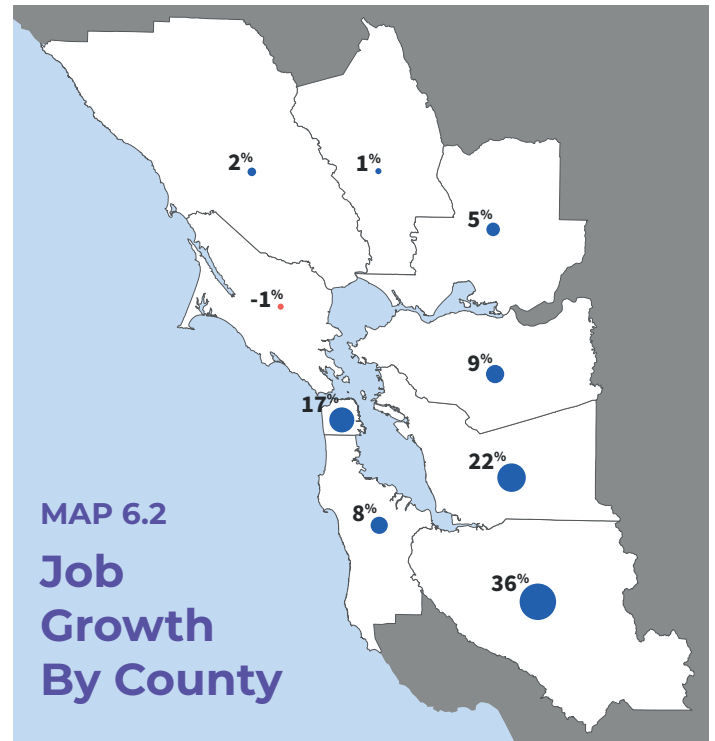
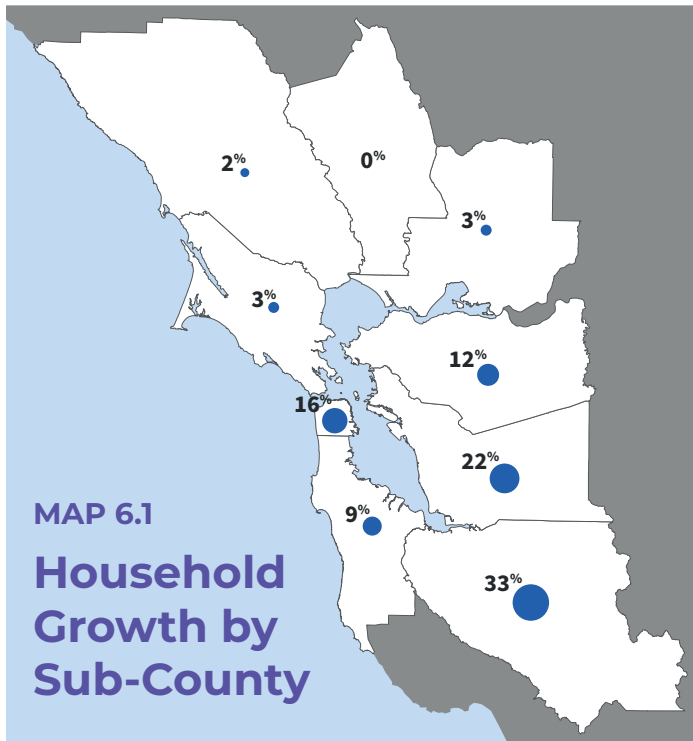
Together, the North Bay counties of Marin, Napa, Sonoma and Solano are expected to be home to less than 10% of new households and jobs, as relatively limited job centers and transit options coupled with wildfire risk make these counties less suited for growth. In fact, Marin County is projected to see a minor net loss in jobs as its population ages and exits the workforce.



Photo: Noah Berger

**Household Growth Between 2015-2050**  
(as a Share of Region's Growth)  
**+1.4M Households**

**Job Growth Between 2015-2050**  
(as a Share of Region's Growth)  
**+1.4M Jobs**



**NOTE:** The nine-county Bay Area is divided into 34 sub-county areas, called "superdistricts." Superdistricts are combinations of cities, towns and unincorporated areas that allow the public to see the more localized growth pattern in Plan Bay Area 2050. Superdistricts within San Francisco have been combined to show the total city share. More information on the superdistricts can be found in the layer documentation. <https://opendata.mtc.ca.gov/datasets/travel-model-super-districts>



## Understanding Outcomes by Guiding Principle

Plan Bay Area 2050's vision is to make the Bay Area more affordable, diverse, connected, healthy and vibrant for all who live here. How well does it succeed? The following projections contrast conditions today (represented using 2015 baseline data) against forecasted outcomes in the year 2050. While these outcomes may be influenced by future unknowns, they represent MTC and ABAG's best possible guess of how the region would look in the future under the plan's strategies. Comparing today's conditions against future performance shows where the plan succeeds and where more work is needed.



Photo: Karl Nielsen





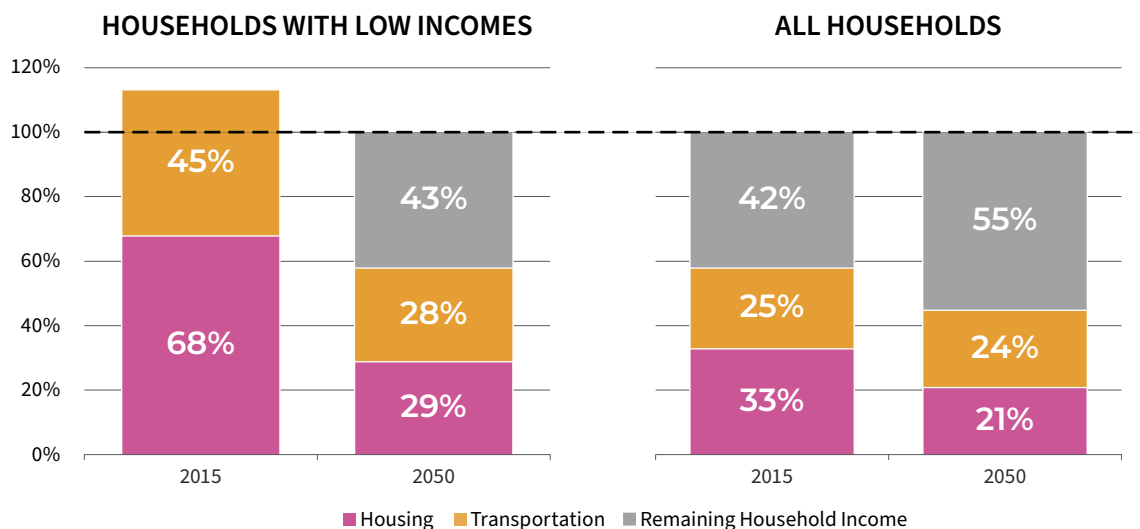
## AFFORDABLE OUTCOMES

Housing and transportation costs, the two largest expenditures for most Bay Area families today, would decrease as a share of household income by 2050 under Plan Bay Area 2050's strategies. Families with low incomes would see larger reductions in these costs than the region at large, providing much-needed relief for many families struggling to afford other necessities like food, healthcare or education. This outcome would be driven by a sizeable investment in new affordable housing construction, including a requirement that all new large developments make 10% to 20% of their units affordable, and preservation of existing affordable units. These strategies would result in 1 million new affordable homes by the year 2050 — enough for every new and existing family with a low income. By 2050, one quarter of all Bay Area homes, including roughly two in five homes in Equity Priority Communities, would be deed-restricted affordable.

Housing costs would also decrease for middle- and upper-income households as housing production better matches the demand for new housing. Furthermore, the strategies would link affordability and sustainability goals, directing new housing growth within existing urban growth boundaries to avoid sprawl into cheaper greenfield construction sites and reduce greenhouse gas emissions.

Household transportation costs would also decrease slightly under Plan Bay Area 2050's strategies, even when accounting for new per-mile tolling on congested freeway corridors. Greater rates of transit usage and telecommuting, combined with a strategy to reduce the cost of long-distance and multi-operator transit trips through fare integration, would help to reduce household transportation costs for residents of all income levels. For residents with low incomes, transportation costs would decrease even further as a result of means-based discounts on transit fares, even when accounting for new transportation costs from per-mile tolls, which would feature a discounted rate for drivers with low-incomes.

Figure 6-2. Share of household income spent on housing and transportation costs



**NOTE:** Accounting for people with no incomes, people on financial assistance and the currently unhoused, housing and transportation costs as a share of income exceeded 100% for households with low incomes in 2015.



## DIVERSE OUTCOMES

Affordability is closely tied with a vision for a diverse and inclusive Bay Area, and many of the affordability strategies described above also would contribute to advancing the plan's guiding principle of diversity. Strategies that allow more housing construction in High-Resource Areas would counterbalance the exclusionary history of many of these places and would increase access to opportunity to more Bay Area residents.

If the strategies in Plan Bay Area 2050 are implemented, by 2050 the share of housing in the region's High-Resource Areas that is affordable by deed restriction would increase from a mere 2% to a much more sizeable 24%. New affordable housing options in these neighborhoods would allow residents with low incomes to take advantage of resources tied with upward economic mobility, such as quality schools, and also enable a modest decrease in concentrated affluence throughout the region. Transit-Rich Areas, when compared to High-Resource Areas, would see even greater gains in the share of residents with low incomes indicating that families with low incomes would be able to benefit from investments that improve transportation in inclusive communities. The residents with low incomes would comprise nearly 40% of residents in Transit-Rich Areas up from 30% in 2015, allowing more people with low incomes to take fuller advantage of the Bay Area's improved transportation network.

Displacement, which occurs when housing costs rise to the point where existing residents cannot afford to remain in their homes, has been an entrenched problem in the Bay Area for decades. Strategies that expand access to mortgage down payments for families with low incomes would support greater rates of homeownership, sheltering these families from volatile rent prices and tempering displacement risk. The share of families with low incomes that own their own homes is projected to increase from 40% in 2015 to 50% by 2050. When combined with strategies that expand protections for renters and increase the number of affordable homes in Equity Priority Communities and other vulnerable areas, these strategies would mitigate displacement risk somewhat in the region, though residents in approximately 20% of all Growth Geographies still would experience displacement risk.

While the disruptive impacts of displacement on individuals and communities are significant, the strategies in Plan Bay Area 2050 would increase the likelihood of displaced families relocating to affordable housing in other Bay Area Growth Geographies rather than being forced out of the region. The share of households with low incomes would increase in all Growth Geographies with Plan Bay Area 2050 strategies in place, even when accounting for displacement, which suggests that displaced families would largely move to new Growth Geographies instead of to the more affordable periphery of the Bay Area's nine counties.



Table 6-3. Displacement trends

SHARE OF NEIGHBORHOODS (TRACTS) THAT EXPERIENCE DISPLACEMENT BETWEEN 2015 AND 2050		DISPLACEMENT
Regionwide	All Neighborhoods (total 1,579 neighborhoods)	48%
	Equity Priority Communities (total 339 neighborhoods)	40%
	High Displacement Risk Tracts (total 850 neighborhoods)	37%
Within Growth Geographies	Growth Geographies (total 492 neighborhoods)	17%
	High-Resource Areas (total 199 neighborhoods)	17%
	Transit-Rich Area (total 344 neighborhoods)	9%



Photos: Karl Nielsen





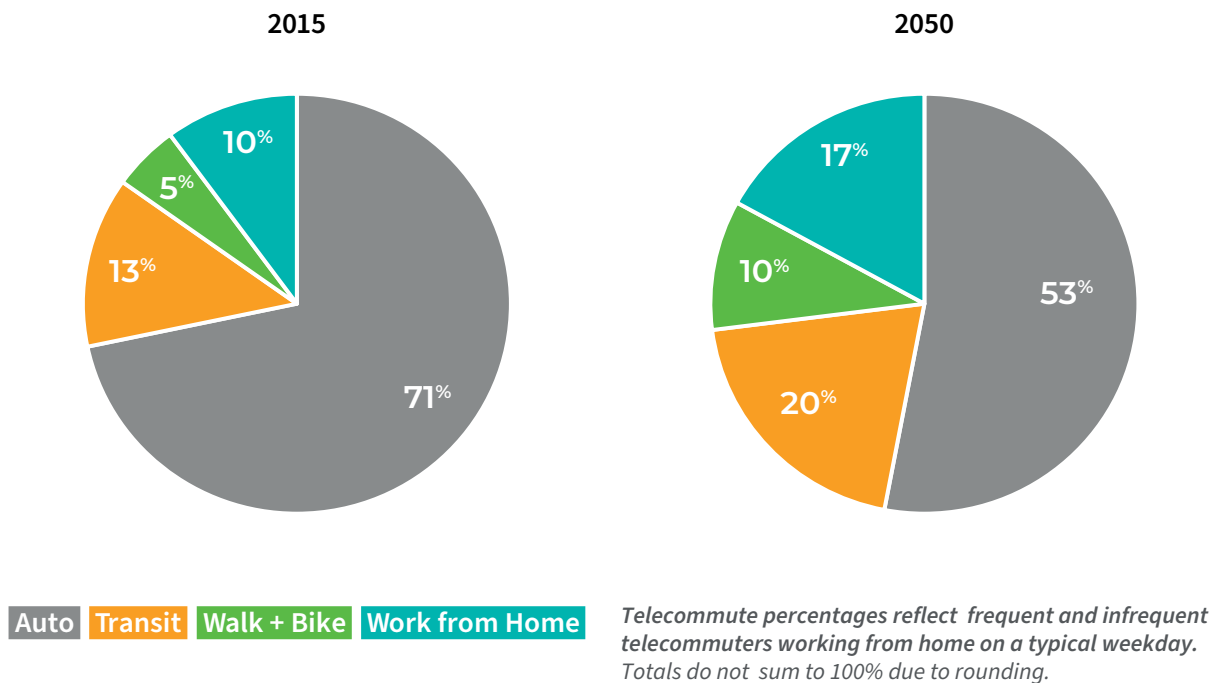
Photo: Karl Nielsen





Plan strategies across the four elements aim to work together to promote a safer and better-connected Bay Area by 2050. Housing and economy strategies encourage walkable, transit-connected communities, bolstered by an expanded set of Growth Geographies that go beyond locally nominated Priority Development Areas. In fact, if the strategies in Plan Bay Area 2050 were implemented, by 2050 nearly half of all Bay Area households would live within one half-mile of frequent transit, and nearly three-quarters of all households with low incomes. This land use pattern, supported by billions of dollars in infrastructure investment and policy reforms that improve biking, walking, riding transit and carpooling, would support a significant shift away from auto dependence for all trips. While today 70% of commuters drive to work either alone or in a carpool, that number would decrease to just over 50% by 2050 under plan strategies, as more Bay Area residents are expected to work from home or walk, bike or take transit to work.

Figure 6-3. Commute mode share



Altogether, the strategies would contribute to small but meaningful gains in the share of jobs that would be accessible within a reasonably short trip by foot, bike or transit. Measured as the share of the Bay Area's jobs that can be reached within a 20-minute walk or bike ride, a 30-minute drive, or a 45-minute transit trip, employment accessibility would increase slightly for pedestrians, cyclists and transit passengers. For drivers, travel times would remain roughly on par with 2015 levels even as the population expands by millions, with highway tolling and speed limit reductions expected to incentivize greater use of transit and telecommuting. In Equity Priority Communities, employment accessibility improvements would be even greater, particularly for cyclists and transit riders. Additionally, land use changes that would allow for the construction of more mixed-use developments, which cluster homes, shops and offices together where appropriate, would likely result in better accessibility to other types of destinations like community centers and supermarkets.

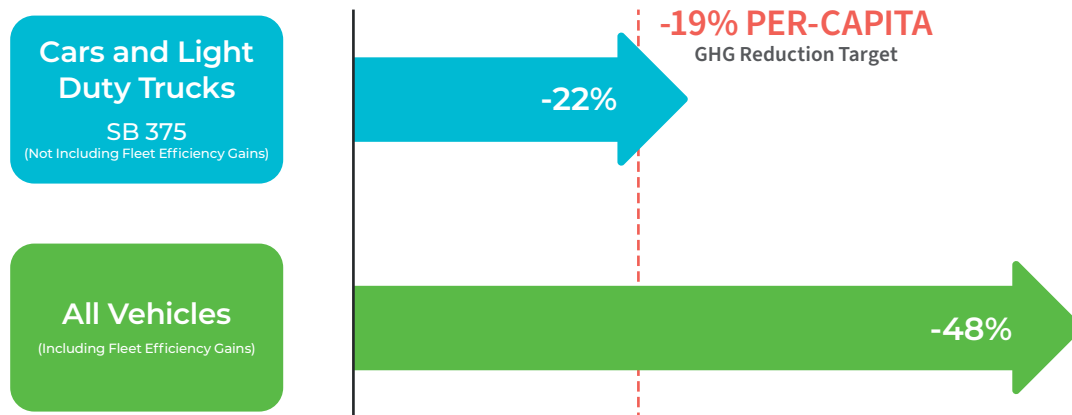


Photo: Courtesy City of San José Department of Transportation



Plan Bay Area 2050 seeks to put the Bay Area’s people and the environment on a trajectory to be healthier, safer and more prepared for natural hazards by 2050. Several plan strategies would reduce air pollution, a key determinant of climate change and public health. Greenhouse gas emissions from transportation would decrease significantly in the years leading up to 2035, representing a 22% decrease in per-capita emissions when compared to 2005 (surpassing the state mandate of a 19% reduction by that year) — but only if all plan strategies are implemented. It is important to reiterate that this reduction would be achieved through the coordinated efforts of all strategies across the four topic elements.

**Figure 6-4.** Percent reduction in per-capita greenhouse gas emissions between 2005 and 2035



**NOTE:** Under Senate Bill 375 (S. Steinberg, Statutes of 2008), emissions reductions from future improvements in vehicle fuel efficiency associated with state regulatory action do not count toward a region’s greenhouse gas emissions reduction target.

While not counted toward greenhouse gas emissions reduction targets under SB 375, the plan would also promote greener buildings. Emissions from residential buildings, which also contribute to greenhouse gas emissions through energy consumption, would decrease by 16% by 2050 if water and energy retrofits that support more energy-efficient homes are implemented.

Environmental benefits from Plan Bay Area 2050 would go beyond climate emissions. Roads would be safer because of strategies that support a regional Vision Zero policy, including expanded infrastructure for cyclists and pedestrians and lower vehicle speeds enforced by street design and speed cameras. Thousands of fatalities and serious injuries could be averted between now and 2050 with these strategies in place. However, Plan Bay Area 2050 would fall short of completely eliminating road fatalities and injuries, highlighting the need for bolder approaches to advancing road safety.

Access to parks and open space is another focus area of the plan, with strategies promoting improved access to urban parks and expansive conservation lands outside the urban core. Investments that protect and maintain open space would pay dividends, with co-benefits to human health and environmental sustainability. The average acres of urban space per resident would increase by 25% between today and 2050; residents of Equity Priority Communities would experience an even larger increase to account for the relatively limited access to open space in these areas today. The increase would come from combined efforts to modernize and enhance existing parks and create new parks, with an emphasis on opening new parks in Equity Priority Communities.

The region would also be more prepared to face natural hazards like rising seas and earthquakes under plan strategies. Nearly all homes in the Bay Area, and all homes in Equity Priority Communities, would be protected from two feet of sea level rise. Major road and rail corridors at risk of flooding would be protected, ensuring that a contiguous transportation network would remain intact. Additionally, all high-risk homes would be retrofitted to reduce major damage risk from seismic and wildfire events which would help to protect families from displacement, ensure that homes are not lost to hazards and lower the risk of intensifying the regional housing crisis.

Plan Bay Area 2050 aims to promote economic vibrancy through two primary routes: improving pathways to economic mobility, and distributing jobs and housing more evenly throughout the region. Under the plan's strategies, results would include shorter commutes and more equitably spread tax revenues, albeit with some limitations.

Lopsided job growth in low-wage and high-wage industries, with a corresponding decline in middle-wage employment, have characterized previous decades. While the number of jobs in high-wage industries would continue to see the largest increases through 2050, Plan Bay Area 2050 would make some headway on increasing the number of jobs in middle-wage industries. The largest share of all new jobs, around 40%, would be in high-wage industries, like information or professional and business services, followed by middle-wage industries at 34%. Business incubators and job retraining programs funded through the plan would support employment in these industries. The number of jobs in low-wage industries would see slower growth through 2050 when compared to years prior to 2015 due to automation and shifts in the labor market, but gains in middle-wage employment would bolster pathways to the middle class for residents without a college degree.

**Table 6-4.** Job growth by industry income category

	NUMBER OF JOBS (2015)	NUMBER OF JOBS (2050)	CHANGE IN NUMBER OF JOBS (2015-2050)	SHARE OF REGIONAL GROWTH (2015-2050)
<b>Low-wage industries</b>	981,000	1,276,000	295,000	21%
<b>Middle-wage industries</b>	1,586,000	2,118,000	532,000	38%
<b>High-wage industries</b>	1,438,000	2,014,000	576,000	41%

Not only would Plan Bay Area 2050 influence the types of jobs that would be created in the region through business incubators and job retraining programs, but it also would shape the geography of job growth. Trends in job and household growth would support a more balanced spatial distribution and in turn would alleviate crowding on roads and transit networks. Regionwide, the jobs-to-housing ratio is projected to decrease slightly, from 1.5 jobs per home in 2015 to 1.3 in 2050, reflecting a higher rate of housing production to accommodate demand, even as jobs grow. In the West Bay and South Bay, strategies to stimulate housing would help to better balance jobs and housing by 2050. Meanwhile, in the North Bay and East Bay, strategies to draw jobs closer to predominantly residential communities would result in more limited changes, suggesting more work is needed to address this imbalance.



## CONCLUSION

The challenges of 2020 have set the Bay Area on a new path, and the future continues to be highly uncertain. Plan Bay Area 2050 is a proposal for how the region can rebuild in a way that recognizes past inequities and positions the Bay Area for success across a variety of future conditions. While Plan Bay Area 2050 cannot right all the wrongs of the past, it demonstrates how the region can make meaningful progress toward realizing the vision voiced by members of the public that inspired this work. With the plan's strategies in place, the nine-county region will be better positioned to become a more affordable, diverse, connected, healthy and vibrant place for all.

Plan Bay Area 2050 would make progress on some of the most deep-rooted challenges facing our region today, from housing affordability to climate emissions. Many of the outcomes shared in this chapter are encouraging snapshots of what the future could hold. Others inspire thought on how a next iteration of strategies could reach beyond what this plan would accomplish. Achieving the plan's vision will require collaboration across all levels of government, between the private and public sectors, and from individual Bay Area residents from all walks of life. Otherwise, these outcomes will remain theoretical. The following chapter outlines a plan for implementing the strategies discussed in Plan Bay Area 2050, with a focus on the next five years.