



H O R I Z O N

# Futures - Interim Report

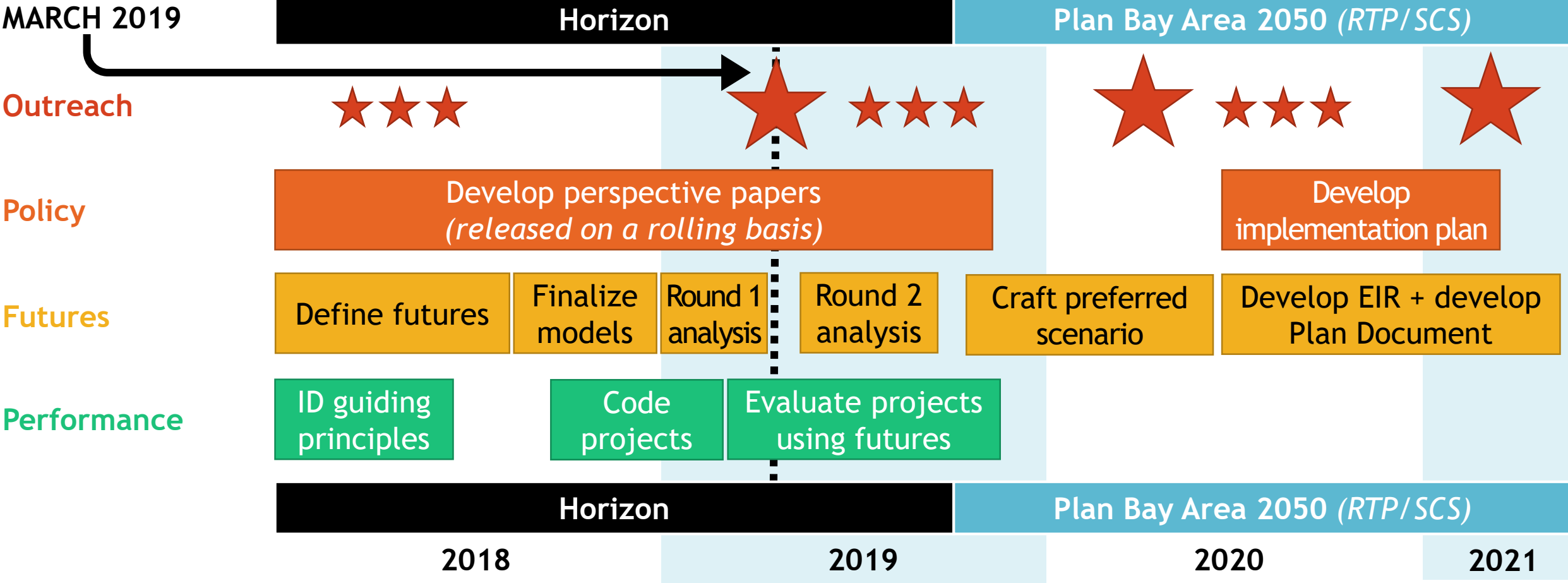
## Opportunities and Challenges

Joint MTC Planning Committee with the ABAG Administrative Committee

March 8, 2019

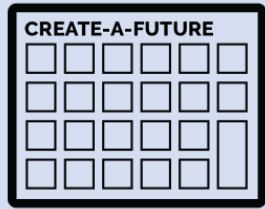
# Schedule for Horizon and Plan Bay Area 2050

MARCH 2019



# Futures Process

## OUTREACH



## ROUND 1 ANALYSIS

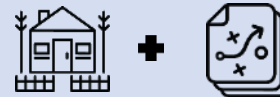
*Current Strategies*



## REPORT



## OUTREACH



## ROUND 2 ANALYSIS

*New Strategies*



## REPORT



# Futures Analysis

## Plan Bay Area 2040

*Adopted in July 2017*

### Horizon Futures Round 1 Analysis

- *How does the region's currently-adopted Plan fare in an era of uncertainty?*
- *What are the opportunities and challenges the region may face?*



Baseline



PBA 2040  
Strategies

### Horizon Futures Round 2 Analysis

- *How might new strategies result in improved outcomes in each future?*
- *Which strategies are effective across many futures?*



Baseline



External  
Forces



PBA 2040  
Strategies



Baseline



External  
Forces



New  
Strategies



# External Forces

FUTURE NAME	IMMIGRATION AND TRADE	NATIONAL TAXES AND FUNDING	NATIONAL GROWTH	LAND USE PREFERENCES	NATIONAL ENVIRONMENTAL POLICY	NEW TECHNOLOGIES	NATURAL DISASTERS
<b>Rising Tides, Falling Fortunes</b>	<b>Reduced</b>	<b>Lower funding</b> due to tax cuts	<b>Limited</b>	Housing: more <b>urban</b>	<b>Relaxed regulations</b> (3' SLR)	More <b>limited</b>	Magnitude 7.0 Hayward Fault earthquake
				Similar to today			
<b>Clean and Green</b>	Similar to today	<b>Higher funding</b> via carbon tax	Similar to today	Housing: more <b>urban</b>	<b>Stricter regulations</b> (1' SLR)	<b>Widespread</b>	Magnitude 7.0 Hayward Fault earthquake
				Jobs: more <b>dispersed</b>			
<b>Back to the Future</b>	<b>Increased</b>	Similar to today	<b>Rapid</b>	Housing: more <b>dispersed</b>	Similar to today (2' SLR)	<b>Widespread</b>	Magnitude 7.0 Hayward Fault earthquake
				Jobs: more <b>urban</b>			



PBA 2040  
Policies

# Plan Bay Area 2040 Policies

## Land Use

- **Assign higher density** than currently allowed by cities in **select PDAs**.
- **Keep urban growth boundaries** in place.
- **Preserve and incorporate office space caps** in **some job-rich cities**.
- **Assume 10% inclusionary zoning** for all for-profit housing development.
- Assume eased parking minimums, streamlined process, and **subsidies stimulate development** in **PDAs**.

## Transportation

- **Operate and Maintain** - Fix-it-First; Ongoing Operations
- **Modernize** - Caltrain Electrification, BART Core Capacity, New BRT Lines, Bay Area Forward, etc.
- **Expand** - BART to Silicon Valley, Caltrain DTX, Express Lanes Network, etc.





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# Three Futures

By imagining three different futures for the Bay Area, we can begin to explore the impacts associated with each path forward.

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# Rising Tides, Falling Fortunes

Imagine a future where the federal government cuts spending and reduces regulations, leaving decisions to states & regions.





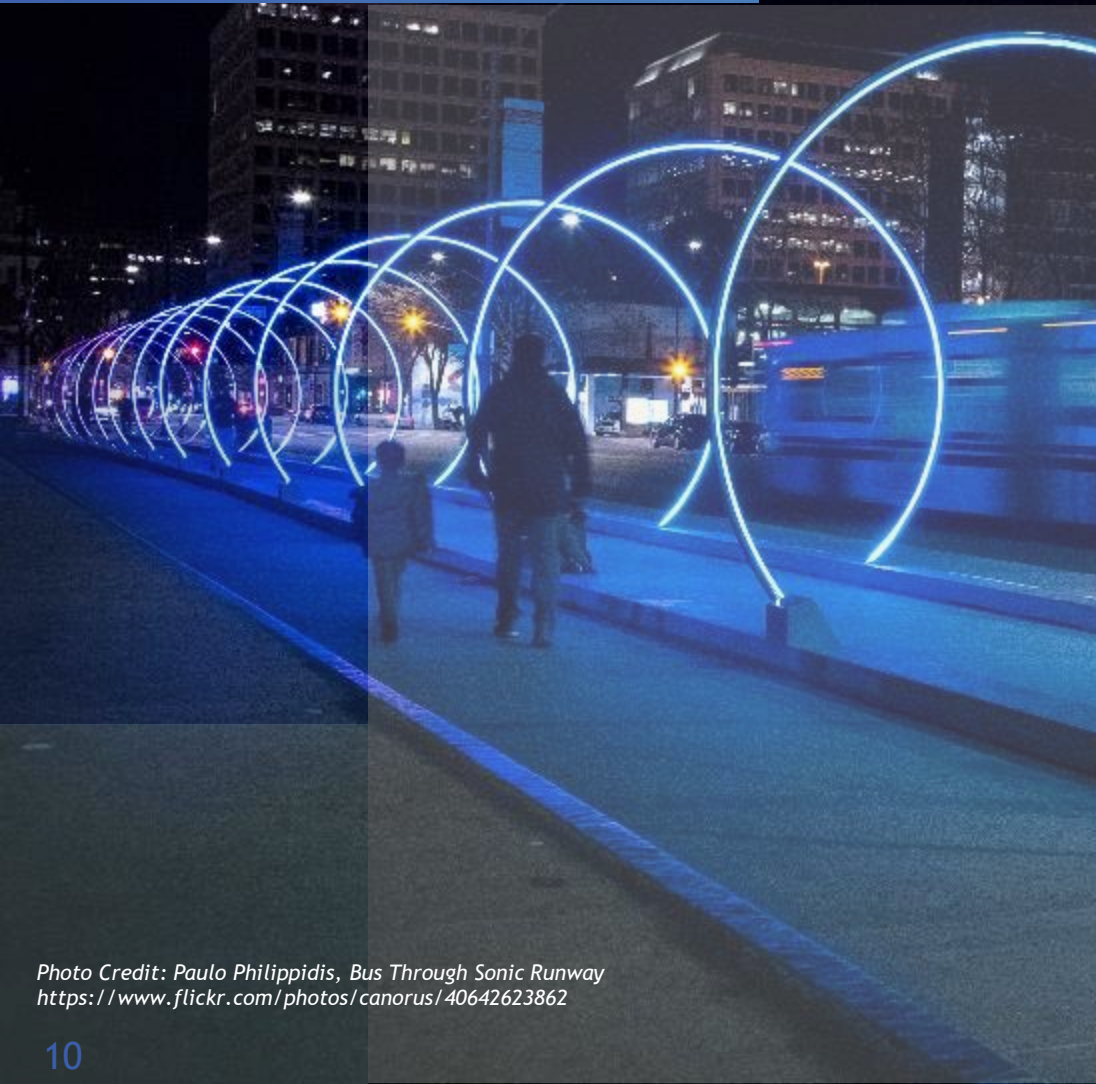
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## Clean & Green

Imagine a future where new technologies and a national carbon tax enabled telecommuting and distributed job centers.



H O R I Z O N



## Back to the Future



Imagine a future where an economic boom and new transportation options spur a new wave of development.



# Population Growth

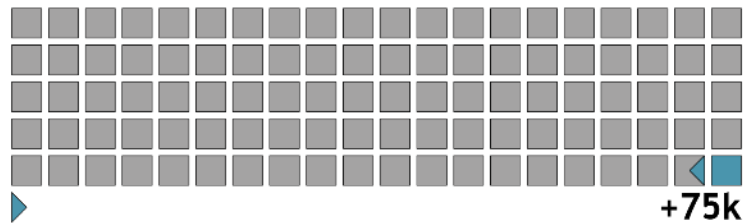
■ = 50,000 residents.  
*a single line represents 1 million residents*



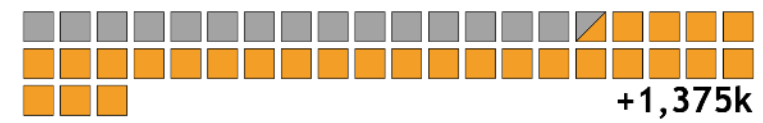
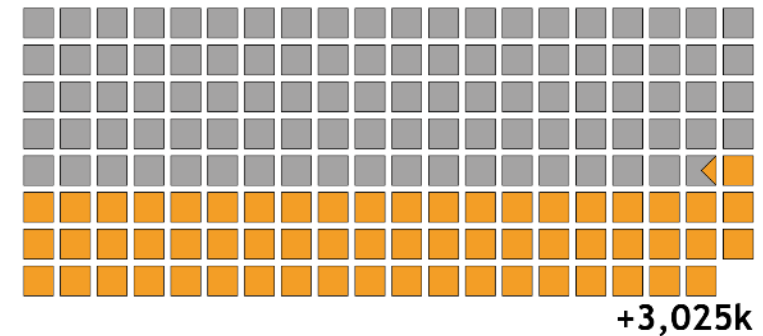
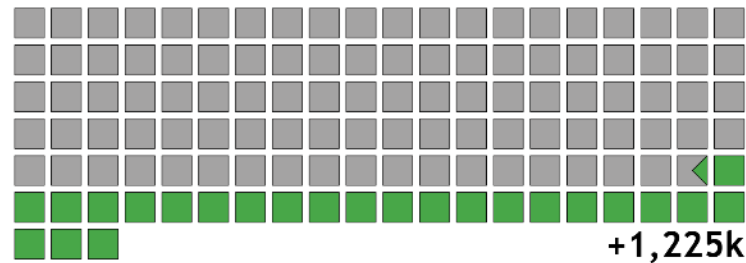
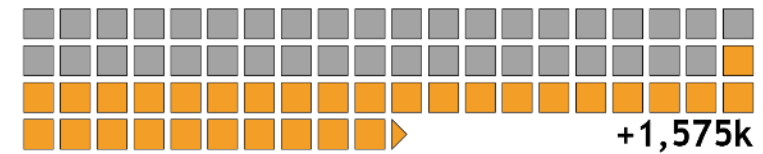
**Rising Tides, Falling Fortunes**  
 +1.0 million residents in 2050



**Clean and Green**  
 +3.1 million residents in 2050



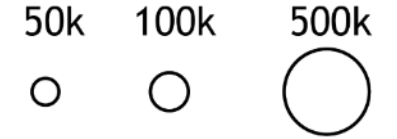
**Back to the Future**  
 +6.0 million residents in 2050



# Housing Growth

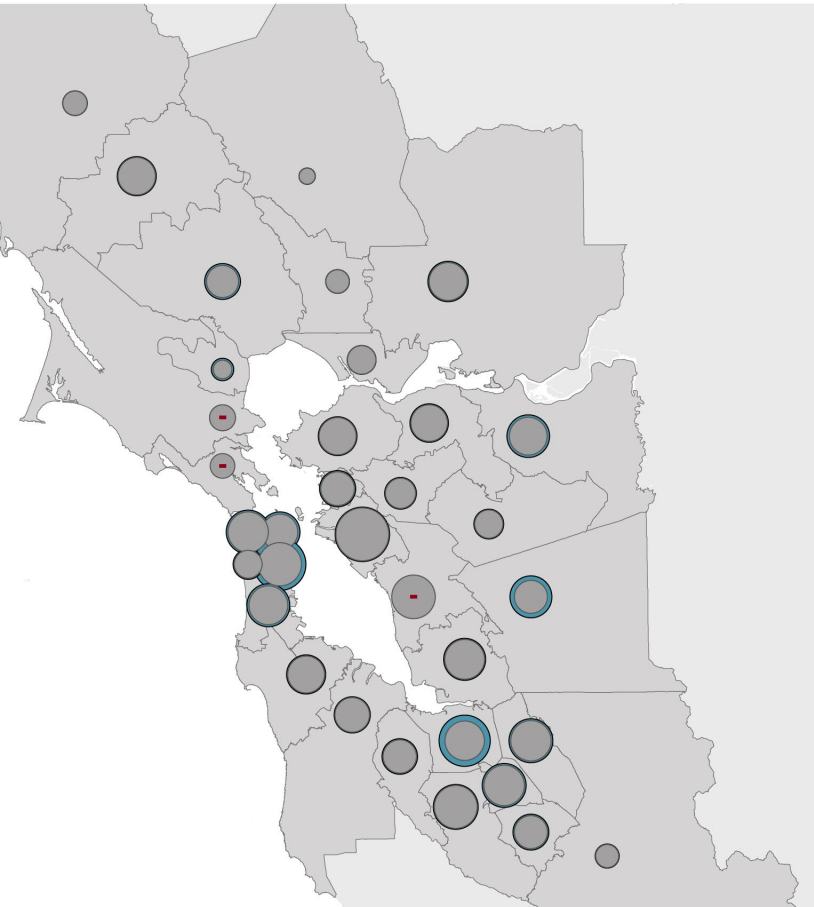
Circle color is representative of year.

Circle area is representative of the number of homes.



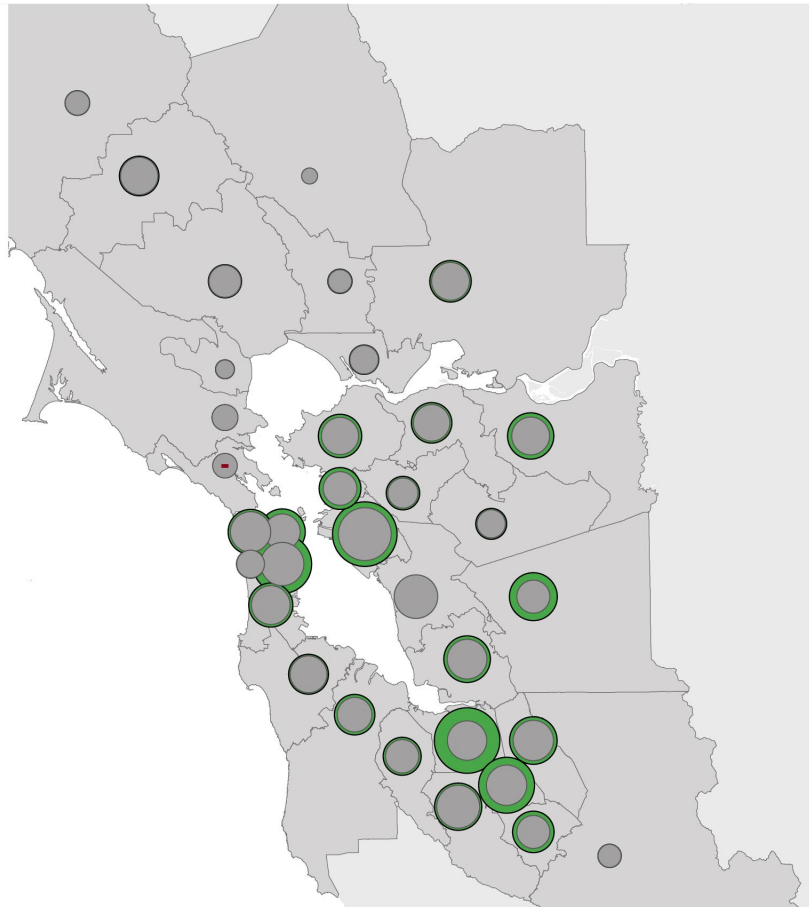
## Rising Tides, Falling Fortunes

+0.5 million units by 2050



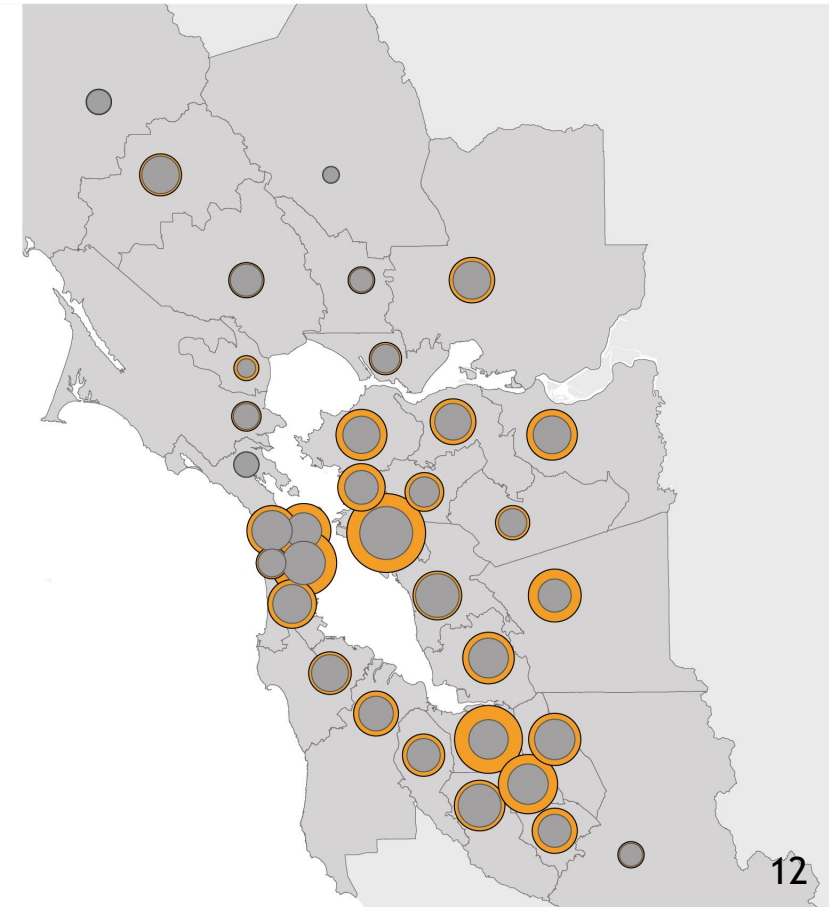
## Clean and Green

+1.3 million units by 2050



## Back to the Future

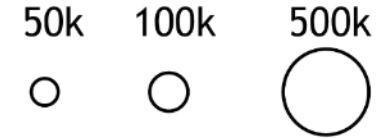
+2.1 million units by 2050



# Job Growth

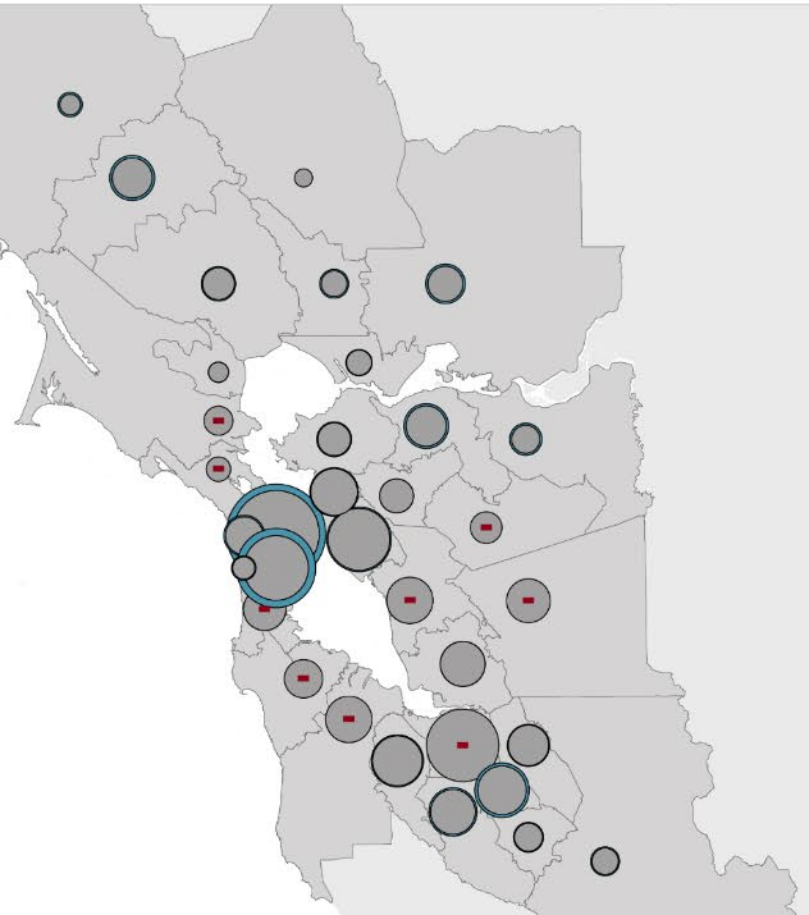
Circle color is representative of year.

Circle area is representative of the number of jobs.



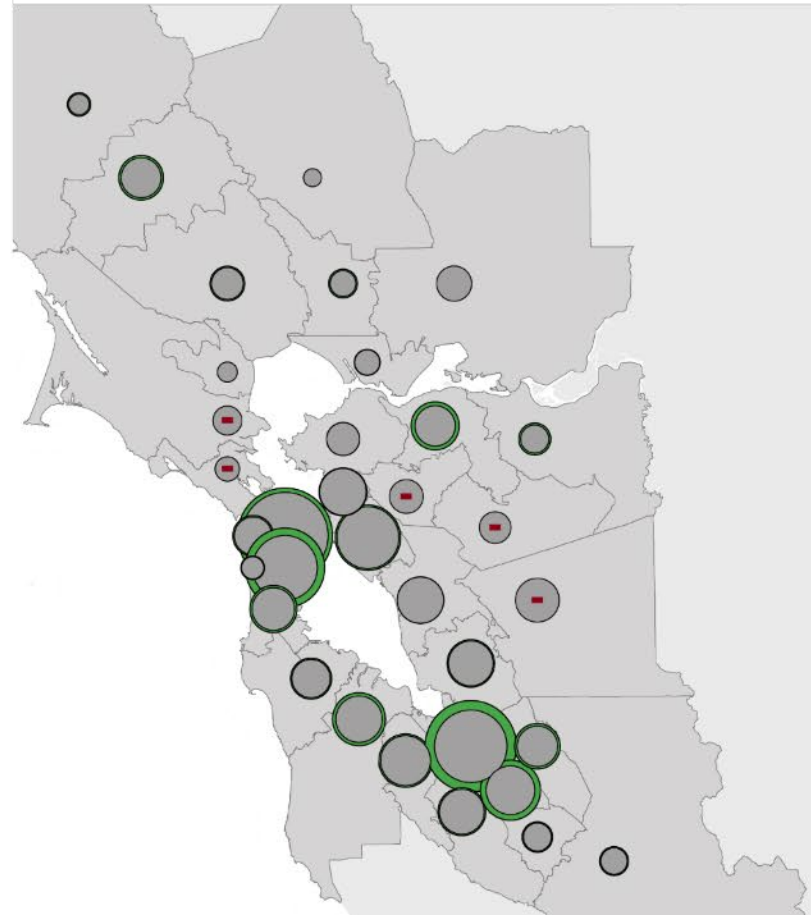
## Rising Tides, Falling Fortunes

+0.5 million jobs by 2050



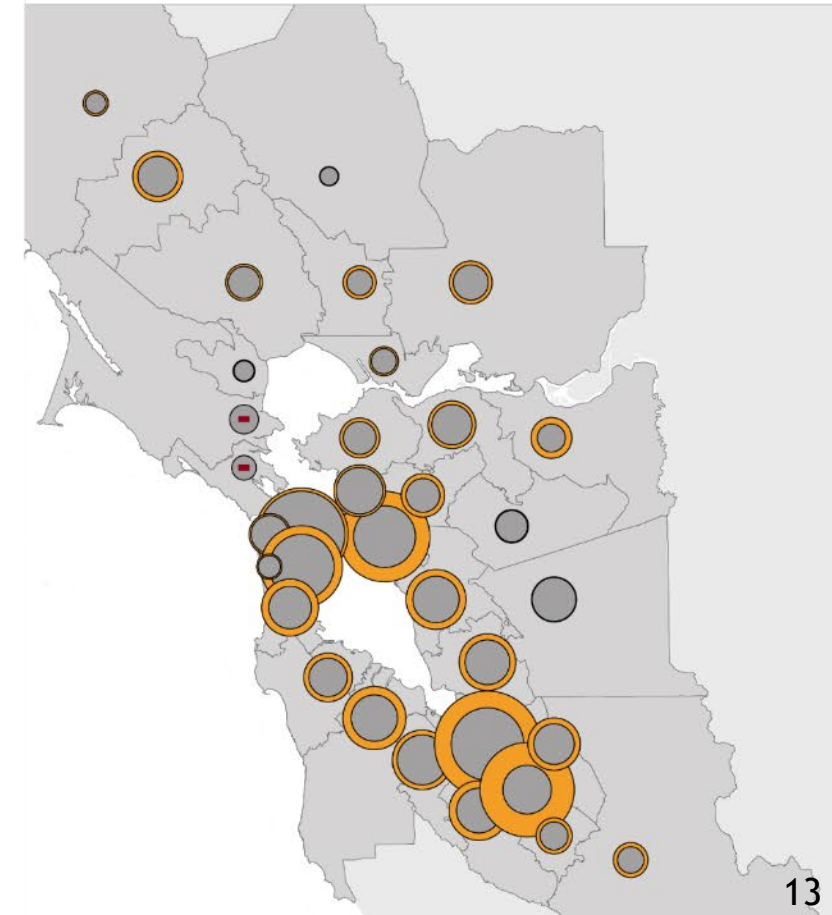
## Clean and Green

+1.1 million jobs by 2050



## Back to the Future

+2.7 million jobs by 2050







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# Opportunities & Challenges: Top 10 Findings

We have explored the opportunities and challenges associated with each future across the five Guiding Principles of Horizon.

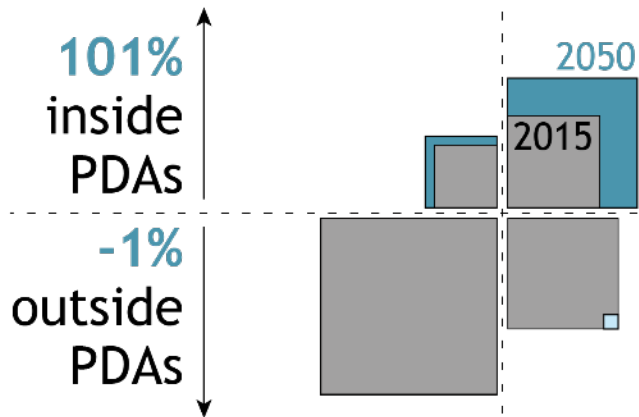
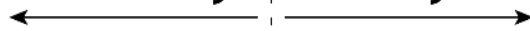


Priority Development Areas (PDAs) thrive in all three futures, putting a greater share of residents close to higher-quality affordable transit.

### Rising Tides, Falling Fortunes

14%  
single  
family

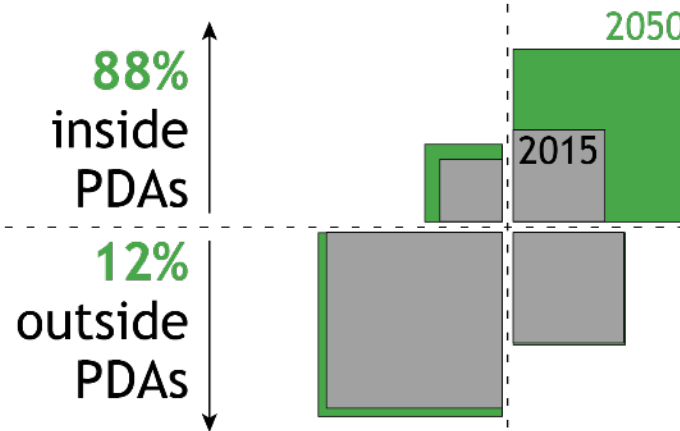
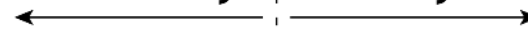
86%  
multi  
family



### Clean and Green

19%  
single  
family

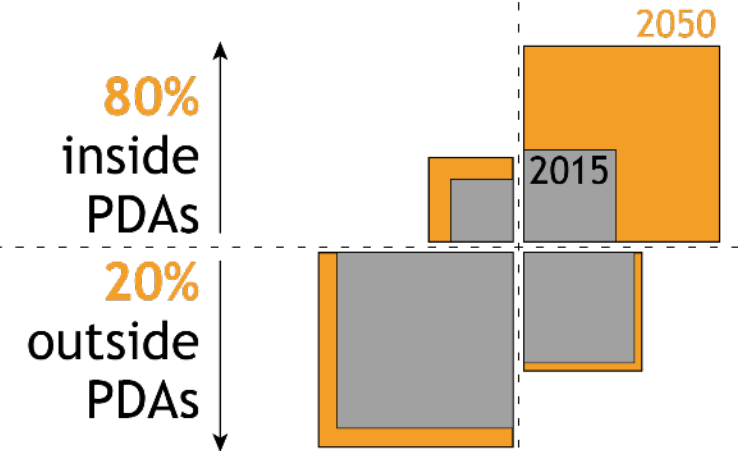
81%  
multi  
family



### Back to the Future

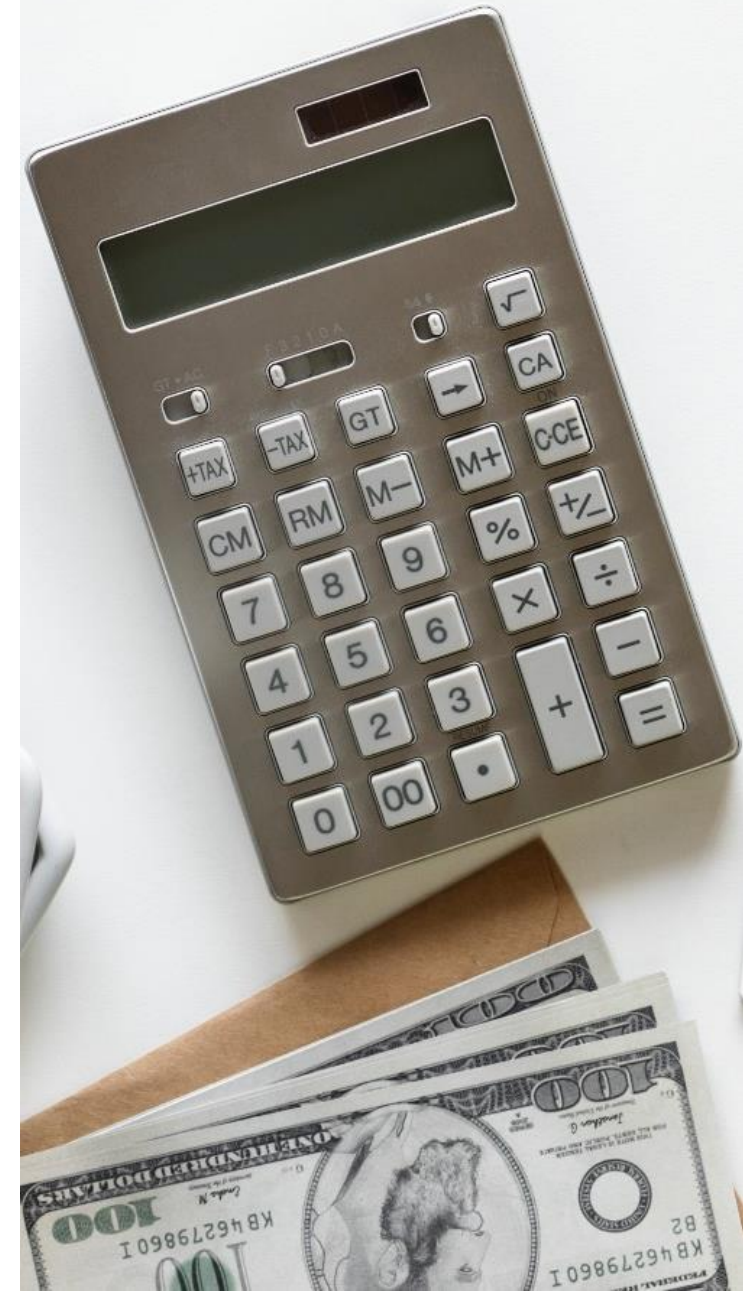
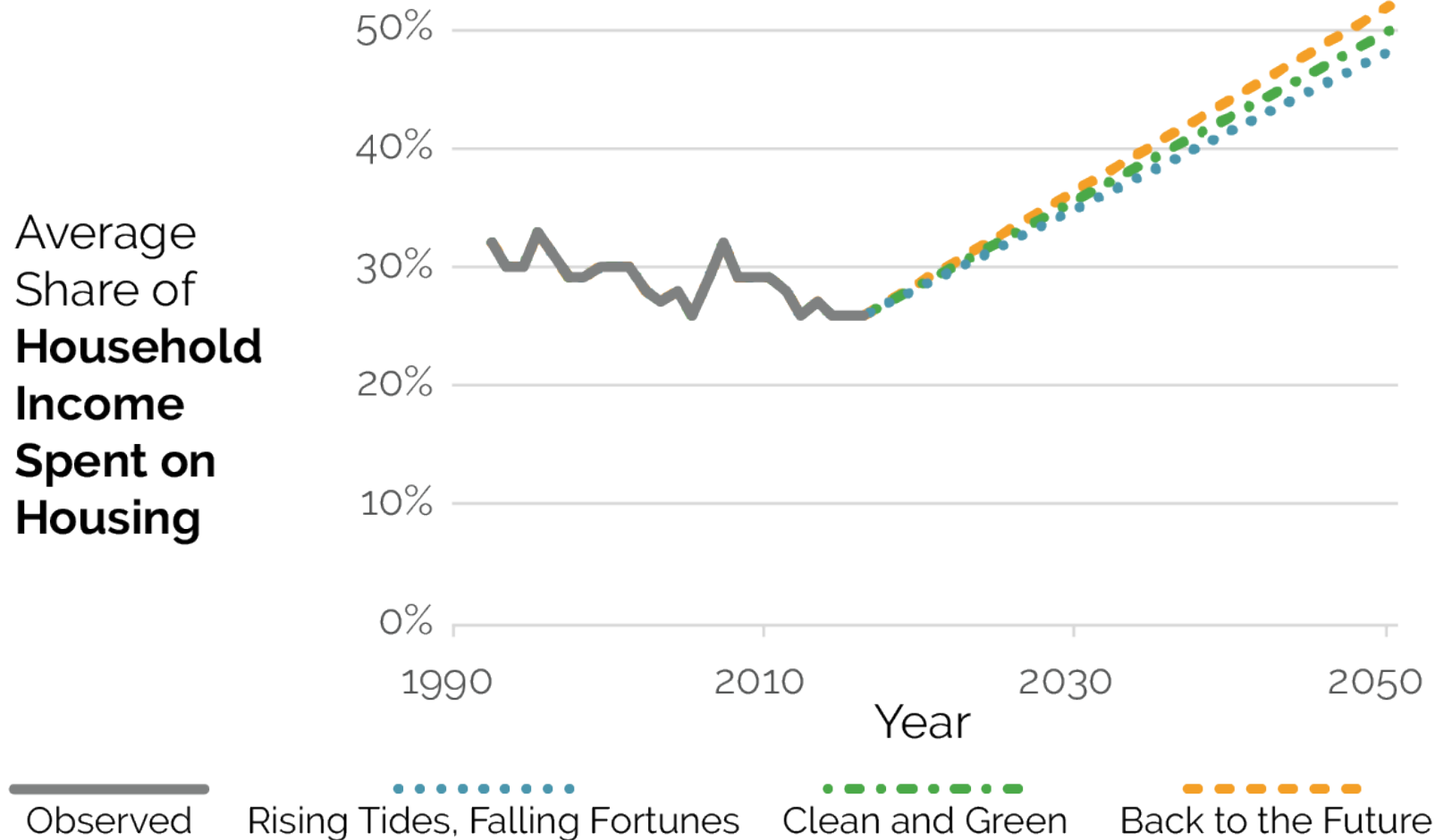
24%  
single  
family

76%  
multi  
family





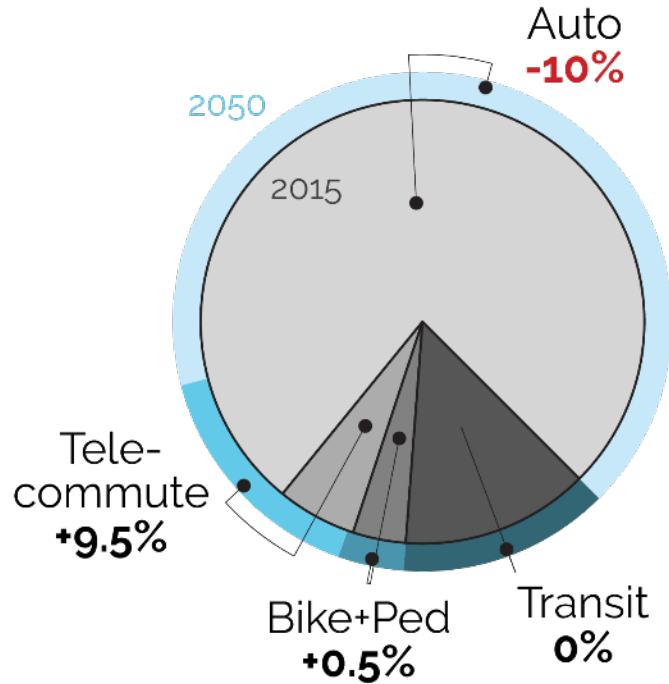
Without new strategies in place, Bay Area housing affordability is likely to continue to get worse.



With growing demand for telecommuting and transit, a smaller percentage of residents may need to depend on automobiles to get around.

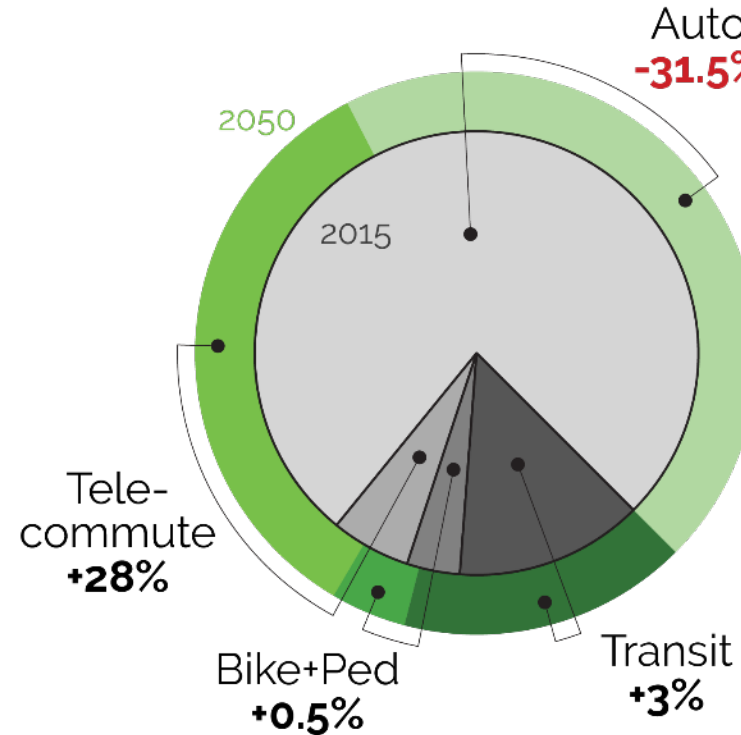
## Rising Tides, Falling Fortunes

In 2050, 67% of commuters use autos.



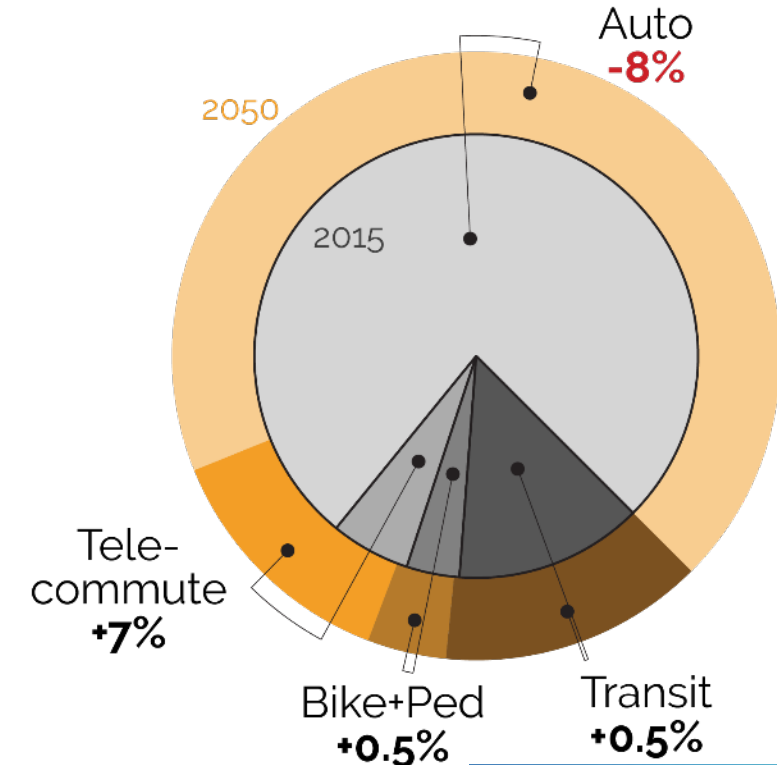
## Clean and Green

In 2050, 45% of commuters use autos.



## Back to the Future

In 2050, 69% of commuters use autos.



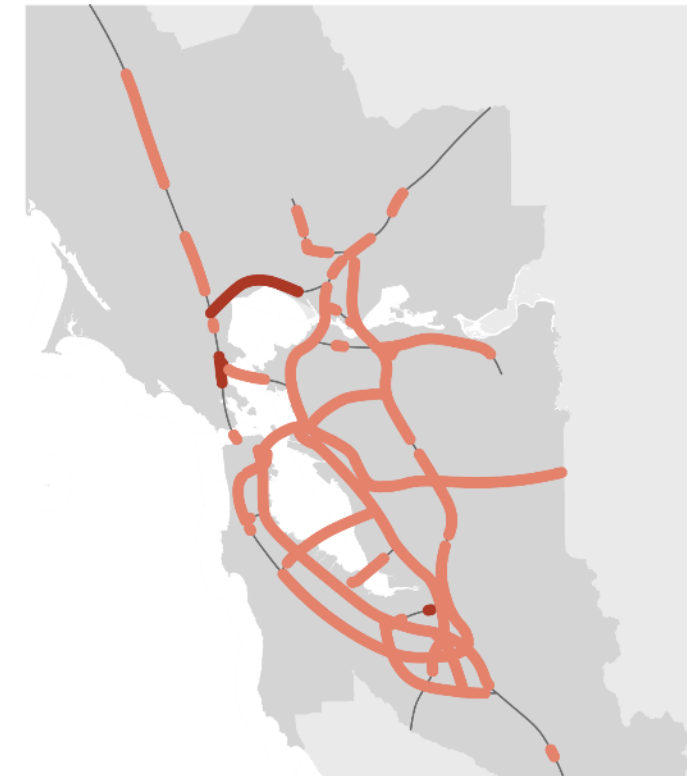
In 2015, 77% of commuters use an automobile to get to work.

Without new strategies like roadway pricing, changing conditions will result in even higher levels of traffic congestion.

**Rising Tides, Falling Fortunes**  
Limited AV, Similar cost to drive,  
Similar ownership model

**Clean and Green**  
Significant AV, High cost to drive,  
Shared ownership model

**Back to the Future**  
Significant AV, Low cost to drive,  
Individual ownership model

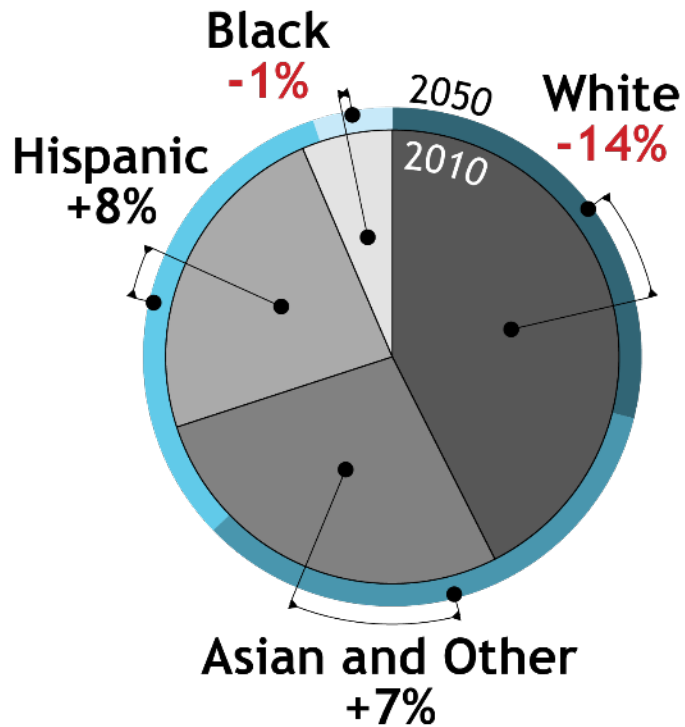




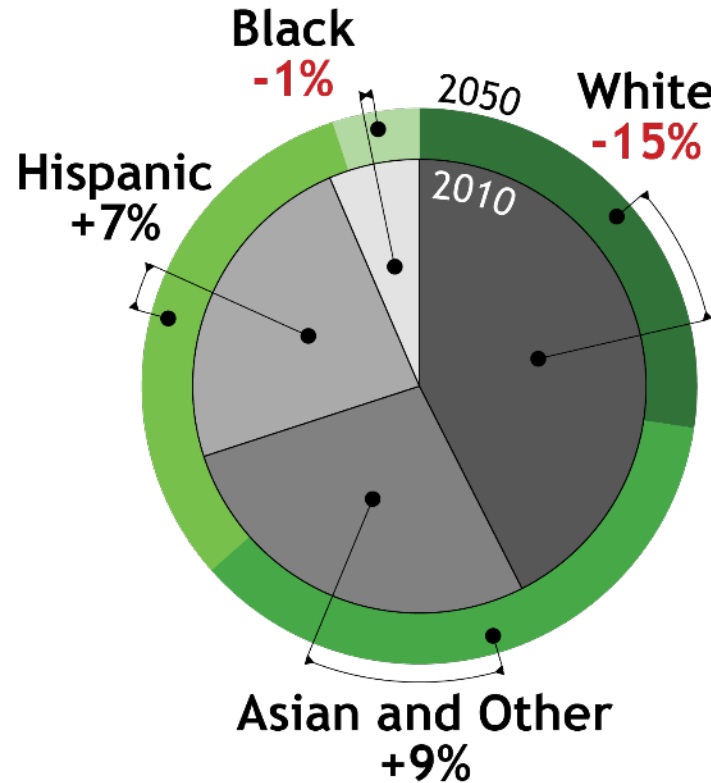
# Opportunity #1

The Bay Area is likely to become more racially diverse over time, driven primarily by immigration from abroad.

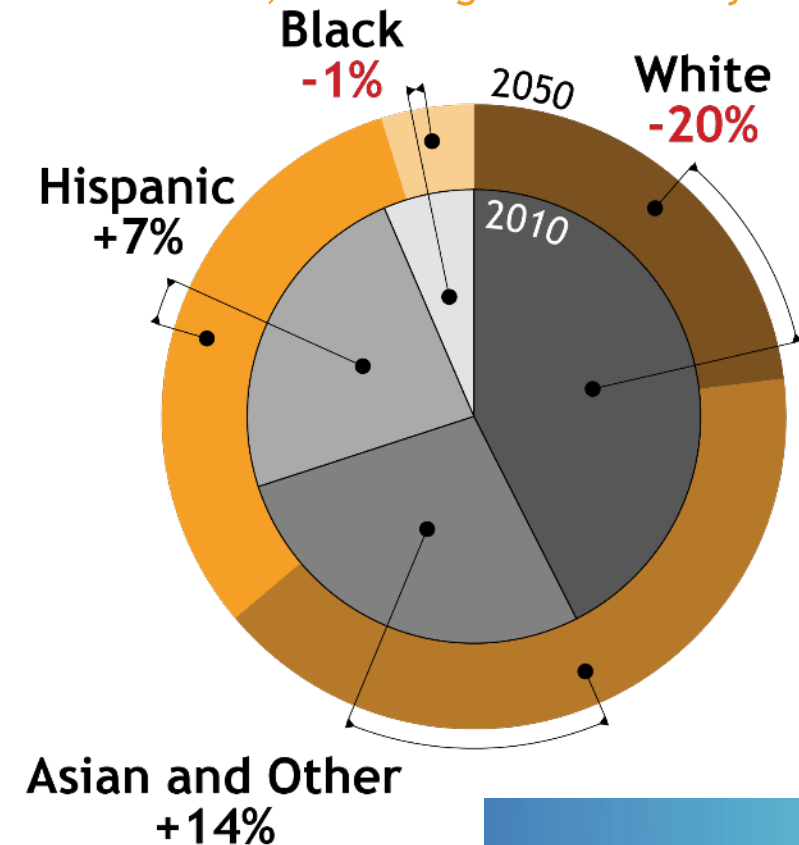
**Rising Tides, Falling Fortunes**  
+20,000 immigrants annually



**Clean and Green**  
+80,000 immigrants annually



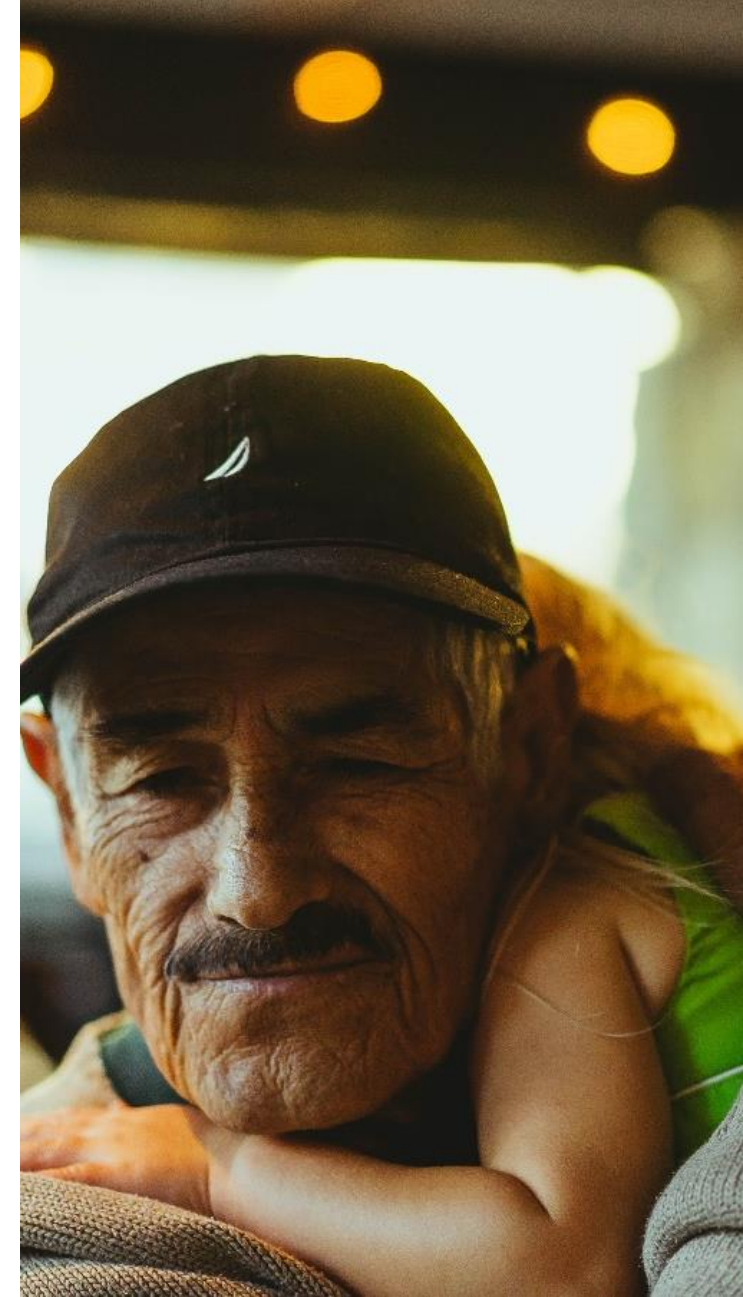
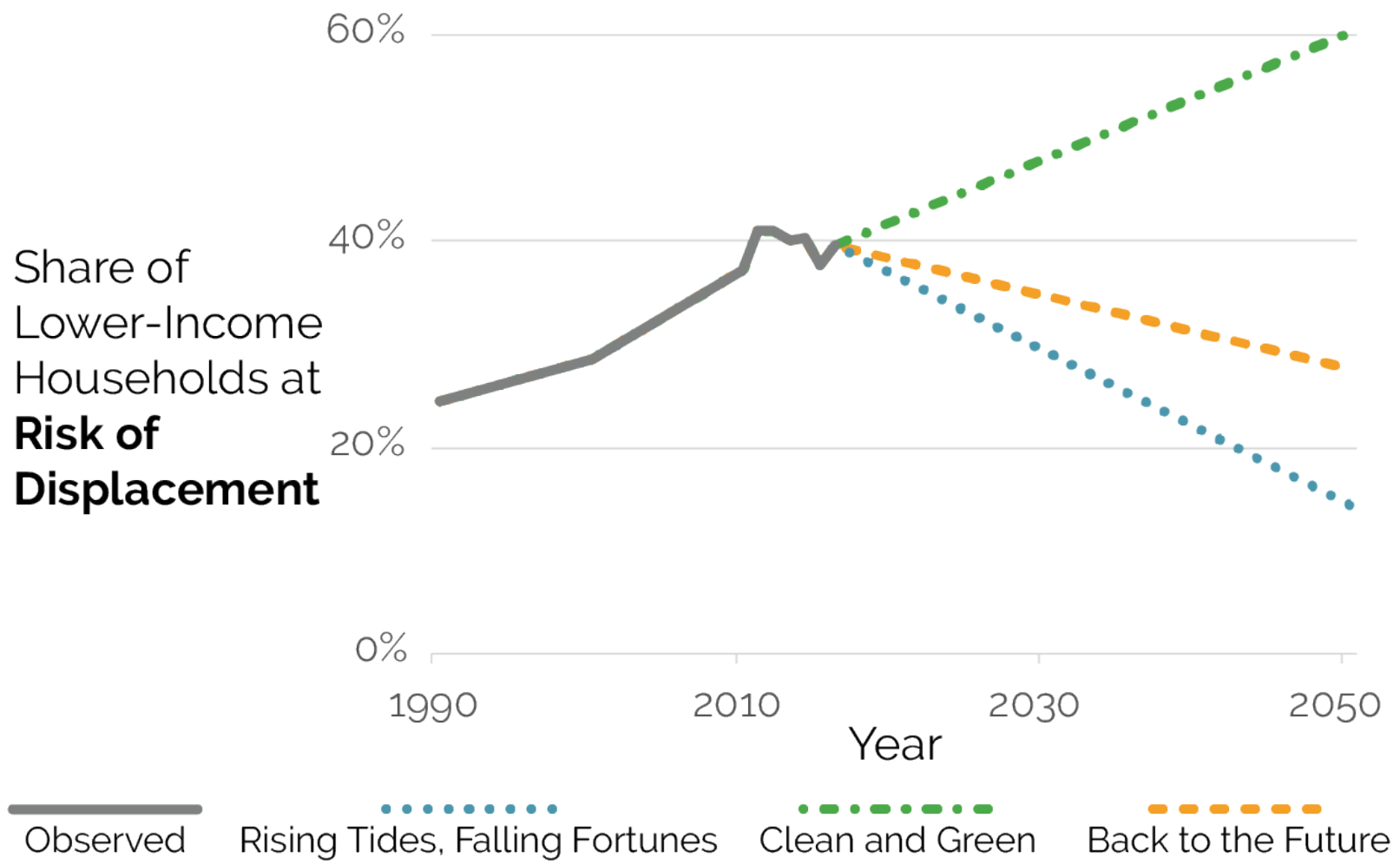
**Back to the Future**  
+240,000 immigrants annually



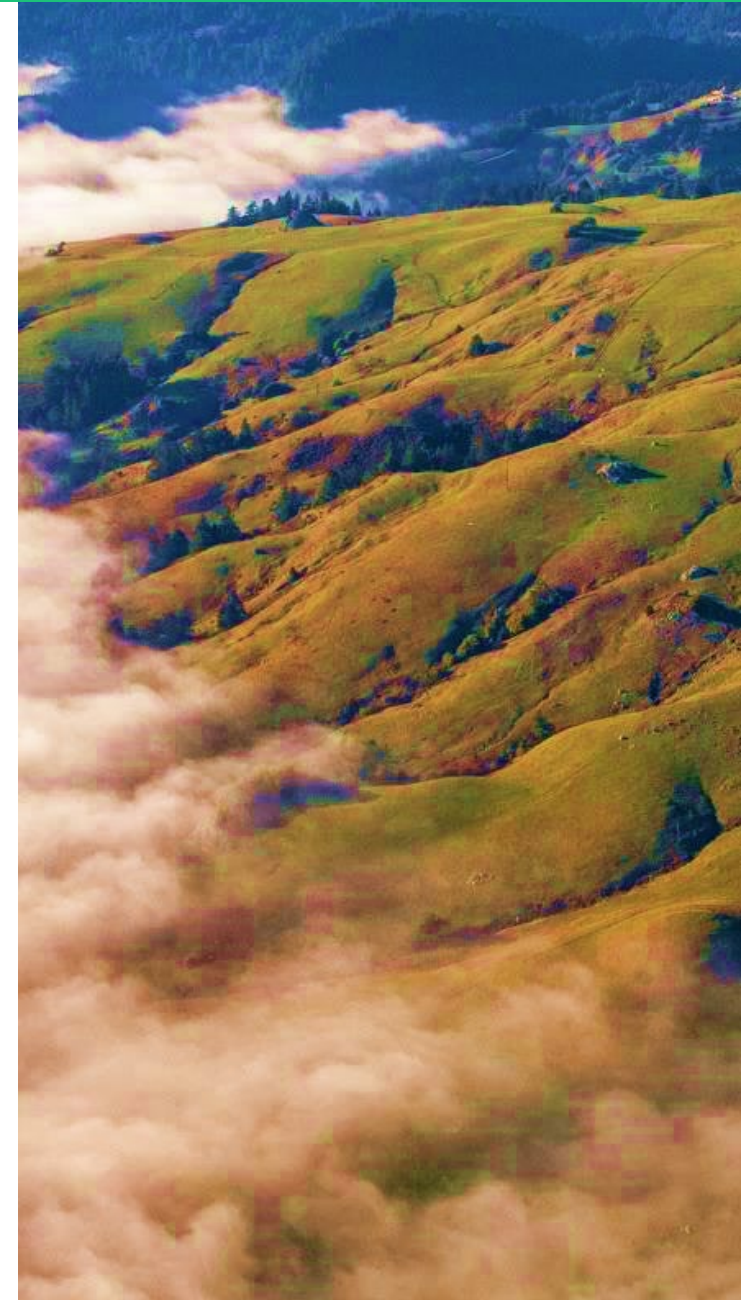
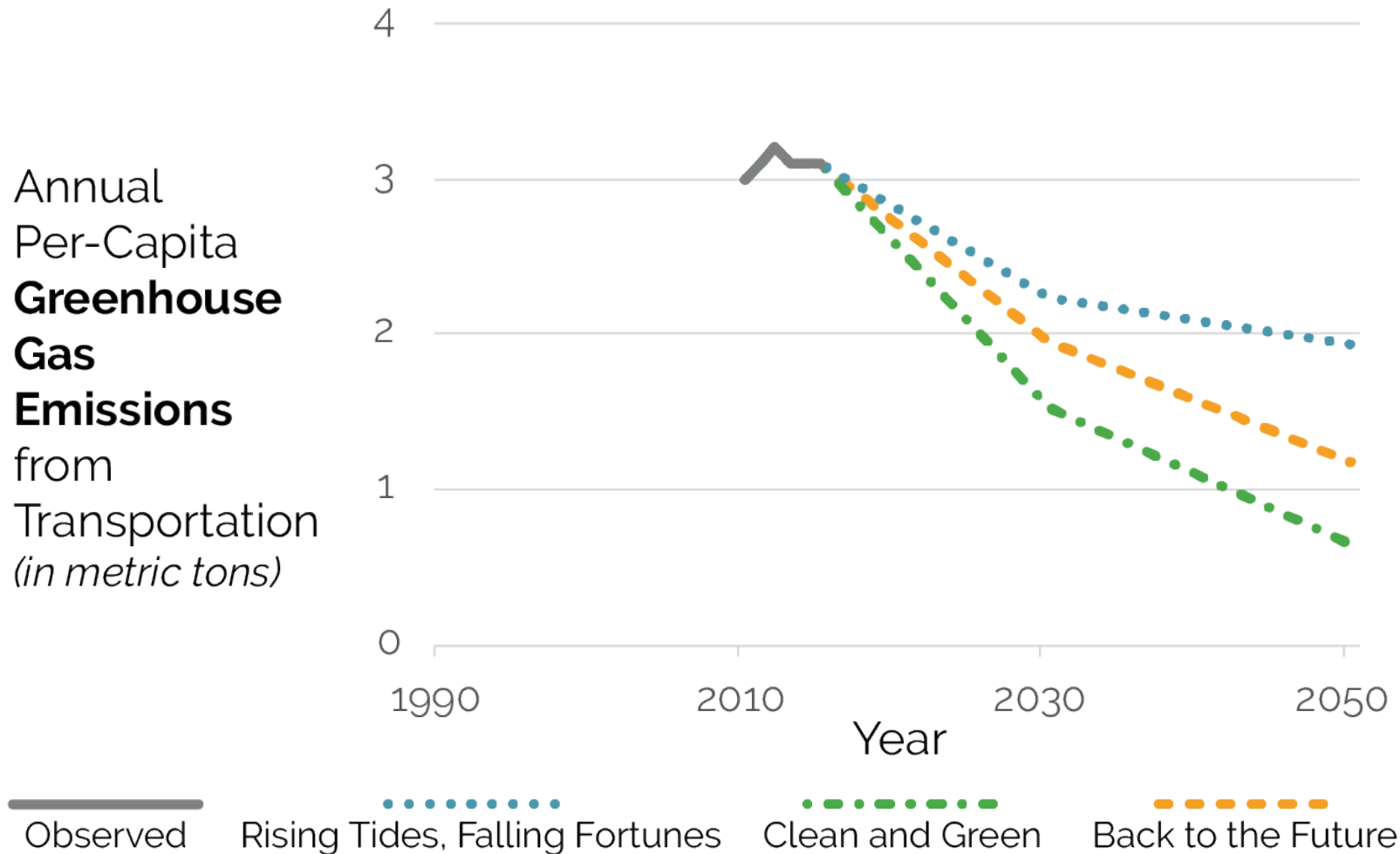
Above is the change in regional share. In *Rising Tides*, a future with slower growth, the absolute number of white residents decreases. In *Back to the Future*, a future with faster growth, the absolute number of white residents increases, but as a share of the regional population it decreases.

# Opportunity #2

Rapid housing growth - or an economy cool-off - could both help ease displacement pressures.



Electrification and urban growth boundaries could reduce human impacts on the environment.



Acute impacts from sea level rise and natural disasters will be more difficult to recover from if the region's economy is weak.

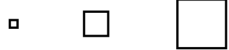
**Rising Tides, Falling Fortunes**  
3 feet of sea level rise

**Clean and Green**  
1 foot of sea level rise

**Back to the Future**  
2 feet of sea level rise

## Homes Affected by Hazards

1k 10k 40k



## Sea Level Rise

Permanent Inundation

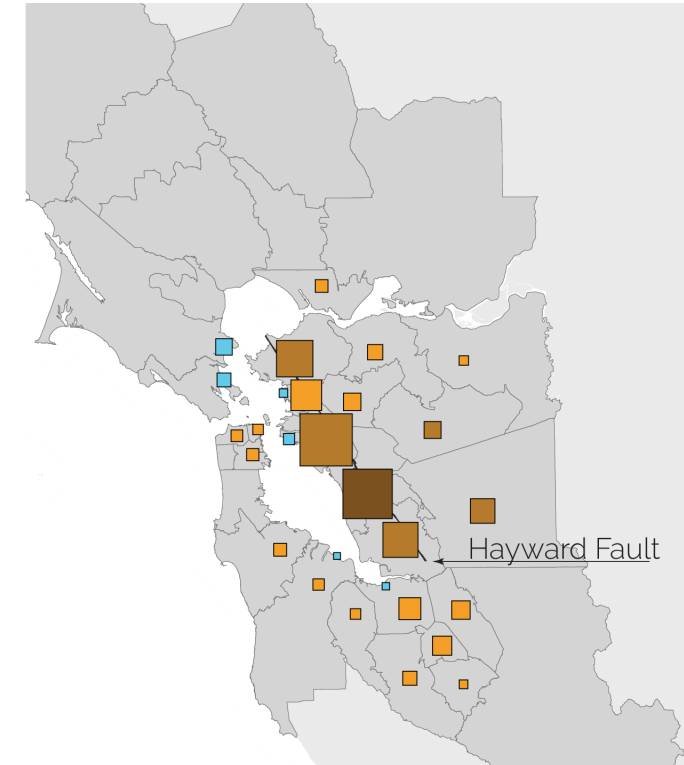
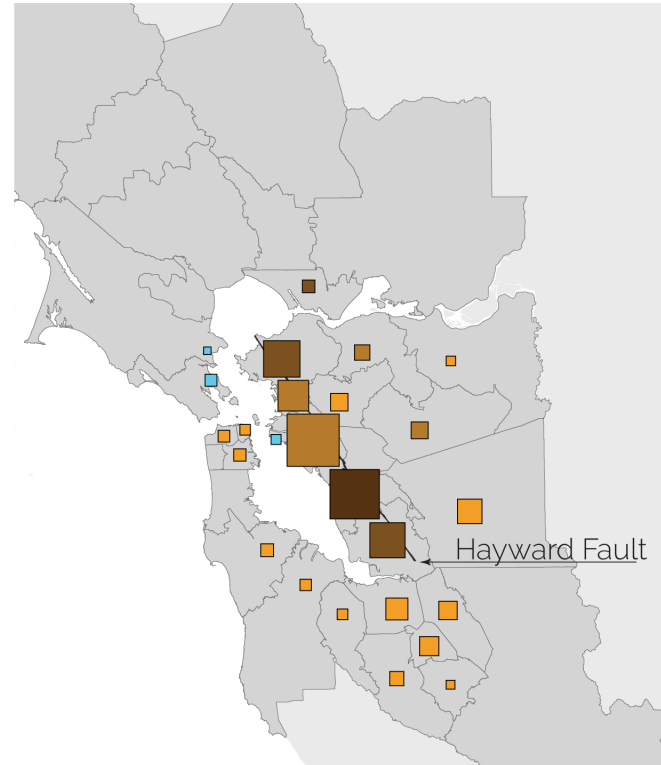
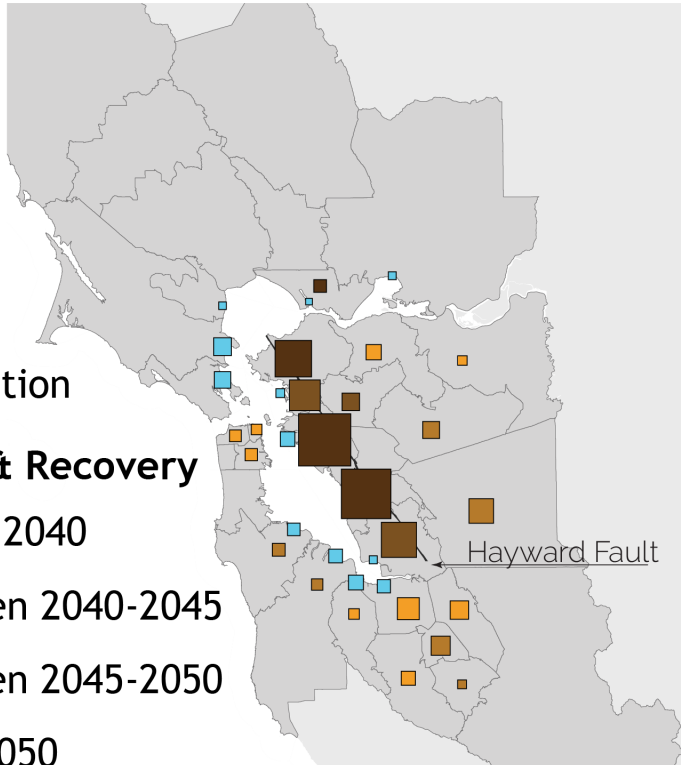
## Earthquake Damage & Recovery

Recovered before 2040

Recovered between 2040-2045

Recovered between 2045-2050

Recovered after 2050





Land use strategies included in *Plan Bay Area 2040* are insufficient to address the region's longstanding jobs-housing imbalance.

**Rising Tides, Falling Fortunes**  
+0.5M Homes, +0.5M Jobs

**Clean and Green**  
+1.3M Homes, +1.1M Jobs

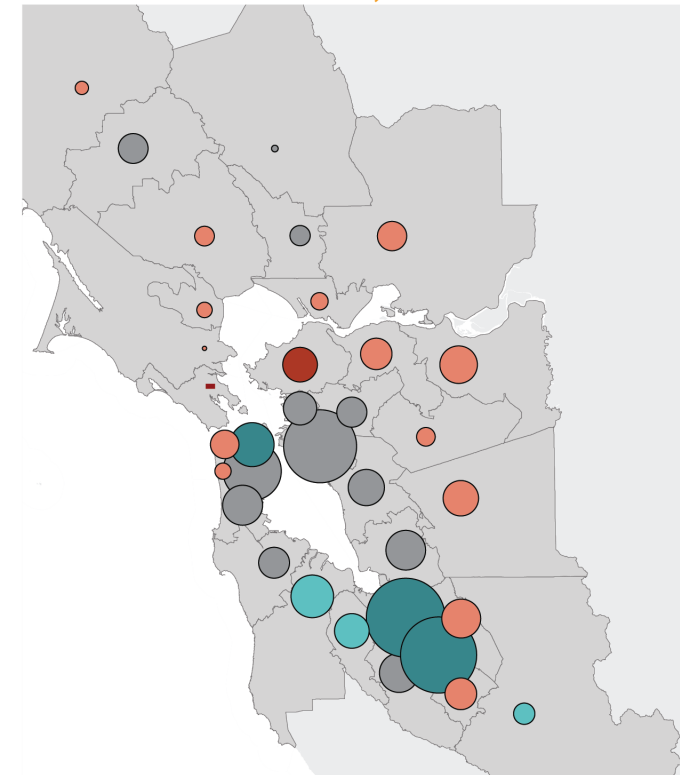
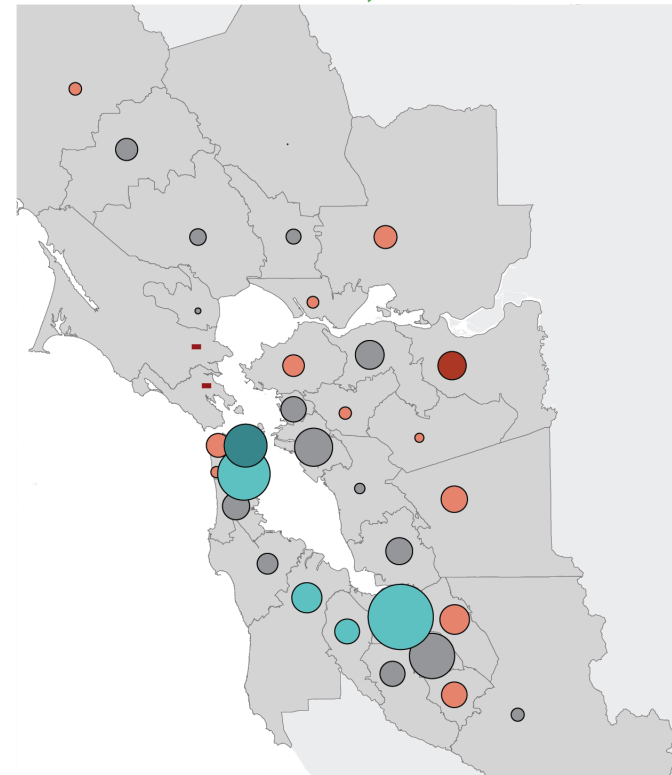
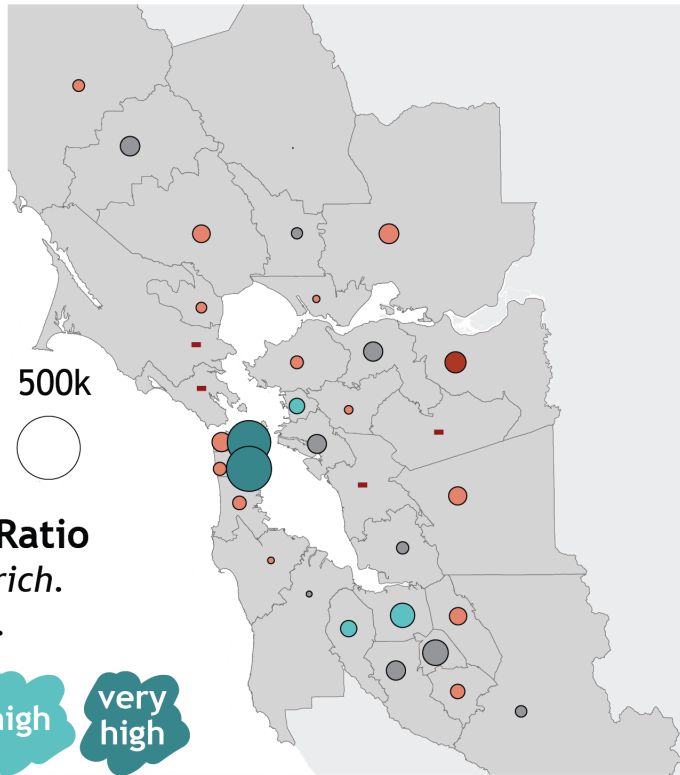
**Back to the Future**  
+2.1M Homes, +2.7M Jobs

**Overall Growth**  
Circle area represents combined job & housing growth from 2015 to 2050.

negative growth  
10k 100k 500k

**2050 Jobs/Housing Ratio**  
Red areas are housing rich.  
Blue areas are job rich.

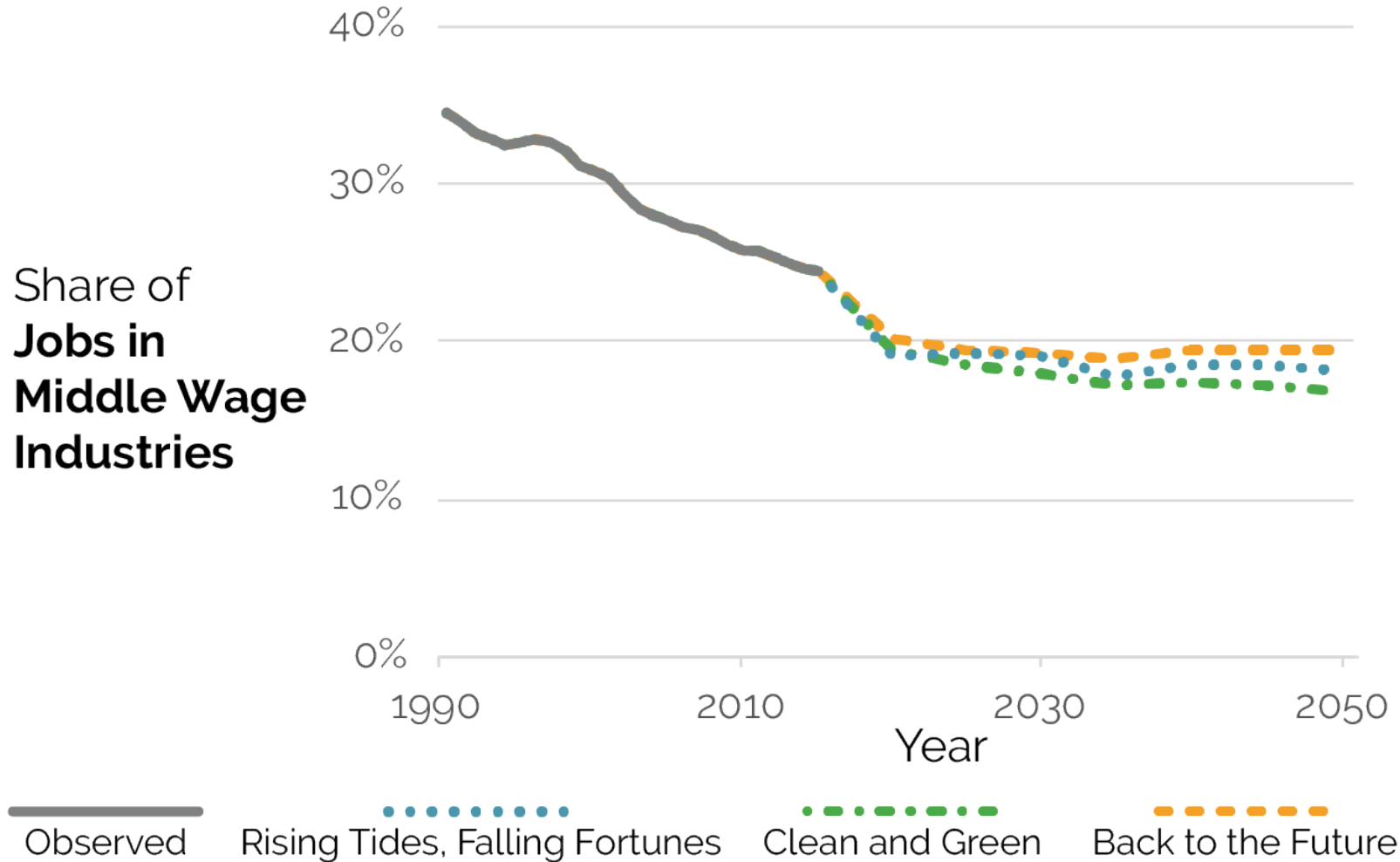
very low low avg. high very high








# Challenge #2




Middle-wage jobs continue to disappear in all three futures.



# Futures Scorecard - Guiding Principles (1)

Selected Indicators from VITAL SIGNS		2015	<i>Rising Tides, Falling Fortunes</i> 2050 Plan Bay Area 2040 Policies	<i>Clean and Green</i> 2050 Plan Bay Area 2040 Policies	<i>Back to the Future</i> 2050 Plan Bay Area 2040 Policies
 <b>AFFORDABLE</b>	<b>Housing costs</b> ( <i>share of income</i> )	26%	<b>48%</b>	<b>50%</b>	<b>52%</b>
	<b>Housing production</b> ( <i>net new units</i> )	16,000	<b>14,000</b>	<b>38,000</b>	<b>60,000</b>
 <b>CONNECTED</b>	<b>Non-auto commute mode share</b>	25%	<b>33%</b>	<b>55%</b>	<b>31%</b>
	<b>Average commute time</b> ( <i>minutes</i> )	31	<b>34</b>	<b>36</b>	<b>40</b>
 <b>DIVERSE</b>	<b>Risk of displacement</b> ( <i>share of lower-income HHs</i> )	38%	<b>14%</b>	<b>60%</b>	<b>28%</b>

# Futures Scorecard - Guiding Principles (2)

Selected Indicators from VITAL SIGNS		2015	<i>Rising Tides, Falling Fortunes</i> 2050 Plan Bay Area 2040 Policies	<i>Clean and Green</i> 2050 Plan Bay Area 2040 Policies	<i>Back to the Future</i> 2050 Plan Bay Area 2040 Policies
 <b>DIVERSE</b>	<b>Low-income population</b> <i>(share of overall population)</i>	50%	<b>54%</b>	<b>37%</b>	<b>39%</b>
 <b>HEALTHY</b>	<b>Greenhouse gas emissions</b> <i>(per-capita)</i>	3.0	<b>1.9</b>	<b>0.7</b>	<b>1.2</b>
	<b>Annual greenfield development</b> <i>(acres)</i>	1,200	<b>300</b>	<b>300</b>	<b>500</b>
 <b>VIBRANT</b>	<b>Jobs in middle-wage industries</b> <i>(share of all jobs)</i>	21%	<b>18%</b>	<b>17%</b>	<b>19%</b>
	<b>Gross regional product</b> <i>(inflation-adjusted)</i>	\$0.7 trillion	<b>\$1.1 trillion</b>	<b>\$2.1 trillion</b>	<b>\$1.9 trillion</b>

H O R I Z O N

## Futures Interim Report: Opportunities and Challenges

*The full report highlights a broader suite of opportunities and challenges, delving into specifics for each future.*

Go to: [mtc.ca.gov/our-work/plans-projects/horizon/futures-planning](https://mtc.ca.gov/our-work/plans-projects/horizon/futures-planning)





H O R I Z O N

# What's Next?

The conditions in each future present unique challenges and opportunities for the region to leverage and address in the next round of analysis.



# Next Step for Futures: Round 2

## Horizon Futures Round 2 Analysis

- *How might new strategies result in improved outcomes in each future?*
- *Which strategies are effective across many futures?*



Baseline



External  
Forces



**New  
Policies**

## Strategies are based on existing and future Perspective Papers:

- Autonomous Vehicles
- Toward a Shared Future
- Growth Strategies
- The Future of Jobs (*Coming in April*)
- Bay Crossings (*Coming in May*)
- Sea Level Rise (*Coming in September*)

## Strategies are also based on other efforts, including:

- CASA
- *BCDC's Adapting to Rising Tides Program*
- *Comprehensive Economic Development Strategy*
- *Horizon/Plan Bay Area 2050 Project Performance*





# Get Involved Planning the Region's Future!

## Stakeholder Workshop

San Francisco

3/11/19 - 8:30 AM to 1:30 PM

## Public Workshops

Oakland

3/12/19 - 6:00 PM to 8:00 PM

San Jose

3/14/19 - 6:00 PM to 8:00 PM

Petaluma

3/16/19 - 10:00 AM to 12:00 PM

San Bruno

3/19/19 - 6:00 PM to 8:00 PM

Vallejo

3/20/19 - 6:00 PM to 8:00 PM

## Online Outreach

[vitalsigns.mtc.ca.gov/horizon](http://vitalsigns.mtc.ca.gov/horizon)



We're seeking input from stakeholders & the public on which strategies would *transform each future* - and we'll report back next month.

The image displays four overlapping pages from the 'Transform-the-Future Strategy Booklet', each representing a different future scenario. The pages are tilted and layered, showing various strategies and their potential impacts.

- AFFORDABLE:** Features the strategy 'Establish Urban Reserve Housing Development'. It includes a photo of a suburban landscape and a train. The text describes expanding urban growth and supporting development in developable land. **POTENTIAL IMPACT:** Up to 5,000 homes. **ASSUMPTIONS:** Assumes one project completed every five years over a 30-year period.
- CONNECTED:** Features the strategy 'Increase Capacity and Frequency by Modernizing Existing Rail Network'. It includes a photo of a train. The text discusses future funding for rail improvements and expanding investment. **POTENTIAL IMPACT:** Increase peak-period by 25-50% and improve reliability. **ASSUMPTIONS:** This project includes \$35 billion for Muni Metro, Downtown Jose light rail modernization, and grade separation. **ASSUMPTIONS:** In addition to the policy measures, an annual subsidy would provide the legal counsel and rental assistance.
- DIVERSE:** Features the strategy 'Increase Renter Protection'. It includes a photo of three people talking. The text describes a suite of four strategies to help current Bay Area renters stay in their communities. **POTENTIAL IMPACT:** Protect 36,000 low-income households annually. **ASSUMPTIONS:** In addition to the policy measures, an annual subsidy would provide the legal counsel and rental assistance.
- HEALTHY:** Features the strategy 'Fully Adapt to Sea Level Rise'. It includes a photo of a coastal area. The text describes purchasing a \$5 billion catastrophe bond. **POTENTIAL IMPACT:** \$5 billion available for Plan Bay Area policies during disaster recovery. **ASSUMPTIONS:** A set of parametric catastrophe funds in the region with immediate and flexible funds in the event of an earthquake, flood, or fire. **POTENTIAL IMPACT:** 6 points. **ASSUMPTIONS:** 4 points.
- VIBRANT:** Features the strategy 'Establish Priority Production Areas to Protect Industrial Lands'. It includes a photo of industrial buildings. The text describes designating priority production areas for manufacturing, distribution, and repair. **POTENTIAL IMPACT:** 2 points. **ASSUMPTIONS:** The region's 600,000-plus jobs on industrial land are projected to grow to 750,000 by 2040 given the PBA 2040 growth scenario. **ASSUMPTIONS:** Industrial lands have a comparatively high share of the region's jobs that provide middle-wage opportunities for workers without a college degree. These businesses also provide support services for a broad range of business activities throughout the Bay Area.

More information available at:  
[mtc.ca.gov/our-work/plans-projects/horizon/futures-planning](https://mtc.ca.gov/our-work/plans-projects/horizon/futures-planning)