



375 Beale Street  
Suite 700  
San Francisco, California  
94105

## Meeting Agenda - Final

### ABAG Administrative Committee

*Chair, David Rabbitt, Supervisor, County of Sonoma*  
*Vice Chair, Jesse Arreguin, Mayor, City of Berkeley*

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Friday, July 12, 2019

9:35 AM

Board Room - 1st Floor

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#### Association of Bay Area Governments Administrative Committee

The ABAG Administrative Committee may act on any item on the agenda.  
The ABAG Administrative Committee will meet jointly with the MTC Planning Committee.

The meeting is scheduled to begin at 9:35 a.m.,  
or immediately following the preceding committee meeting.  
Agenda, roster, and webcast available at <https://abag.ca.gov>  
For information, contact Clerk of the Board at (415) 820-7913.

#### Location

375 Beale Street, 1st Floor, Board Room, San Francisco, California

#### Teleconference Location

200 E. Santa Clara Street, 18th Floor, Conference Room 1853, San Jose, California

#### Roster

Jesse Arreguin, Cindy Chavez, David Cortese, Scott Haggerty, Karen Mitchoff, Raul Peralez,  
Julie Pierce, David Rabbitt, Belia Ramos

#### 1. Call to Order / Roll Call / Confirm Quorum

#### 2. ABAG Compensation Announcement - Clerk of the Board

#### 3. ABAG Administrative Committee Consent Calendar

- 3.a. [19-0798](#) Approval of ABAG Administrative Committee Minutes of May 10, 2019  
and May 22, 2019

Action: ABAG Administrative Committee Approval

Attachments: [AC Minutes 20190510 Draft.pdf](#)  
[AC Minutes 20190522 Draft.pdf](#)

#### 4. MTC Planning Committee Consent Calendar

- 4.a. [19-0727](#) Approval of MTC Planning Committee Minutes of the June 14, 2019  
Meeting

Action: MTC Planning Committee Approval

Attachments: [4a MTC PLNG Minutes June 14 2019.pdf](#)

## 5. Information

### 5.a. [19-0729](#) Plan Bay Area 2050: Public Engagement Overview

Presentation of the Plan Bay Area 2050 (Plan) public engagement plan, from promotion prior to Plan kickoff in September 2019 through adoption in summer 2021.

**Action:** Information

**Presenter:** Ursula Vogler

**Attachments:** [5a\\_PBA2050\\_Public Engagement Overview.pdf](#)

### 5.b. [19-0728](#) Plan Bay Area 2050: Regional Growth Forecast Methodology

Report on Plan Bay Area 2050: Regional Growth Forecast Methodology.

**Action:** Information

**Presenter:** Cynthia Kroll

**Attachments:** [5b\\_PBA 2050-Regional Growth Forecast Methodology.pdf](#)

## 6. Public Comment / Other Business

*Information*

## 7. Adjournment / Next Meeting

*The next meeting of the ABAG Administrative Committee is on September 13, 2019.*

**Public Comment:** The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

**Meeting Conduct:** If this meeting is willfully interrupted or disrupted by one or more persons rendering orderly conduct of the meeting unfeasible, the Chair may order the removal of individuals who are willfully disrupting the meeting. Such individuals may be arrested. If order cannot be restored by such removal, the members of the Committee may direct that the meeting room be cleared (except for representatives of the press or other news media not participating in the disturbance), and the session may continue.

**Record of Meeting:** Committee meetings are recorded. Copies of recordings are available at a nominal charge, or recordings may be listened to at MTC offices by appointment. Audiocasts are maintained on MTC's Web site ([mtc.ca.gov](http://mtc.ca.gov)) for public review for at least one year.

**Accessibility and Title VI:** MTC provides services/accommodations upon request to persons with disabilities and individuals who are limited-English proficient who wish to address Commission matters. For accommodations or translations assistance, please call 415.778.6757 or 415.778.6769 for TDD/TTY. We require three working days' notice to accommodate your request.

**可及性和法令第六章:** MTC 根據要求向希望來委員會討論有關事宜的殘疾人士及英語有限者提供服務/方便。需要便利設施或翻譯協助者，請致電 415.778.6757 或 415.778.6769 TDD / TTY。我們要求您在三個工作日前告知，以滿足您的要求。

**Acceso y el Titulo VI:** La MTC puede proveer asistencia/facilitar la comunicación a las personas discapacitadas y los individuos con conocimiento limitado del inglés quienes quieran dirigirse a la Comisión. Para solicitar asistencia, por favor llame al número 415.778.6757 o al 415.778.6769 para TDD/TTY. Requerimos que solicite asistencia con tres días hábiles de anticipación para poderle proveer asistencia.

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Attachments are sent to Committee members, key staff and others as appropriate. Copies will be available at the meeting.

All items on the agenda are subject to action and/or change by the Committee. Actions recommended by staff are subject to change by the Committee.



ABAG

# Metropolitan Transportation Commission

375 Beale Street, Suite 800  
San Francisco, CA 94105

## Legislation Details (With Text)

**File #:** 19-0798      **Version:** 1      **Name:**

**Type:** Minutes      **Status:** Consent

**File created:** 6/17/2019      **In control:** ABAG Administrative Committee

**On agenda:** 7/12/2019      **Final action:**

**Title:** Approval of ABAG Administrative Committee Minutes of May 10, 2019 and May 22, 2019

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [AC Minutes 20190510 Draft.pdf](#)  
[AC Minutes 20190522 Draft.pdf](#)

Date	Ver.	Action By	Action	Result
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Approval of ABAG Administrative Committee Minutes of May 10, 2019 and May 22, 2019

ABAG Administrative Committee Approval



375 Beale Street  
Suite 700  
San Francisco, California  
94105

## Meeting Minutes - Draft

### ABAG Administrative Committee

*Chair, David Rabbitt, Supervisor, County of Sonoma*  
*Vice Chair, Jesse Arreguin, Mayor, City of Berkeley*

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Friday, May 10, 2019

1:00 PM

Board Room - 1st Floor

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#### Association of Bay Area Governments Administrative Committee

The ABAG Administrative Committee may act on any item on the agenda.  
The ABAG Administrative Committee will meet jointly with the MTC Planning Committee.

The meeting is scheduled to begin at 1:00 p.m.

Agenda, roster, and webcast available at <http://abag.ca.gov>  
For information, contact Clerk of the Board at (415) 820-7913.

**Location**  
Bay Area Metro Center, 375 Beale Street, Board Room, San Francisco, California

**Roster**  
Jesse Arreguin, Cindy Chavez, Julie Combs, David Cortese, Scott Haggerty, Jake Mackenzie,  
Karen Mitchoff, Raul Perez, Julie Pierce, David Rabbitt, Belia Ramos

#### 1. Call to Order / Roll Call / Confirm Quorum

Chair Rabbitt called the meeting to order at about 3:55 p.m. Quorum was present.

**Present:** 6 - Arreguin, Haggerty, Mackenzie, Mitchoff, Pierce, and Rabbitt

**Absent:** 4 - Chavez, Cortese, Perez, and Ramos

#### 2. ABAG Compensation Announcement - Clerk of the Board

The ABAG Clerk of the Board gave the compensation announcement.

#### 3. ABAG Administrative Committee Consent Calendar

- 3.a. [19-0502](#) Approval of ABAG Administrative Committee Summary Minutes of the April 12, 2019 Meeting

Upon the motion by Haggerty and second by Arreguin, the ABAG Administrative Committee Consent Calendar, including approval of the minutes of April 12, 2019, was approved. The motion passed unanimously by the following vote:

**Aye:** 6 - Arreguin, Haggerty, Mackenzie, Mitchoff, Pierce, and Rabbitt

**Absent:** 4 - Chavez, Cortese, Peralez, and Ramos

#### 4. MTC Planning Committee Consent Calendar

The MTC Planning Committee took action on this item.

- 4.a. [19-0504](#) Approval of MTC Planning Committee Minutes of the April 12, 2019 Meeting
- 4.b. [19-0505](#) Federal Performance Target-Setting Update - May 2019
- 4.c. [19-0506](#) Draft Transportation-Air Quality Conformity Analysis for the Amended Plan Bay Area 2040 and the 2019 Transportation Improvement Program

#### 5. Approval

- 5.a. [19-0507](#) Plan Bay Area 2050 - Regional Growth Framework Revisions

Staff is presenting a status and performance report on current Priority Development Areas (PDAs) as requested at prior meetings. In addition, staff is requesting that the ABAG Administrative Committee and MTC Planning Committee refer the proposed revisions to the Regional Growth Framework (PDA, Priority Conservation Area and proposed new Priority Production Area pilot) highlighted in this memo and its attachments to their respective governing boards for approval.

Mark Shorett gave the staff report.

The following individuals gave public comment: Amelia Thompson, Duane De Witt.

**Upon the motion by Pierce and second by Haggerty, the ABAG Administrative Committee recommended ABAG Executive Board adoption of Resolution No. 02-19, which includes the revised definition for Priority Development Areas (PDAs); proposed definition for Priority Production Areas (PPAs); submission window for local jurisdictions and partner organizations to submit new or modified PDAs and Priority Conservation Areas (PCAs), and new PPAs. The motion passed unanimously by the following vote:**

**Aye:** 6 - Arreguin, Haggerty, Mackenzie, Mitchoff, Pierce, and Rabbitt

**Absent:** 4 - Chavez, Cortese, Peralez, and Ramos

#### 6. Public Comment / Other Business

There was no public comment.

**7. Adjournment / Next Meeting**

Chair Rabbitt adjourned the meeting at about 4:50 p.m. The next meeting of the ABAG Administrative Committee is on June 14, 2019.



375 Beale Street  
Suite 700  
San Francisco, California  
94105

## Meeting Minutes - Draft

### ABAG Administrative Committee

*Chair, David Rabbitt, Supervisor, County of Sonoma*  
*Vice Chair, Jesse Arreguin, Mayor, City of Berkeley*

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Wednesday, May 22, 2019

10:30 AM

Board Room - 1st Floor

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#### Association of Bay Area Governments Administrative Committee

##### Special Meeting

The ABAG Administrative Committee may act on any item on the agenda.

The meeting is scheduled to begin at 10:30 a.m.,  
or immediately following the preceding MTC Commission meeting, whichever is later.

Agenda, roster, and webcast available at <https://abag.ca.gov>

For information, contact Clerk of the Board at (415) 820-7913.

##### Location

Bay Area Metro Center, 375 Beale Street, Golden Gate Conference Room 8102, San Francisco,  
California

##### Teleconference Locations

Office of Mayor Jesse Arreguin, 2180 Milvia Street, 5th Floor, Berkeley, California

Napa County Administration Building, 1195 Third Street, Suite 310, Napa, California

##### Roster

Jesse Arreguin, Cindy Chavez, David Cortese, Scott Haggerty, Jake Mackenzie, Karen  
Mitchoff, Raul Peralez, Julie Pierce, David Rabbitt, Belia Ramos

#### 1. Call to Order / Roll Call / Confirm Quorum

Chair Rabbitt called the meeting to order at about 11:48 a.m. The following  
committee members participated by teleconference: Arreguin, Ramos.  
Quorum was present.

**Present:** 8 - Arreguin, Cortese, Haggerty, Mackenzie, Mitchoff, Pierce, Rabbitt, and Ramos

**Absent:** 2 - Chavez, and Peralez

#### 2. Public Comment

There was no public comment.

#### 3. Committee Announcements

There were no committee member announcements.



#### 4. Chair's Report

There was no Chair's Report.

#### 5. Adoption of Resolution No. 02-19 Approval of the Plan Bay Area 2050 - Regional Growth Strategies Framework Revisions: Next Steps

5.        [19-0629](#)        Adoption of Resolution No. 02-19 Approval of the Plan Bay Area 2050 - Regional Growth Strategies Framework Revisions: Next Steps

There was no public comment.

**Upon the motion by Mitchoff and second by Arreguin, the ABAG Administrative Committee adopted Resolution No. 02-19. The motion carried unanimously by the following vote:**

**Aye:**    8 -    Arreguin, Cortese, Haggerty, Mackenzie, Mitchoff, Pierce, Rabbitt, and Ramos

**Absent:** 2 -    Chavez, and Peralez

#### 6. Adjournment / Next Meeting

Chair Rabbitt adjourned the meeting at about 11:52 a.m. The next meeting of the ABAG Administrative Committee is on June 14, 2019.

# Metropolitan Transportation Commission

## Legislation Details (With Text)

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**File #:** 19-0727      **Version:** 1      **Name:**

**Type:** Minutes      **Status:** Consent

**File created:** 6/7/2019      **In control:** Joint MTC Planning Committee with the ABAG Administrative Committee

**On agenda:** 7/12/2019      **Final action:**

**Title:** Approval of MTC Planning Committee Minutes of the June 14, 2019 Meeting

**Sponsors:**

**Indexes:**

**Code sections:**

**Attachments:** [4a MTC PLNG Minutes June 14 2019.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

Approval of MTC Planning Committee Minutes of the June 14, 2019 Meeting

**Recommended Action:**

MTC Planning Committee Approval

**Attachments:**



# Metropolitan Transportation Commission

## Meeting Minutes - Draft

### Agenda Item 4a

Bay Area Metro Center  
375 Beale Street  
San Francisco, CA 94105

## Planning Committee

### *Committee Members:*

*James P. Spering, Chair Anne W. Halsted, Vice Chair*

*Damon Connolly, Dave Cortese, Sam Liccardo, Jake*

*Mackenzie, David Rabbitt, Warren Slocum*

*Non-Voting Members: Dorene M. Giacomini and Janea Jackson*

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Friday, June 14, 2019

9:35 AM

Board Room - 1st Floor

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### 1. Roll Call / Confirm Quorum

**Present:** 5 - Chair Spering, Vice Chair Halsted, Commissioner Cortese, Commissioner Mackenzie, and Commissioner Slocum

**Absent:** 3 - Commissioner Connolly, Commissioner Rabbitt, and Commissioner Liccardo

Non-Voting Member Present: Commissioner Giacomini

Non-Voting Member Absent: Commissioner Jackson

Ex Officio Voting Member Present: Commission Chair Haggerty

Ad Hoc Non-Voting Member Present: Commissioner Josefowitz

### 2. Consent Calendar

**Upon the motion by Commissioner Mackenzie and second by Vice Chair Halsted, the Consent Calendar was unanimously approved. The motion carried by the following vote:**

**Aye:** 5 - Chair Spering, Vice Chair Halsted, Commissioner Cortese, Commissioner Mackenzie and Commissioner Slocum

**Absent:** 3 - Commissioner Connolly, Commissioner Rabbitt and Commissioner Liccardo

#### 2a. [19-0576](#) Approval of Planning Committee Minutes of the May 10, 2019 Meeting

**Action:** Committee Approval

**Attachments:** [2a\\_MTC\\_PLNG\\_Minutes\\_May\\_10\\_2019.pdf](#)

- 2b.**     [19-0372](#)     MTC Resolution No. 3000, Revised - Congestion Management Program Policy

**Action:** Committee Approval

**Presenter:** Adam Noelting

**Attachments:** [2b Reso-3000 CMP Guidance.pdf](#)

- 2c.**     [19-0380](#)     MTC Resolution No. 4387 - Final Transportation-Air Quality Conformity Analysis for the Amended Plan Bay Area 2040 and the 2019 Transportation Improvement Program

**Action:** Commission Approval

**Presenter:** Harold Brazil

**Attachments:** [6k Planning Reso-4387 Final Transportation-Air Quality Conformity Analysis.pdf](#)

### **3. Public Comment / Other Business**

### **4. Adjournment / Next Meeting**

The next meeting of the Planning Committee will be Friday, July 12, 2019 at 9:35 a.m. at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.

# Metropolitan Transportation Commission

## Legislation Details (With Text)

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**File #:** 19-0729      **Version:** 1      **Name:**

**Type:** Report      **Status:** Informational

**File created:** 6/7/2019      **In control:** Joint MTC Planning Committee with the ABAG Administrative Committee

**On agenda:** 7/12/2019      **Final action:**

**Title:** Plan Bay Area 2050: Public Engagement Overview

Presentation of the Plan Bay Area 2050 (Plan) public engagement plan, from promotion prior to Plan kickoff in September 2019 through adoption in summer 2021.

**Sponsors:****Indexes:****Code sections:****Attachments:** [5a\\_PBA2050\\_Public\\_Engagement\\_Overview.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

Plan Bay Area 2050: Public Engagement Overview

Presentation of the Plan Bay Area 2050 (Plan) public engagement plan, from promotion prior to Plan kickoff in September 2019 through adoption in summer 2021.

**Presenter:**

Ursula Vogler

**Recommended Action:**

Information

**Attachments:**

Metropolitan Transportation Commission and the Association of Bay Area Governments  
**Joint MTC Planning Committee with the ABAG Administrative Committee**

July 12, 2019

Agenda Item 5a

**Plan Bay Area 2050: Public Engagement Overview**

- Subject:** Presentation of the Plan Bay Area 2050 (Plan) public engagement plan, from promotion prior to Plan kickoff in September 2019 through adoption in summer 2021.
- Background:** In April 2018, the Commission approved MTC's Public Participation Plan (PPP) and its Appendix A, which outlined the anticipated approach and schedule for Plan Bay Area 2050 public engagement. The PPP anticipated that the Plan's engagement would take a new approach from past Plans, striving to invigorate engagement efforts and go above and beyond federal and state requirements. Since that time, and with the introduction of Horizon, public engagement reached more people in different ways, creating opportunities to hear from people not normally part of the planning process. With Plan Bay Area 2050, staff is proposing to build on these efforts to deliver a comprehensive public engagement program that encourages residents, especially low-income communities and communities of color, to participate in the decisions that affect them.
- Issues:** Staff anticipates that there will be four phases of public engagement for Plan Bay Area 2050:
- Prior to the Plan: Promotional Activities (July to September 2019)
  - Phase I: Plan Bay Area 2050 Kickoff (October and November 2019)
  - Phase II: Input on Draft Preferred Scenario (April and May 2020)
  - Phase III: Input on Draft Plan and Draft EIR (February and March 2021)
- Staff proposes using both innovative and tried-and-true strategies to deliver a comprehensive public engagement program, including:
1. Improved promotion of the Plan Bay Area 2050 brand via a social media marketing campaign aimed at growing new followers and increasing comments from previously unheard voices during public engagement;
  2. Use of innovative strategies aimed at maximizing the quality and number of comments, use "pop-up" workshops at existing community events as well as a variety of digital engagement tools;
  3. Ongoing engagement with the following groups:
    - a. Community-based organizations to receive input from low-income and limited English proficient populations and to promote existing events;
    - b. Federally-recognized tribal communities throughout the Plan Bay Area 2050 process; and
    - c. Youth via the Y-PLAN program to receive input on key Plan Bay Area 2050 issues.
  4. Enhanced engagement with our stakeholders via webinars and the Regional Advisory Working Group; and
  5. Implementation of a statistically valid telephone poll to the nine-county Bay Area.
- Next Steps:** Taking into account input from working groups and committees in July, staff will begin promotional activities in advance of the anticipated Plan kickoff this fall.
- Attachments:** **Attachment A:** Plan Bay Area 2050 Public Engagement Plan  
**Attachment B:** Presentation

  
Alix Bockelman

## Plan Bay Area 2050 Public Engagement Plan Overview of Engagement Activities

Agenda Item 5a

MTC and ABAG are committed to an active public engagement process that provides comprehensive information, timely public notice and full public access to key decisions. Appendix A of the adopted Public Participation Plan (available at [www.planbayarea.org/get-involved/public-participation-plan](http://www.planbayarea.org/get-involved/public-participation-plan)) uses these tenets to establish an engagement framework for Plan Bay Area 2050, and provides an overview of the Plan's engagement strategies and an anticipated timeline. The information below provides more detail of the engagement activities by phase, including specific recommendations on engagement tactics and an updated engagement calendar.

### **Prior to Plan Kickoff: Promotional Activities (July to September 2019)**

In order to introduce Plan Bay Area 2050 (Plan) to the public and stakeholders, and to grow the database of interested participants and encourage participation in the Plan Bay Area 2050 process, staff recommends promoting the Plan prior to its kick-off using the following proposed strategies:

#### **a) Plan Bay Area 2050 Brand Promotion**

Using video segments featured on social media and podcast sessions with local radio (e.g., KQED, KCBS), the approach will serve to explain Plan Bay Area 2050 to the Bay Area public to encourage residents to get involved in the long-range planning process. As we believe that early engagement will encourage ongoing participation throughout the process, promotional efforts would begin in summer 2019 and would continue through Plan adoption in 2021.

#### **b) "Plan Bay Area 2050 Summer Webinar Series"**

Staff experienced recent success with webinars, which allow for live interactive presentations to be made to remote participants. The webinars would showcase some of the preparatory activities for Plan Bay Area 2050, as well as reviewing the foundational work completed through Horizon. Potential webinar topics include an overview of the Plan Bay Area 2050 process both for partners and stakeholders, recaps on recent Horizon planning activities for new stakeholders and members of the public, guidance on updates to the Regional Growth Framework for local jurisdictions, and information on upcoming public engagement.

### **Phase I: Kick-off of Plan Bay Area 2050 (October and November 2019)**

Focused primarily on further prioritizing strategies (e.g., policies and investments) analyzed as part of Horizon, staff recommends use of innovative engagement tactics in order to reach more people and receive more input using the following proposed engagement strategies:

#### **a) "Pop-up" Workshops**

Hugely successful in the early months of the Horizon initiative, this format consists of meeting people "where they are" at public events/venues (e.g., farmers markets, art festivals, libraries and transit centers, etc.). Instead of holding traditional open houses that attract fewer people, "pop-ups" allow us to use existing venues and gatherings to

increase participation. “Pop-up” workshops are mobile, light and inexpensive, with more limited staff participation (two to three staff per location) - meaning more events can be held in each county. To increase participation even more, we will ask MTC’s eight Community-based Organizations (CBOs) to promote the pop-up workshops to their members and guide us in our selection of venues. These events will also be promoted to the public to ensure that everyone has the opportunity to comment.

**b) Digital Tool**

Aimed at reaching a younger, less traditional audience and those who may not be interested in attending a workshop, a Plan Bay Area 2050 digital tool will be launched this fall. The tool, like a video game, will use gamification to entice participants to provide feedback on strategies for transportation, housing, economic development, and resilience - similar to the content being showcased at pop-up workshops. The digital tool will be promoted via social media in order to maximize participation.

**c) Webinars**

Staff is planning to continue several webinars throughout fall 2019, enabling more detailed information to be presented to a broader array of participants across the region.

**d) Statistically Valid Poll**

As in past Plan cycles, staff recommends conducting a statistically valid telephone survey of Bay Area residents. The questions will focus on Plan Bay Area 2050, with input received being able to be integrated into components of the Preferred Scenario.

**Phase II: Input on Draft Preferred Scenario (April and May 2020)**

This phase will showcase the regional blueprint established in the Draft Preferred Scenario, reflecting how strategies influence the location of growth, the performance of the transportation system, etc. Given the complexity of the information, staff recommends a multi-faceted approach to engagement, including holding workshops/open houses and other conversational engagement to ensure the public can provide detailed comments, and using digital engagement to maximize participation.

**a) Workshops**

During this key phase, the traditional workshop/open house format generally works best, as complex topics are described and detailed input is requested. This format consists of participants visiting individual tables or “stations” to gain information from knowledgeable staff members. The public would provide input via interactive displays and/or comment cards at the event. We recommend holding two workshops in each county, promoting them in advance to ensure everyone has an opportunity to comment.

**b) CBO Focus Groups**

Proven to be quite successful in each Plan cycle, CBO focus groups allow us to ask detailed questions and get in-depth responses to key questions. The topics would mirror the workshops, with each CBO potentially delving into one or more specific topic areas.



**c) Digital Engagement: Online Surveys and Video**

During the Horizon initiative, online surveys were successfully used to obtain input from online participants. For Plan Bay Area 2050, surveys will be combined with video to outline the Draft Preferred Scenario to the public and then request input. Both would be promoted via social media to increase participation.

**d) “Coffee Conversations”**

This type of engagement brings together partners, stakeholders, private sector business groups and/or members of the public with MTC/ABAG staff in a casual and intimate setting, potentially over a cup of coffee. The goal of these conversations would be to delve into various topics related to Plan Bay Area 2050, and for MTC/ABAG staff to have time to flesh out the ideas discussed. This tactic would be most useful when tackling a particular question or issue within the Draft Preferred Scenario.

**e) Webinars**

Staff is planning to continue webinars, this cycle focusing on bringing the Draft Preferred Scenario to a broad array of stakeholders and the public for input.

**Phase III: Input on Draft Plan and Draft EIR (February and March 2021)**

The final phase of engagement activities is outlined below. We recommend, however, remaining flexible with engagement tactics as the planning process unfolds.

**a) Workshops**

Similar to Phase II, the traditional workshop/open house format also works best during this phase, when, in addition to complex material, multiple documents (e.g., Draft Plan, Environmental Impact Report and Transportation Improvement Program) are required to be available for viewing. We will host one workshop in each Bay Area county.

**b) Public Hearings on the Draft Environmental Impact Report (EIR) and Draft Plan**

A statutory requirement of the Plan, three public hearings will be held around the region and will serve as public hearings on the Draft Plan Document and the. For the Draft EIR, a Notice of Preparation will be issued and a public scoping meeting(s) will be held to explain the environmental process and solicit early input on areas of concern. A public comment period will be established for written and oral public comments, as per guidelines under the California Environmental Quality Act (CEQA); responses to comments will be in the Final EIR.

**c) CBO Focus Groups and Video/Surveys**

We will continue use of CBO focus groups to gather input on the Draft Plan, as well as the use of video and surveys to inform and gather input from the public and our partners on the specifics of the Draft Plan.

**d) Forums with Business Groups + Federal & State Agencies**

A statutory requirement, we will obtain input on the Draft Plan from our partner agencies and members of the private sector. Forums would take place at the Bay Area Metro Center and would involve a round table format.

The background is a collage of images related to public engagement. It includes a blue header with a white wavy line, a person's hand pointing at a large map with colorful markers, and a person's hand holding a pen over a document. The text "PLAN BAY AREA 2050" is overlaid on the blue header.

PLAN BAY AREA 2050

# Public Engagement Overview

Joint MTC Planning Committee with the  
ABAG Administrative Committee

July 12, 2019

# The Approach

- Grow followers early to increase participants
- Encourage participation by low-income communities and communities of color
- Go well above-and-beyond federal and state requirements



# What's New

- **Enhanced Promotion + Innovative Engagement**
  - Promotion of Plan Bay Area 2050 brand via social media
  - “Pop-up” workshops in Phase I
  - “Coffee Conversations” with interested public
  - More CBO and youth engagement



# What's New

- **Enhanced Digital Engagement**
  - Digital tool
  - Social media
  - Embedded video
  - Online surveys



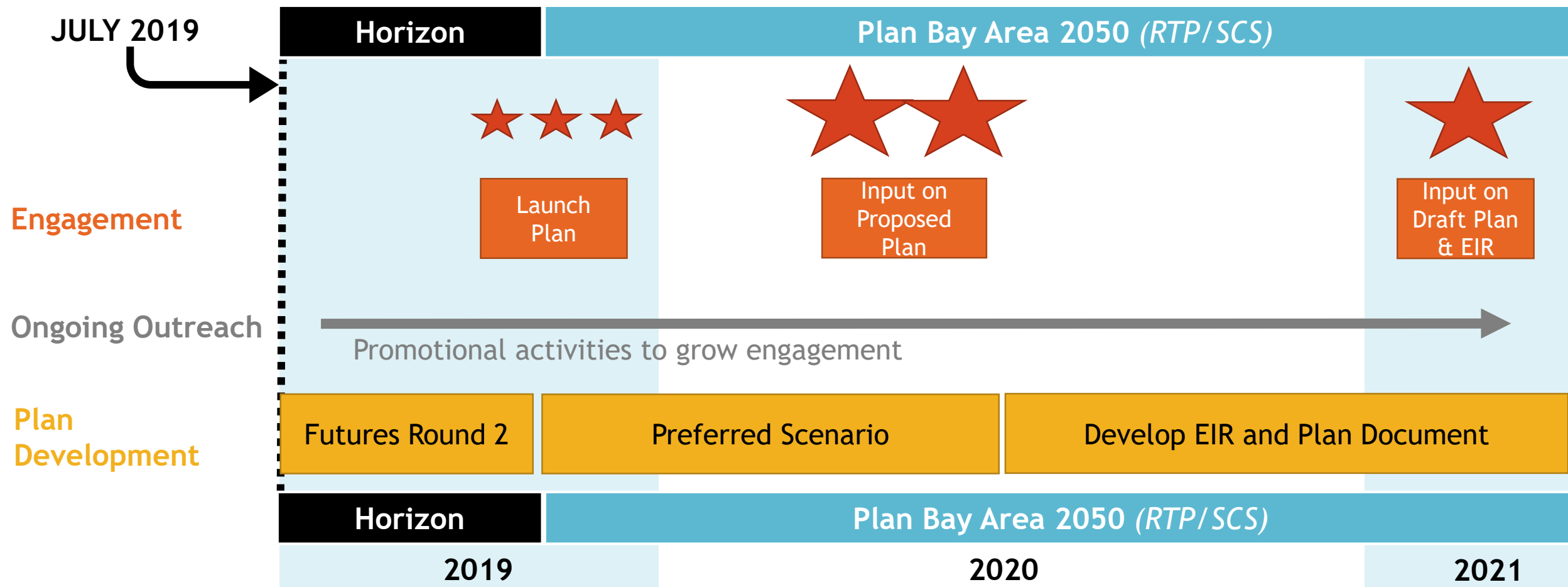


# Building Upon Traditional Engagement Techniques

- Webinars
- Statistically Valid Telephone Poll
- Open Houses
- Forums with Community Groups



# Plan Bay Area 2050 Schedule: Outreach & Engagement





# Prior to the Plan (July to September 2019)

## Focus Area

Increase participation during Plan Bay Area 2050 engagement through promotional activities

## Tactics

1. Plan Bay Area 2050 Brand Promotion
  - a. Video segment promotion on social media
  - b. Podcast sessions with local radio stations
2. “Plan Bay Area 2050 Summer Webinar Series”





# Phase I: Plan Bay Area 2050 Kickoff (October and November 2019)

## Focus Area

Prioritize high-performing Horizon strategies for consideration in Preferred Scenario

## Tactics

1. Pop-up Workshops (*20-30 locations across the Bay Area*)
2. Digital Tool (*use of gamification to engage new participants*)
3. Webinars for Stakeholders & Public
4. Statistically-Valid Telephone Poll





# Phase II: Draft Preferred Scenario Input (April and May 2020)

## Focus Area

Request input/feedback on Draft Preferred Scenario

## Tactics

1. Workshops (*18 locations; 2 per county*)
2. CBO Focus Groups
3. Digital Engagement (*video & online surveys*)
4. “Coffee Conversations” (*small group discussions on specific Plan topics*)
5. Webinars for Stakeholders & Public



# Phase III: Draft Plan/EIR Input (February and March 2021)

## Focus Area

Request input/feedback on Draft  
Plan Document & Draft EIR

## Tactics

1. Workshops/Open Houses
2. EIR Public Hearings
3. CBO Focus Groups
4. Draft Plan Bay Area 2050  
Video
5. Forums with Business Groups,  
Federal/State Agencies, etc.





## Questions?

*Contact MTC/ABAG staff with any follow-up questions:*

Ursula Vogler, Principal, Public Engagement:  
[uvogler@bayareametro.gov](mailto:uvogler@bayareametro.gov)

Dave Vautin, Plan Bay Area 2050 Project Manager:  
[dvautin@bayareametro.gov](mailto:dvautin@bayareametro.gov)

# Metropolitan Transportation Commission

## Legislation Details (With Text)

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**File #:** 19-0728      **Version:** 1      **Name:**

**Type:** Report      **Status:** Informational

**File created:** 6/7/2019      **In control:** Joint MTC Planning Committee with the ABAG Administrative Committee

**On agenda:** 7/12/2019      **Final action:**

**Title:** Plan Bay Area 2050: Regional Growth Forecast Methodology

Report on Plan Bay Area 2050: Regional Growth Forecast Methodology.

**Sponsors:****Indexes:****Code sections:**

**Attachments:** [5b\\_PBA 2050-Regional Growth Forecast Methodology.pdf](#)

Date	Ver.	Action By	Action	Result
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**Subject:**

Plan Bay Area 2050: Regional Growth Forecast Methodology

Report on Plan Bay Area 2050: Regional Growth Forecast Methodology.

**Presenter:**

Cynthia Kroll

**Recommended Action:**

Information

**Attachments:**

**Metropolitan Transportation Commission and the Association of Bay Area Governments  
Joint MTC Planning Committee with the ABAG Administrative Committee**

July 12, 2019

Agenda Item 5b

**Plan Bay Area 2050: Regional Growth Forecast Methodology**

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**Subject:** Report on Plan Bay Area 2050: Regional Growth Forecast Methodology

**Background:** Staff will present the approach, tools and assumptions underlying the Regional Growth Forecast of total jobs, population, and households for Plan Bay Area 2050.

In preparation for crafting the growth pattern for Plan Bay Area 2050, it is necessary to first understand how much the region will likely grow over the next 30 years.

Building upon the work from Horizon which explored three different futures and associated growth trajectories, Plan Bay Area 2050 will require a Regional Growth Forecast for use in the development of the regional plan.

The Regional Growth Forecast estimates of jobs, population, and households will serve as a key input to the UrbanSim 2.0 land use model, which will identify likely locations for future growth based on the ultimate Plan's strategies.

This presentation will focus on the methods used for creating the Regional Growth Forecast, putting it in the broader context of the Plan Bay Area 2050 development process.

**Issues:** **How will Plan Bay Area 2050 be analyzed?**

Each version of Plan Bay Area (officially the Regional Transportation Plan / Sustainable Communities Strategy) has relied upon a Regional Growth Forecast of how total levels of employment, population, and households will change across the nine-county region over the Plan lifespan and at what income levels. Further analysis of the Plan is conducted using a land use model (UrbanSim 2.0) to identify where growth will locate inside the region, and a transportation model (Travel Model 1.5) that will explore the travel patterns and transportation impacts generated by this growth.

**What tools are used?**

The Regional Growth Forecast makes use of the Bay Area Regional Economic Modeling Inc. (REMI) 2.2 model. Additional analysis of household, income and in-commute patterns are done using analytic techniques created in-house. Ultimately, the results inform and may be informed by UrbanSim 2.0 and Travel Model 1.5.

**How are the underlying assumptions determined?**

At the regional forecast stage, the assumptions are mainly technical in nature. When we reach the stage of the local area forecast, a number of land use policy assumptions will be made in consultation with regional planners, while at the same time strategies will be vetted by the public and key stakeholders. For the Regional Growth Forecast, the ABAG/MTC team has worked with the Center for Continuing Study of the California Economy and with a technical advisory committee of economic, demographic, real estate, and model experts to discuss assumptions and provide

feedback on the Regional Growth Forecast methodology. Economists and demographers from the California Department of Finance are also consulted.

**What is new for Plan Bay Area 2050?**

There will be more attention to how the information provided by one model can inform other parts of the analysis, so that the Regional Growth Forecast of population, jobs and households takes into account the impacts of strategies for housing, economic development, and beyond. Furthermore, the Regional Growth Forecast will for the first time extend through the year 2050 – the horizon year for this planning cycle.

**Next Steps:**

This initial presentation of the forecasting methodology gives staff time to incorporate suggestions and address unanticipated concerns.

The methodology was presented to the ABAG Regional Planning Committee on June 5 and to the ABAG Administrative Committee on July 12 with input from committee members and public comment.

Between mid-July and mid-August, public comments are requested on the Regional Growth Forecast methodology; in combination with a public hearing, final approval of this methodology will be requested by the September ABAG Executive Board meeting.

Staff will continue improving the method of iterating results between REMI 2.2, UrbanSim 2.0 and Travel Model 1.5 over the summer with the goal of developing a Draft Regional Growth Forecast by fall 2019.

Further testing of strategies will be done in fall 2019 and early 2020, with a final Regional Growth Forecast slated for adoption in spring 2020.

**Attachments:**

Attachment A: Plan Bay Area 2050: Regional Growth Forecast Methodology  
Attachment B: Presentation

  
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Alix Bockelman



**Plan Bay Area 2050: Regional Growth Forecast Methodology**  
*[Proposed Methodology as of July 2019]*

The Regional Growth Forecast is an important element of the Plan Bay Area 2050 long-range planning process. It sets expectations for how much the Bay Area might grow between today and 2050, and for characteristics of that growth. These include total employment and employment by major industrial sectors, total population and population by age and ethnic characteristics, and the number, size, demographic characteristics and income of households. This information in turn informs *where* growth (employment and households) may go and the nature and amount of travel demand associated with it, as well as expectations for housing production. The Regional Growth Forecast is a key analytical underpinning of much of the policy work associated with the regional planning process.

**Opportunities for Input on This Document**

In addition to spring 2019 workshops on the three Horizon futures - which described the benefits and drawbacks of different regional growth trajectories - the Regional Growth Forecast methodology has sought public and stakeholder input through public meetings in June and July:

- Regional Advisory Working Group (June 2019)
- MTC Policy Advisory Council (June 2019)
- MTC Planning Committee (July 2019)
- ABAG Administrative Committee (July 2019)
- ABAG Executive Board (July 2019)

To allow for additional public comment before the public hearing and adoption by the ABAG Executive Board in September, ABAG/MTC has opened a public comment period on this document. Comments should be submitted to ABAG/MTC via [info@bayareametro.gov](mailto:info@bayareametro.gov) by **August 19, 2019** for consideration in advance of the **September 19, 2019** public hearing at the ABAG Executive Board meeting, consistent with the BIA Bay Area settlement agreement.

Further public input will be sought through fall 2019 and spring 2020 public outreach on the Preferred Scenario for Plan Bay Area 2050. As the final Regional Growth Forecast will not be adopted in September - solely the methodology - there will be additional time for review of the Regional Growth Forecast in the months ahead as well.

**Tools and Expertise**

The Plan Bay Area 2050 Regional Growth Forecast is produced by ABAG/MTC Planning staff with consultant and technical advisory committee input. The Regional Growth Forecast makes use of multipurpose tools that can be used to describe future possibilities and to test the effects of different assumptions and strategies on future projections.



### Expertise

The Regional Growth Forecast is being developed in consultation with the Center for Continuing Study of the California Economy, with input and review by a technical advisory committee of experts as well as from ABAG and MTC advisory committees.

The technical advisory committee (list and affiliation included as Attachment 1) includes:

- 6 Bay Area economists
- 3 California Department of Finance experts (*chief economist, senior economist and demographer*)
- 3 megaregion representatives (*Sacramento Area Council of Governments, San Joaquin Council of Governments, University of the Pacific*)
- 3 experienced REMI users (*from the Atlanta Regional Commission, a Michigan think tank, and a Colorado nonprofit*)

Input is also sought from other experts, including California Department of Finance (DOF) and Housing and Community Development (HCD) staff working on developing accurate counts of housing units and occupancy.

### Tools

Central to the Regional Growth Forecast development is the REMI (Regional Economic Modeling Inc.) model for the San Francisco Bay Area [version 2.2]. The REMI model integrates into one package a dynamic accounting of the core components of the economy - industry structure and competitiveness relative to other regions; propensity to export; and population and labor market structure. The population is explicitly connected to industry growth and demand for labor, with migration increasing in times of strong employment growth.<sup>1</sup> The model specifically characterizes the local economy in the context of the national economy, recognizing the relationships to the state, nation, and surrounding metropolitan planning areas. Downstream, separate staff modules are used to compute households, income distribution, and in-commute levels. The Regional Growth Forecast then serves as an input into the small-scale distribution of land uses (including employment, population and households) using UrbanSim 2.0, a land use model that simulates the urban development process and the location choices of employers and households.<sup>2</sup> The local allocation in turn informs the modeling of travel patterns and investments using Travel Model 1.5. The relationship among these models is described further below, followed by brief discussions of major elements of the models. Detailed descriptions of the versions of these tools used for *Plan Bay Area 2040* can be found in <http://2040.planbayarea.org/reports> (under the Land Use and Transportation sections).

### Adjustments to the Overall Forecast Methodology from Plan Bay Area 2040

This will be the first Plan Bay Area done with a consolidated regional planning team for ABAG and MTC, the two regional agencies responsible for crafting the long-range plan. While the overall suite of tools is similar to the Plan Bay Area 2040 approach, staff proposes to make use of the model output and analytic results in a more iterative fashion between models to better capture

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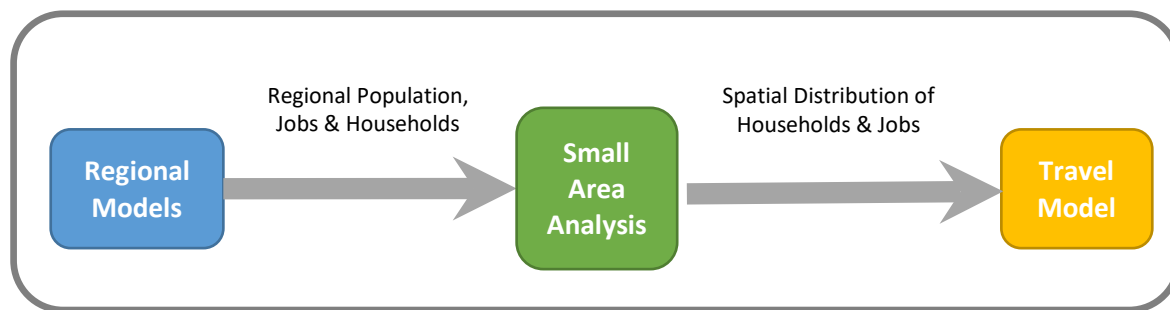
<sup>1</sup> REMI is an integrated set of input-output, computable general equilibrium, econometric, and economic geography methodologies that describe the key relationships in the economy. See Regional Economic Modeling Inc., *REMI PI+ v. 2.2*, *REMI Transight v.4.2*, *REMI Tax-PI v.2.2*, *Metro PI v. 2.2 Model Equations*.

<sup>2</sup> <http://www.urbansim.com/urbansim>

feedback mechanisms in the economy. This will ideally create stronger bridges among the different technical elements of the forecast for Plan Bay Area 2050, including the Regional Growth Forecast, the small area distribution of the forecast, and forecasts of travel patterns and transportation impacts.

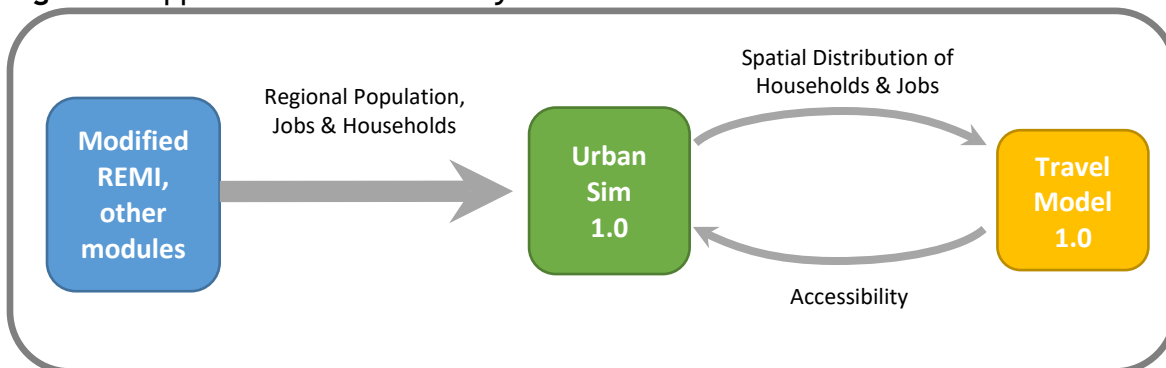
For decades, the general approach to forecasting proceeded in a linear fashion consisting of the steps outlined in Figure 1, although the specific tools used at each step changed over time. The Regional Growth Forecast of employment, population and households fed directly into the small area analysis, which then provided data used by the travel model.

**Figure 1:** Historic Approach to Regional, Spatial and Transportation Forecasts



With a changeover of tools for the Plan Bay Area 2040 forecast, the land use and travel modelers added additional feedback loops between the small area analysis (developed using UrbanSim 1.0) and Travel Model 1.0, as shown in Figure 2. We have long known that land use impacts transportation demand, but it has also been recognized that transportation, through accessibility, in turn impacts land use patterns. The model system was modified to include this two-way connection, so that the location of growth can be influenced by improved accessibility following planned transportation investments. At the same time, growth and location affect congestion and multimodal accessibility, shifting transportation investment decisions. This coupling of land use and transportation was reflected in the modeling approach for the first time in *Plan Bay Area 2040* but did not include a feedback loop to the Regional Growth Forecast.

**Figure 2:** Approach Used in *Plan Bay Area 2040*



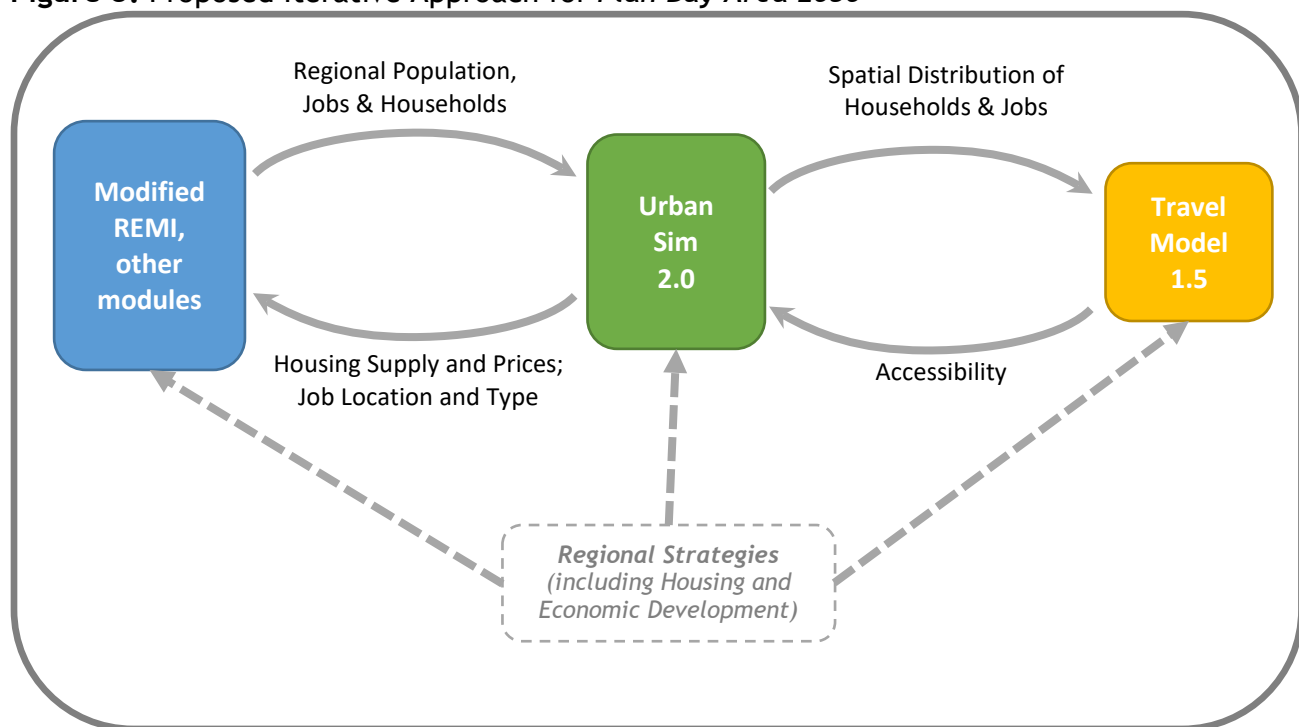
Land use and transportation are not the only connected systems, however. Local land markets may have regional implications. For example, economists have pointed to constrained housing markets as in turn reducing the overall size of the economy. When preparing a Regional Growth Forecast for Plan Bay Area 2050, we intend to consider how model results from UrbanSim 2.0 and Travel Model 1.5 could be factored into the modified REMI model, altering the Regional Growth

Forecast. For example, where and how much housing is built could change the cost of housing, as well as the cost and demand for labor. Similarly, a change in housing prices and location overall could further change the number and types of jobs that can be generated in the region as well as the labor force that can live in the region (see Figure 3).

The first aim of this integration is to seek a fuller representation of these types of effects. The second aim is, by having a better accounting of housing markets across the model systems, to better capture effects of policy interventions (i.e., strategies) addressing housing and labor markets. If we are successful in incorporating housing changes into the regional employment and population analysis, we may also be better positioned to then analyze the effects of other strategies, such as economic development strategies like workforce training programs and Priority Production Areas, which could affect the ability of middle-wage jobs to remain in the region.

The remainder of the memo focuses on the first of the three elements of the Regional Growth Forecast: the projection of jobs, population, and households at the *regional level*.

**Figure 3: Proposed Iterative Approach for *Plan Bay Area 2050***



### What Does the Regional Forecast Do?

The Regional Growth Forecast projects total employment, population, households, income distribution and in-commute change for the region as a whole between the Plan baseline year of 2015 and the Plan horizon year of 2050. As part of the iterative process, we will begin with a baseline employment and population forecast that will be consistent with likely national economic and demographic trends, layering in new strategies as the Preferred Scenario is developed. Table 1 summarizes the approach this cycle and how this was done in the last cycle.

**Table 1: Summary of Approach to Regional Growth Forecast**

Forecast Element	Plan Bay Area 2040	Plan Bay Area 2050 ( <i>Draft</i> )
Employment	Adjustments to REMI, with input from CCSCE and TAC	<b>Update</b> - different base compared to <i>Plan Bay Area 2040</i> , CCSCE and TAC recommended adjustments to REMI
Population	Minor REMI adjustments only	<b>Update</b> - REMI adjusted to some DOF fertility assumptions and to match labor force requirements.
Households	Average headship rates for the most recent 5 years, some decrease over time for seniors and multigenerational households	<b>Update</b> - Goal in this cycle is to provide a more detailed accounting of households by size, number of workers, and income level categories. Headship, or household formation rates in consultation with TAC and CCSCE, are applied to population age and race estimates. ACS workforce characteristics will be added to households. Distribution of income among households will be based on historic patterns and regional economic forecast trends.
Income distribution	Econometric equations for each of four categories based on national cross-sectional data by income category. Reconciliation of numbers to total household control.	
In-commute change	Took the larger of two alternative estimates drawn from REMI data on residence workforce, labor force and jobs	<b>No change</b> in method, but further informed by iterations with other models and by multiregional results of REMI model.

The Regional Growth Forecast begins with the structure of the REMI model, which describes employment, population, gross regional product, and total personal income for the historical period back to 2000 and for a forecast period through 2060 (our forecast goes only to 2050). The model includes a built-in forecast that reflects one of several possible sets of assumptions about the factors underlying growth at the national level and a set of interrelated regional forecasts for 22 custom-designed “regions” for our Bay Area version of the model. The regions include the nine Bay Area counties, metropolitan areas bordering our region, several southern California counties, the rest of California, and the rest of the US. Our focus when developing the Regional Growth Forecast described here is on the nine Bay Area counties as aggregated into one region. REMI is designed to be adjusted to be customized by the user to better reflect expectations about national trends, as well as their detailed knowledge about the relevant region.

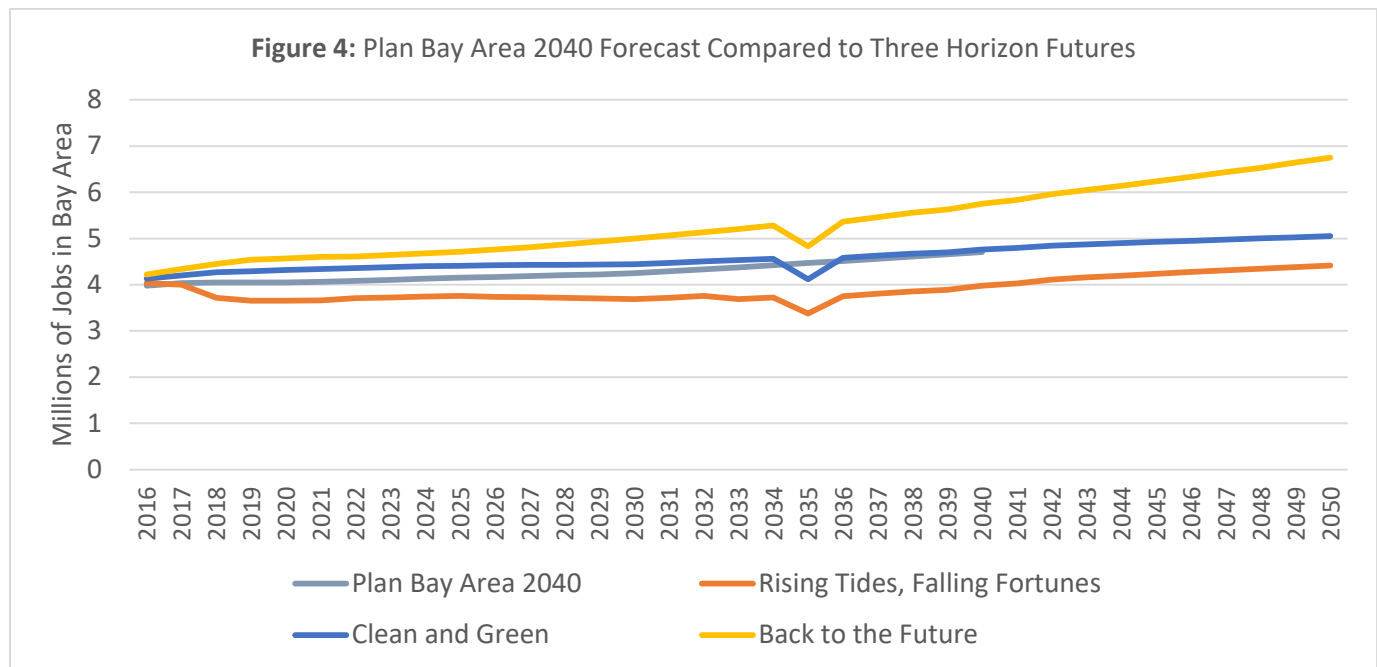
As described in Table 1, we propose to use the REMI model with multiple adjustments, after consultation with CCSCE and the technical advisory committee, to describe the employment and population forecasts. We then separately forecast households, income distribution, and any change in the level of in-commuting. The types of assumptions underlying the adjustments to the REMI model and the other elements of the Regional Growth Forecast are summarized below, by element of the forecast.

## *Employment*

Baseline employment for the Bay Area is driven by national trends in population growth and employment, by the Bay Area employment mix by sector and by the competitiveness of Bay Area sectors relative to the equivalent sectors in the US. REMI accounts for the Bay Area's strong competitiveness in many industries relative to other regions, leading to a representation of a generally favorable jobs outlook across a range of sectors, which in turn grows the labor force through migration. At the same time, REMI represents the relatively high cost of housing and labor as well, which all other things equal serves to temper the growth outlook.

In the previous Regional Growth Forecast, there was a great deal of uncertainty about how the region would fare both in the near future and over the decades of the plan's forecast. The forecast for *Plan Bay Area 2040* is quite low compared to recent experience, when Bay Area knowledge sectors rapidly expanded employment for almost a decade. Should we adjust the forecast upward to account for this continued strength, or consider the possibility that going forward a national recession or a reversal of fortunes of our leading sectors could lead to an extended period of stagnant growth or job loss? In the last three decades, new industry formation of new industries has led to strong surges of growth in the region following downturns. Will we continue to have this generative capacity over the next 30 years?

We began to address these uncertainties in the Horizon process. For the "futures," we modified the built-in REMI forecast based on widely varying assumptions about external forces beyond our control—national policy, international events, and the possibility of severe natural hazards. We modeled the range of possible futures for the region should these events occur in the policy framework encompassed in the last Plan Bay Area (*Plan Bay Area 2040*). These forecasts gave several possible trajectories of growth, as shown in Figure 4. In one future, Rising Tides, Falling Fortunes, with high sea level rise and low government spending, there is a long period of stagnation followed by modest job growth, leaving little net change overall. At the other extreme, Back to the Future, with few land use constraints on growth and generous public spending leads to growth that far exceeds our projections from *Plan Bay Area 2040*. The third future, Clean and Green, is closer to our previous projected level of growth, but with a very different occupation mix and energy, high levels of taxation, but also selected high levels of public investment.



Source: ABAG/MTC Analysis, 2019

As we proceed into analysis for *Plan Bay Area 2050*, we will craft a base employment forecast with a less divergent set of assumptions at the national level, assuming policies similar to those today and those encompassed in *Plan Bay Area 2040*. We will also examine how additional strategies proposed for *Plan Bay Area 2050* could affect employment. Strategies to be tested iteratively before reaching a final employment figure could include:

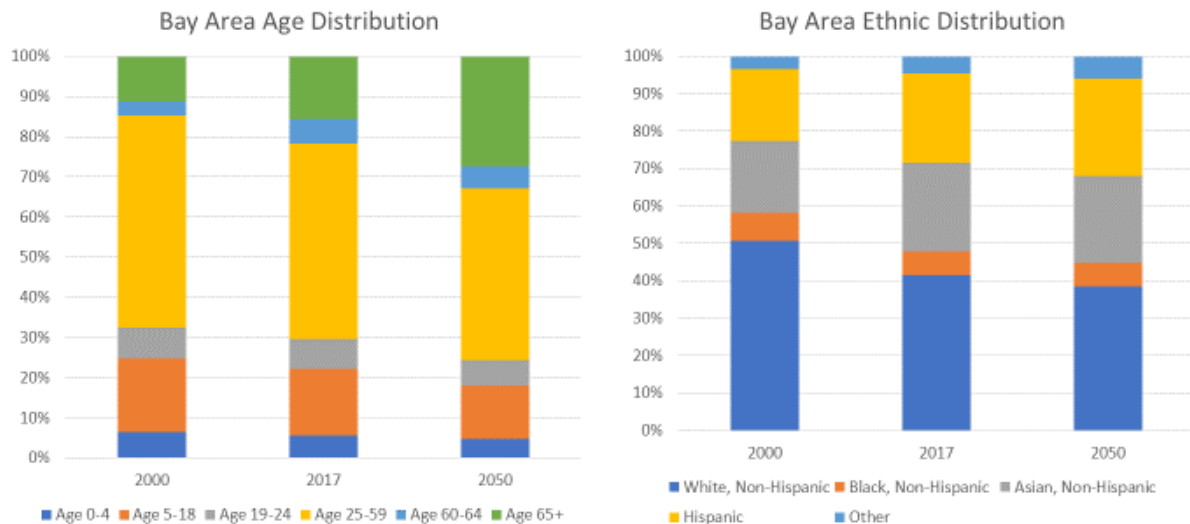
- **Improved access to housing in the region:** this can change the cost of labor, affecting rates of growth of middle and lower wage sectors.
- **Workforce training:** this could have complex effects, improving productivity, allowing higher output without necessarily more jobs, although a more skilled workforce could also attract additional employers.
- **Priority Production Area protections:** this could slow further declines in industrial sectors and associated middle-wage jobs, especially in production, distribution, and repair sectors.

## Population

REMI, like most population projection models, predicts future population growth based on a detailed accounting of the population in terms of age, gender and ethnicity, with schedules of fertility and mortality determining natural increase, while migration is determined through the interaction with the economic portion representing labor market demand of the model. Retirement migration is also represented. While California Department of Finance (DOF) similarly uses a cohort-component model, the differences are in how some of the population is categorized, as well as assumptions for future mortality, fertility and migration rates. At this stage we note that apart from population totals, there are age and ethnic differences between the REMI forecast and the DOF 2017 forecast that need to be better understood. We are examining how assumptions about trends in birth and mortality rates and in immigration levels and composition affect the REMI levels. This will help us create a population forecast that is both consistent with expected growth levels and reflective of our understanding of the composition of the California population.



Figure 5: Bay Area Age and Ethnic Distribution, 2000, 2017 and DOF 2050 Projection



Source: ABAG/MTC from US Census and California Department of Finance.

Through the iterative process, it may be possible to capture benefits from strategies to increase housing production and lower housing prices. These strategies may include market mechanisms or subsidies, helping to retain lower- and middle-wage earners while encouraging economic immigration to increase working age population. Separately, demand-side rental subsidies would also help to retain lower- and middle-income households.

### Households

The vast majority (currently 98 percent) of the population lives in households, with a small remainder living in group quarters. ABAG/MTC translates a given population age structure into households using headship rates. Headship rate is defined as the share of adults in a particular age group (e.g., 25 to 29 years old) who are heads of households. The rate underlies the average household size and thereby how much housing will be needed to house the population. The share can be applied to population projections by age and race/ethnicity to estimate the number of households by these demographic characteristics. A *higher* headship rate would imply *lower* average household sizes.

The household estimate for *Plan Bay Area 2040* was built using headship rates for the 2006 to 2014 period, with additional marginal adjustments. The *Plan Bay Area 2050* analysis will test more than one headship estimate approach, addressing two key questions:

- Are rates relatively constant over time, or do they move with some other factor, such as cost of housing?
- What determines the differences in rates of household formation among different ethnic groups, and how does this propensity change over time for new immigrants?

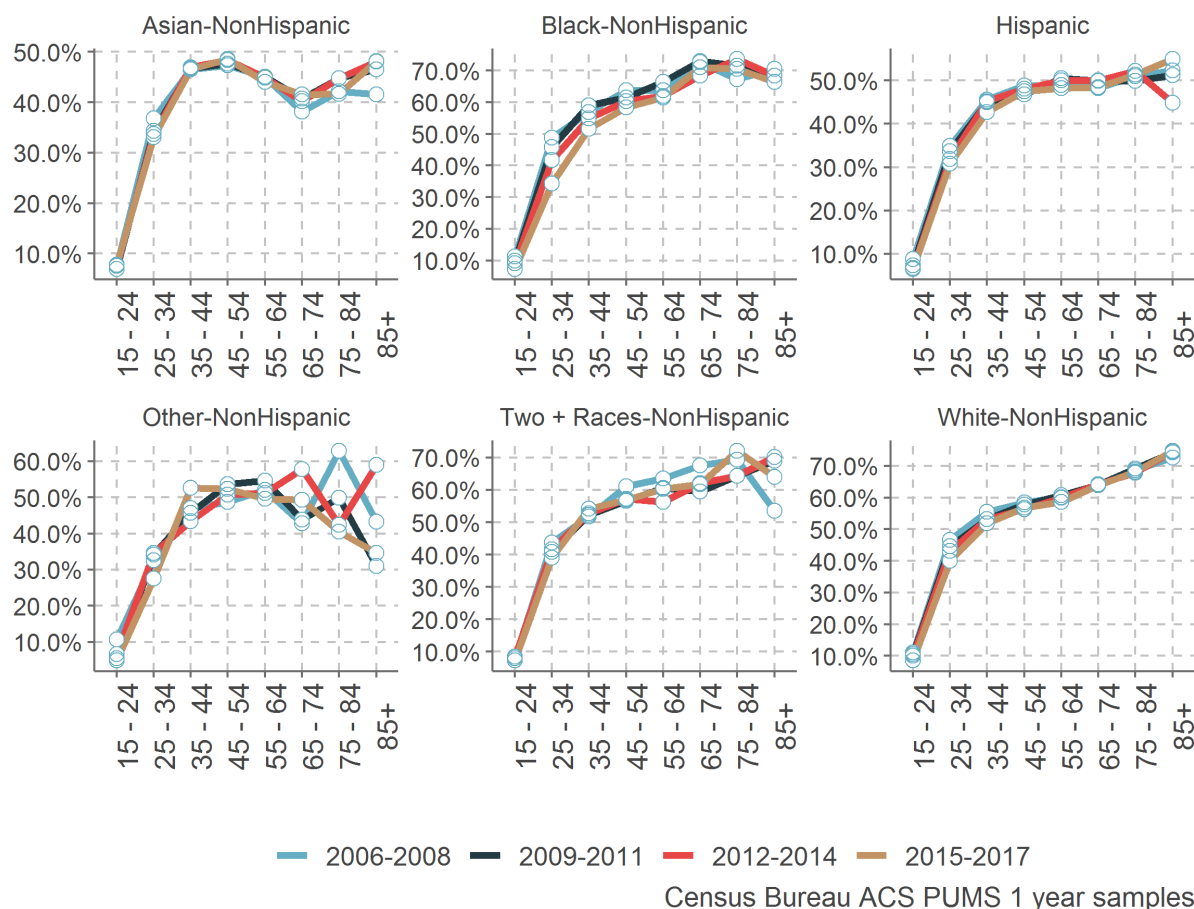
Staff will explore different headship rates that come from varying assumptions about these factors. These may include using the most recent headship rates (2012-2017), gradually converging rates to the previous 2005-2009 rates, or averaging over a full economic cycle (2010-2017). We will also test possible rates of convergence of Hispanic and Asian/Other rates to the average rate of the remaining non-Hispanic groups.

In making these tests, we want to explore potential challenges, such as:

- i) The current headship rate may be artificially compressed due first to the Great Recession and then to the high cost of housing. We will seek a way to capture a wider mix of economic experiences in the rate used.
- ii) Hispanic and Asian/Other headship rates may converge toward the average headship of the two other ethnic categories, as the native-born share of households in those groups increases and the household characteristics of immigrants move towards those in the U.S.

Figure 6 illustrates the variability of headship rates by age category, ethnic group and over time, with both Asian and Hispanic ethnic categories have lower headship rates (higher household sizes) than their counterpart white or black households (with generally much lower shares of immigrant households).

**Figure 6: Comparative Headship Rates by Ethnicity, Age Group and Time Period**



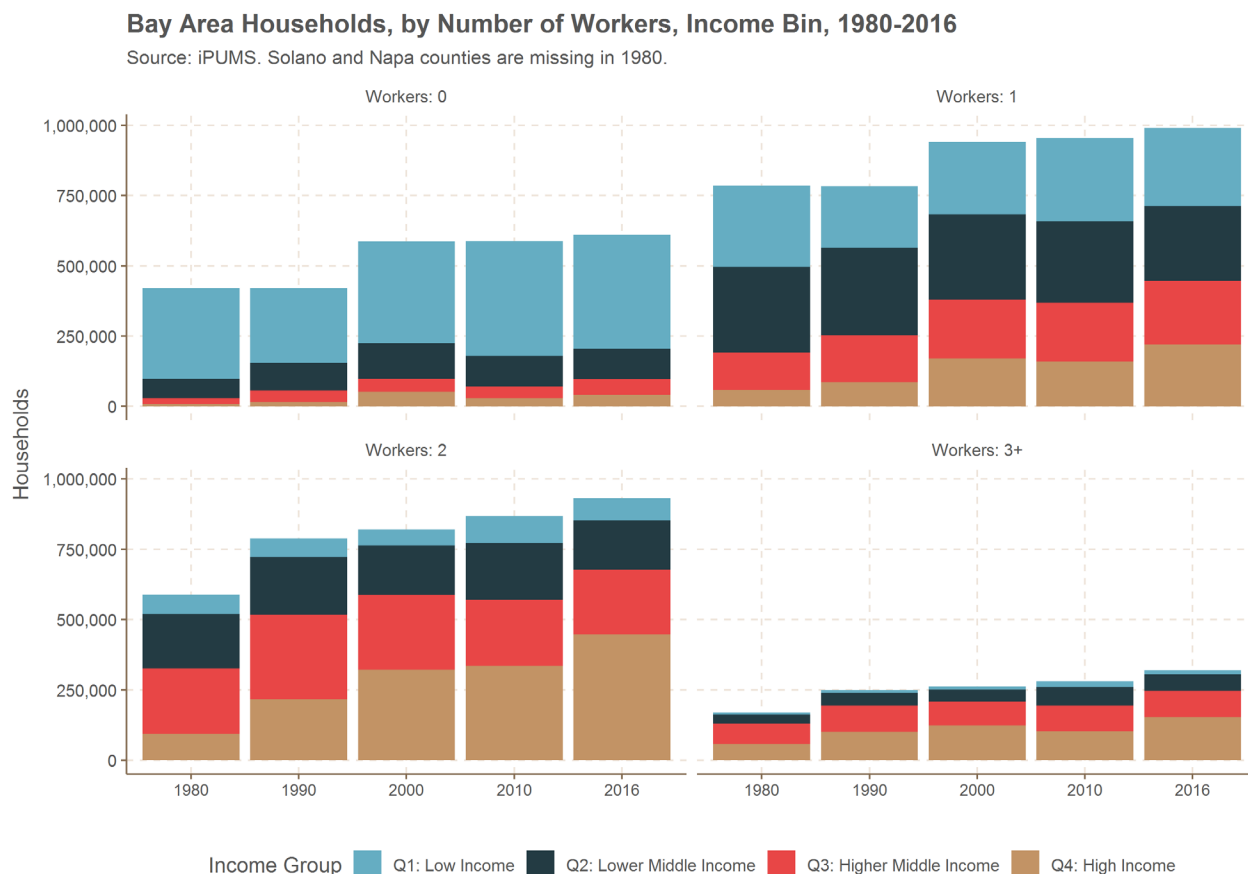


High housing costs may affect not only labor markets and money available for other goods, but they may affect how families form households and consume housing. Housing strategies may affect overall household formation leading to lower or higher household sizes, changing costs, and changing locations of new households. Through the iterative process, it may be possible to reflect the benefits of housing strategies that allow new households to form (increasing headship rates among young adults, for example) as well as the type of new units (which may target young adults or seniors with smaller household sizes).

### *Income Distribution by Household*

The household income distribution is generally determined both by overall wages and other source of incomes, and separately by how households tend to form, including how persons in different parts of the income spectrum pair up, or not. Figure 7 offers information on how many households have, respectively, 0, 1, 2 and 3 or more workers in them, and for each of these household types, the share in different income groups. Counts are shown for 1980, 1990, 2000, 2010, and 2016. There are about the same number of households with one or two workers in them, but two-worker households are much more likely to be in the highest income quartile. Conversely, households with zero workers, typical for seniors, are frequently lower income (though some of these may be relatively wealthy).

**Figure 7: Change in Workers per Household, by income quartile, 1980-2016 (Source: IPUMS)**



The method for this calculation will seek to link age of head of household and number of working household members with income levels. Other factors that may also influence overall household income categories will include the overall change in the economy between high and low wage sectors, the relationship of output to employment (e.g., is value added rising, dropping or remaining constant in the growing sectors), and any changes between the proportions of wage income with other income sources. There are two general ways to approach this part of the forecast, which will be further explored this summer.

*Approach 1:* Project total households in each income category. Use recent ACS household profiles to disaggregate into the detailed categories needed for UrbanSim. For *Plan Bay Area 2040*, the household numbers in each income bin were estimated using separate econometric equations that predicted the number of households in each income category (one predictive equation per household income quartile). UrbanSim 1.0 and Travel Model 1.0 then synthesized the types of households in each income category. This approach could be used again using the latest models, or the income quartile analysis could then be disaggregated to more fine-grained household types based on recent ACS profiles.

*Approach 2:* Define the full array of the 2017 baseline household types needed for UrbanSim 2.0 using ACS data, and trend these categories for each five-year increment of time, under the influence of how the economy, total income, occupations, and age profiles change over time. This approach is not econometric in nature.

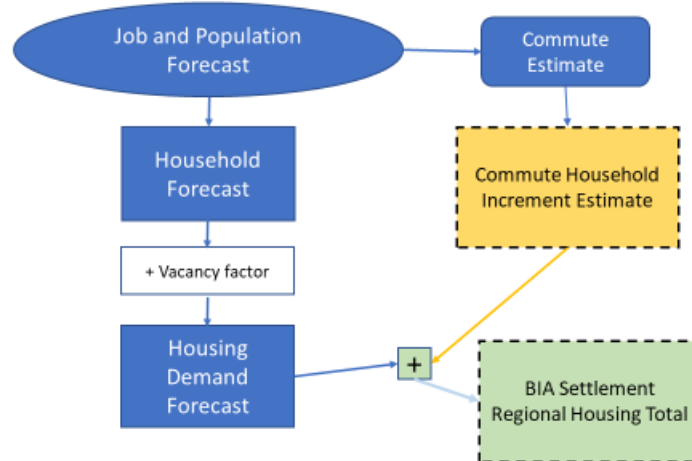
Through the iterative process, it may be possible to reflect strategies that affect the income mix of the region, ranging from incentives for middle-wage jobs in housing-rich areas to affordable housing programs to transit subsidies. To the extent that these strategies are modeled in terms of employment or population impacts, they may in turn be translated into household and income level implications. Alternatively, if the specific impacts cannot be reliably modeled, the qualitative implications will be discussed.

### *In-Commute*

The in-commute analysis was conducted in *Plan Bay Area 2040* as diagrammed in Figure 7. We propose doing a more nuanced in-commute analysis compared to the approach used for *Plan Bay Area 2040*. Rather than simply estimating the overflow, ABAG/MTC will examine how the distribution of *employment location* may change for some sectors between the Bay Area and its neighboring MPOs in the REMI model, possibly reducing the need for in-commuting. In the iterative process, we will look at how housing availability may change based on policies affecting the amount of housing built and the cost-mix of housing between market rate and subsidized housing. Through this iterative process, ABAG/MTC can test to what extent a larger housing stock may decrease in-commuting versus increasing employment growth.

Apart from these efforts, if adjustments are needed to reduce the in-commute, we will follow the method used in *Plan Bay Area 2040*.

**Figure 8:** Schematic for Adding In-Commute Housing to the Regional Housing Total, PBA 2040



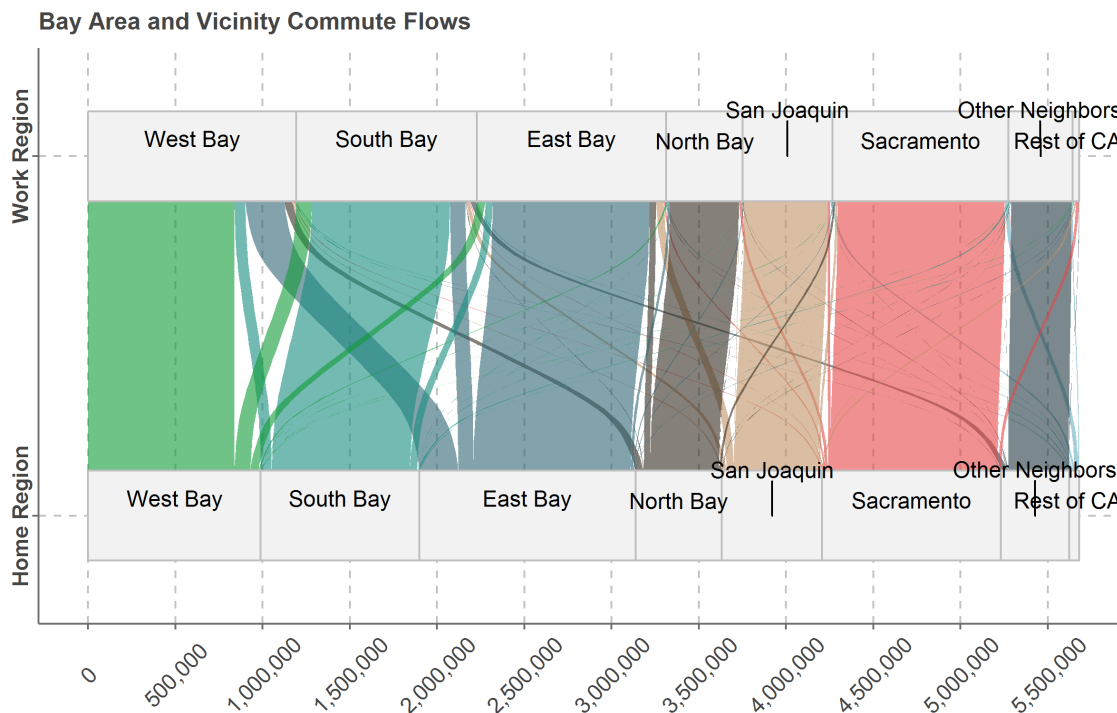
Source: ABAG Regional Forecast Approach, Presentation to the ABAG Executive Board, July 2015.

In reality, commute flows occur across MPOs for many reasons, going in two directions, a function of the size and pull of job centers, the resident labor force in the subregions, as well as the difference in housing costs and the relative ease of transportation. For a large region such as the Bay Area, it is expected that the concentration and diversity of specialized functions will attract workers from beyond the region's labor force. Further, a strong job node on the edge of the region, such as parts of the Tri-Valley, is much closer to the resident labor force of Tracy and Stockton. This draw will continue, even with more housing added west of the Altamont Pass. This is evident in Figure 9, where most commute flows into and outside the region are very small, but the most significant inflows are to Santa Clara County from its southern neighbors and to Alameda County from the Central Valley. Using the multiregional REMI model - an enhancement since Plan Bay Area 2040 - will allow us to examine further how Bay Area strategies may affect the net in- or out- commute flows the different regions experience as well as possible changes in job mix that occur because of the different strategies.

A number of strategies may affect in-commuting:

- Construction of housing for low and middle income workers could reduce the numbers commuting in from outside the region.
- Improved rail networks and bus rapid transit could reduce this number of current in-commuters by auto, although the net effects on total in-commuting would be more complex.
- Higher tolls on freeways and subsidies for transit ridership would reduce the number of in-commuters in private vehicles, but not necessarily in-commuting overall.

**Figure 9: Commute Flows to and from the Bay Area, 2015**



Source: CTPP 2012-2016, Table B302102

Note: Subregion definitions by county—West Bay—Marin, San Francisco, San Mateo; South Bay—Santa Clara; East Bay—Alameda, Contra Costa; North Bay—Napa, Solano, Sonoma

## Beyond the Regional Growth Forecast: Crafting the Growth Pattern

The Regional Growth Forecast focuses on the nine-county total level of growth for jobs, population, and households, acting as a key input into the modeling process. To develop the Plan's growth pattern on a localized level, MTC/ABAG will use Bay Area UrbanSim 2.0, a spatially explicit economic model that forecasts future business and household locations. MTC/ABAG used a version of the Bay Area UrbanSim 1.0 model to inform the environmental assessment for the region's first RTP/SCS (Plan Bay Area) and both the Plan process and the environmental assessment for the region's second RTP/SCS (Plan Bay Area 2040). An updated version of Bay Area UrbanSim (Version 1.5) is also currently being used for the Horizon long-range planning process.

Bay Area UrbanSim 2.0 forecasts future land use change (e.g., development or redevelopment) starting from an integrated (across different source data) base year database containing information on the buildings, households, businesses and land use policies within the region. Running in five-year steps, the model predicts that some households will relocate and a number of new households will be formed or enter the region (as determined by the adopted regional growth forecasts). The model system micro-simulates the behavior of both these types of currently unplaced households and assigns each of them to a currently empty housing unit. A similar process is undertaken for businesses and jobs. The various submodels are "trained" on existing data in order to represent how households or businesses "respond" to different features of locations considered; from accessibility to jobs and open space to the relative cost of real estate. During the simulation, Bay Area UrbanSim 2.0 micro-simulates the choices real estate developers make on how much of, what, and where to build. This adds additional housing units and commercial space in profitable locations (i.e., land use policies at the site allow the construction of a building that is profitable under forecast demand).

In this way, the preferences of households, businesses and real estate developers are combined with the existing landscape of building and policies to generate a forecast of the overall land use pattern in future years. As the model is explicit in how the urban environment changes, the model system is ideally suited to a range of systematic *what-if* tests: Given behavioral information on how households and businesses tend to locate based on observed data, and given land use policy assumptions, what might happen to overall patterns over time as regulations change, constraints are variably eased and increased in different parts of the region? For example, the land use policies in place in the base year can be changed (e.g., allowable zoned residential density could be increased) and Bay Area UrbanSim 2.0 responds by forecasting a different land use pattern consistent with the constraints or opportunities resulting from the change. After each five-year step, the model produces a zonal output file for the transportation model that contains household counts by type and employee counts by sector. This provides the travel model with information on land use intensity in different locations and the spatial distribution of potential origins and destinations within the region. Documentation for Bay Area UrbanSim 2.0 is available online<sup>3</sup>.

To build the forecasted land use development pattern, Bay Area UrbanSim 2.0 will be used to iteratively build the Preferred Scenario in a manner that is vetted and assessed for policy realism by regional planners and feedback from local jurisdictions. Through this iterative process, we intend to bring to bear a forecasted development pattern that provides the best from both human planners and computer simulation tools before presenting them to the Commission and the ABAG Board for their consideration.

## Next Steps

The Regional Growth Forecast methodology is anticipated to be presented to both the ABAG Administrative Committee and the ABAG Executive Board with input from the public in July. During the 30-day comment period between July 19 and August 19, public comments are requested on the Regional Growth Forecast methodology; in combination with a public hearing, final approval will be requested by the September ABAG Executive Board meeting. Staff will continue improving the method of iterating results between REMI 2.2, UrbanSim 2.0 and Travel Model 1.5 over the summer with the goal of developing a Draft Regional Growth Forecast by fall 2019. Further testing of strategies will be done in fall 2019 and early 2020, with a final Regional Growth Forecast slated for adoption in spring 2020.

Table 2 shows the timing for the Regional Growth Forecast and its place in the development of the Preferred Plan. Staff have already started working on the associated forecasting and data analysis; ABAG/MTC will further develop the draft baseline Regional Growth Forecast over the summer for use in crafting the Draft Preferred Plan this fall. Further refinement of the forecast will continue through early 2020. The final Regional Growth Forecast to be used in the Plan is scheduled to be completed in April 2020 in time for the Final Preferred Plan to be advanced into the EIR phase by July 2020.

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<sup>3</sup> Bay Area UrbanSim documentation is available at: [http://bayareametro.github.io/bayarea\\_urbansim/](http://bayareametro.github.io/bayarea_urbansim/)

[illegible]

### Technical Advisory Committee for the Regional Growth Forecast

Organization	Title	Name
City of San Francisco	Chief Economist	Ted Egan
Center for Business and Policy Research, University of the Pacific	Director	Jeffrey Michael
Trulia	Chief Economist	Issi Romen
SPUR	Regional Planning Director (alternate: Research Manager)	Egon Terplan (Sarah Jo Szambelan)
Bay Area Council Economic Institute	Executive Director (alternate: Acting Executive Director)	Micah Weinberg (Jeff Bellisario)
San Joaquin Council of Governments	Senior Regional Planner	Kim Anderson
California Department of Finance	Chief Economist	Irena Asmundson
Atlanta Regional Commission	Principal Planner	Colby Lancelin
Sonoma State University	Dean	Robert Eyler
Common Sense Policy Roundtable	Director, Policy and Research	Chris Brown
Economic Growth Institute, University of Michigan	Senior Research Area Specialist	Don Grimes
Sacramento Council of Governments	Senior Regional Planner	Garett Ballard-Rosa
California Department of Finance	Researcher	Ethan Sharygin
Indeed.com	Chief Economist	Jed Kolko
MTC/ABAG Staff Advisors	Assistant Director	Matt Maloney
	Principal Planner	Dave Vautin
	Principal Planner	Mike Reilly

**Consultant:** Stephen Levy, President, Center for Continuing Study of the California Economy





PLAN BAY AREA 2050

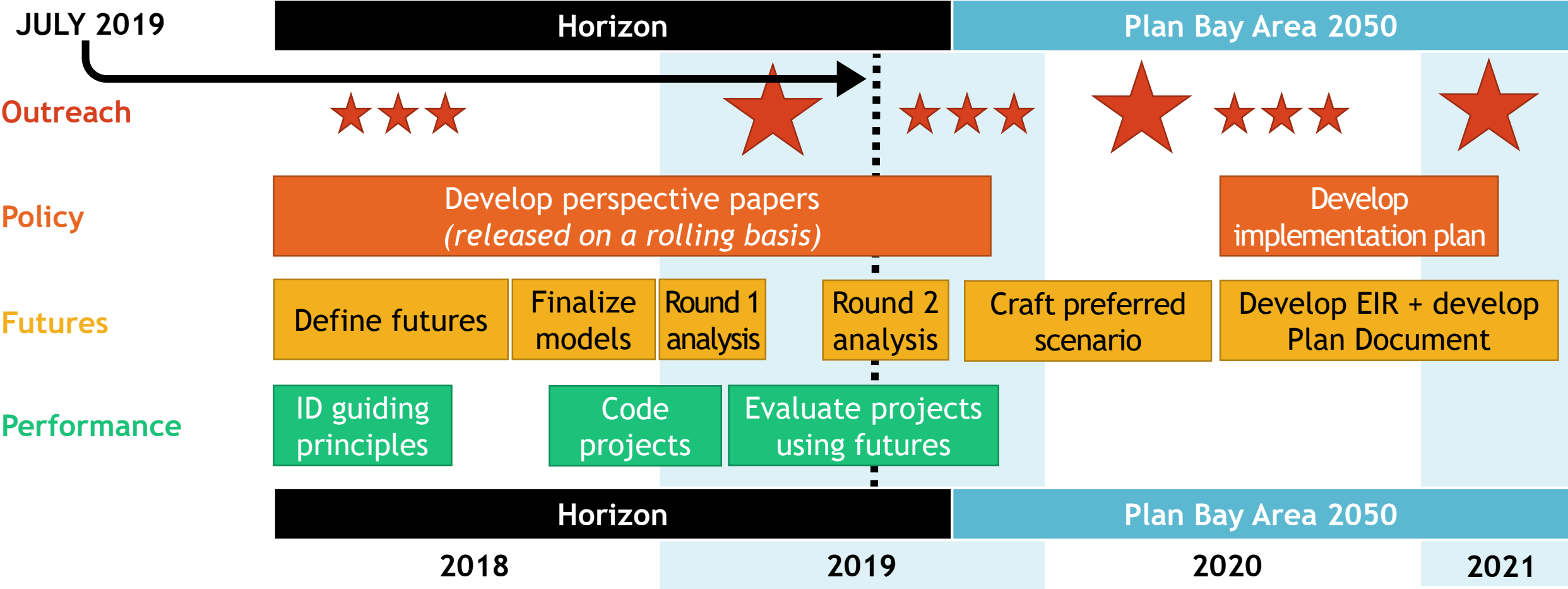
# Regional Growth Forecast Methodology

Setting the Stage for Crafting Plan Bay Area 2050's  
Growth Pattern

Cynthia Kroll, Kearey Smith, David Vautin - ABAG/MTC  
July 2019



# Preparing for Plan Bay Area 2050



# How Will We Forecast the Growth Pattern?



# BASIS: Working to Improve Baseline Data



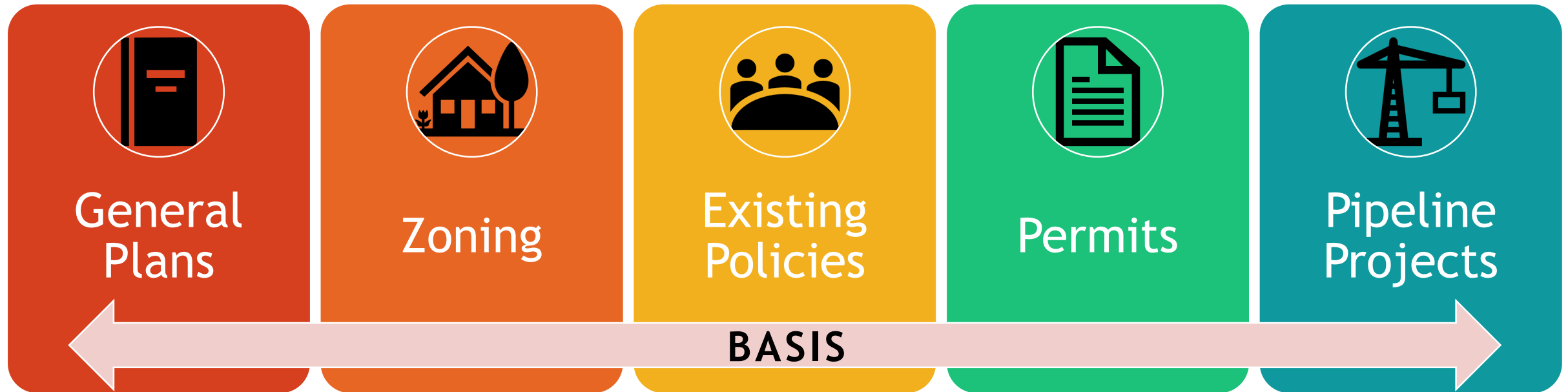
Baseline  
Data

- In tandem with developing a Regional Growth Forecast, MTC/ABAG has been **working to improve data on existing land use conditions** in concert with local jurisdictions.
- This work is being conducted as the **first step of the Bay Area Spatial Information System (BASIS) initiative**, a staff-driven effort to bring key regional datasets onto an industry-standard Data as a Service (DaaS) Platform that supports greater collaboration with external partners.
- Key BASIS datasets are expected to be **ready in time for the Plan Bay Area 2050 kickoff** this fall - and will be used for UrbanSim 2.0 model runs.

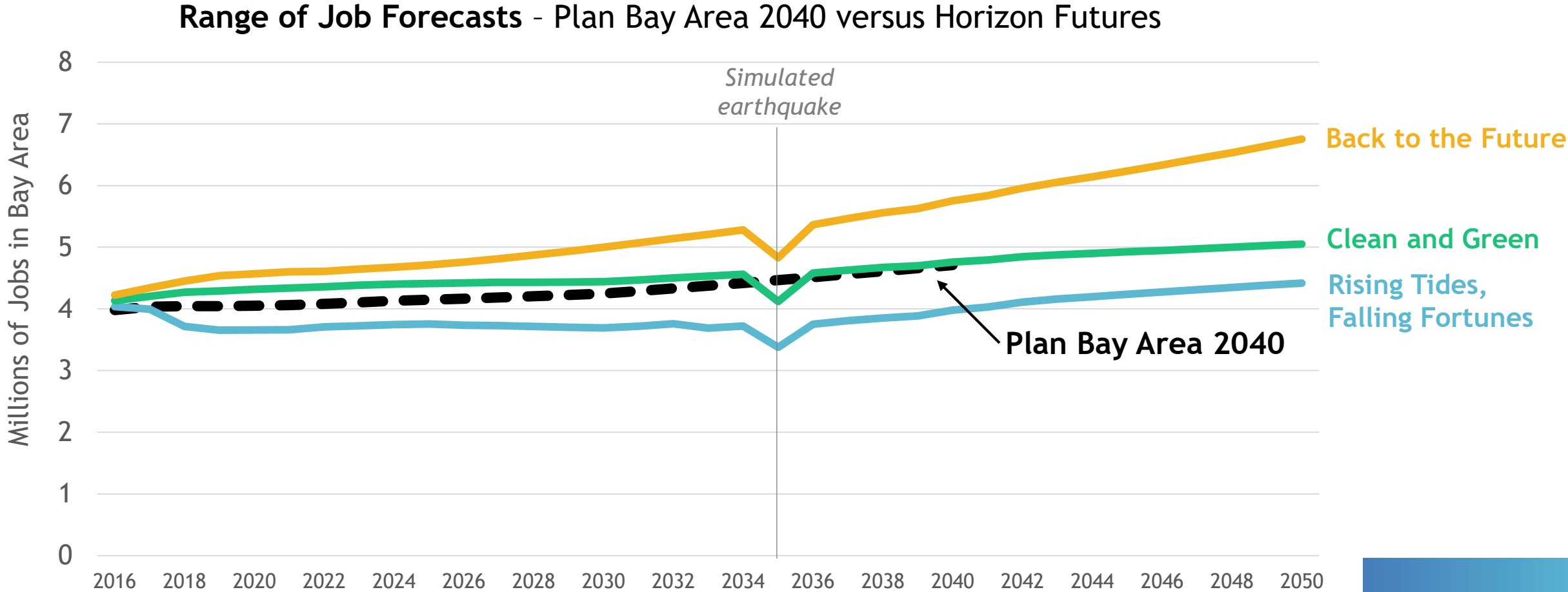
# BASIS: Working to Improve Baseline Data

Baseline  
Data

What datasets are specifically being updated at this time?



# Exploring Uncertain Futures: What Have We Learned from Horizon?



# Exploring Uncertain Futures: What Have We Learned from Horizon?

**External forces** - ranging from immigration policy to automation of labor - could significantly affect the region's growth trajectory in the years ahead.

**Weak economic growth** could slow growth pressures but may pose new challenges for Bay Area residents; **strong economic growth** may continue to strain infrastructure.

**Under all Futures**, rising income inequality, worsening affordability, and an aging population pose major challenges.

**New strategies need to be resilient** to potential demographic and economic shifts.



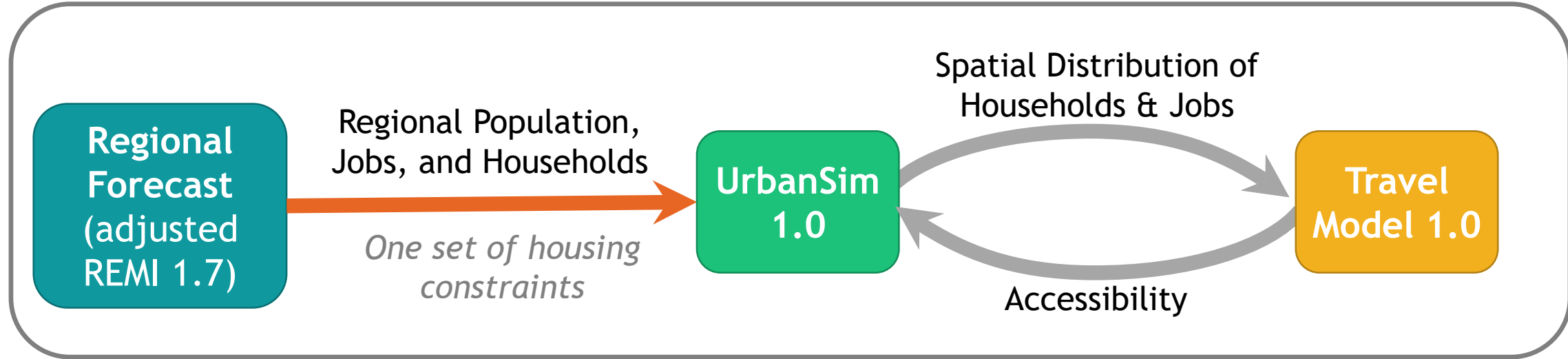
# Pivoting to Plan Bay Area 2050: Developing the Regional Forecast

Regional  
Forecast

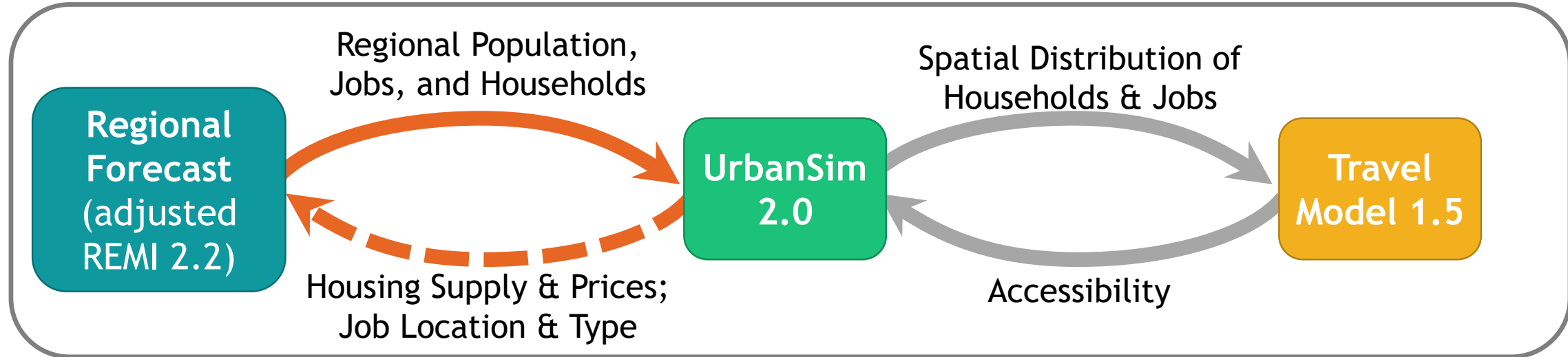
- Consulting with Center for Continuing Study of the California Economy (CCSCE) and a Technical Advisory Committee
- Tools to craft the Regional Growth Forecast
  - Regional Economic Models, Inc. (REMI) version 2.2 - for the San Francisco Bay Area
  - Household + Income Model (*developed in-house*)
  - In-Commute Assessment (*developed in-house*)
- In general, our approach **builds upon the REMI model**, making adjustments when supported by further data analysis by ABAG/MTC or CCCSE.
- **Attachment A** provides additional technical information on the draft methodology under development.

# Model Flow Chart: Interactive Approach

Plan  
Bay  
Area  
2040



Plan  
Bay  
Area  
2050  
*(draft)*



# Elements of the Regional Forecast

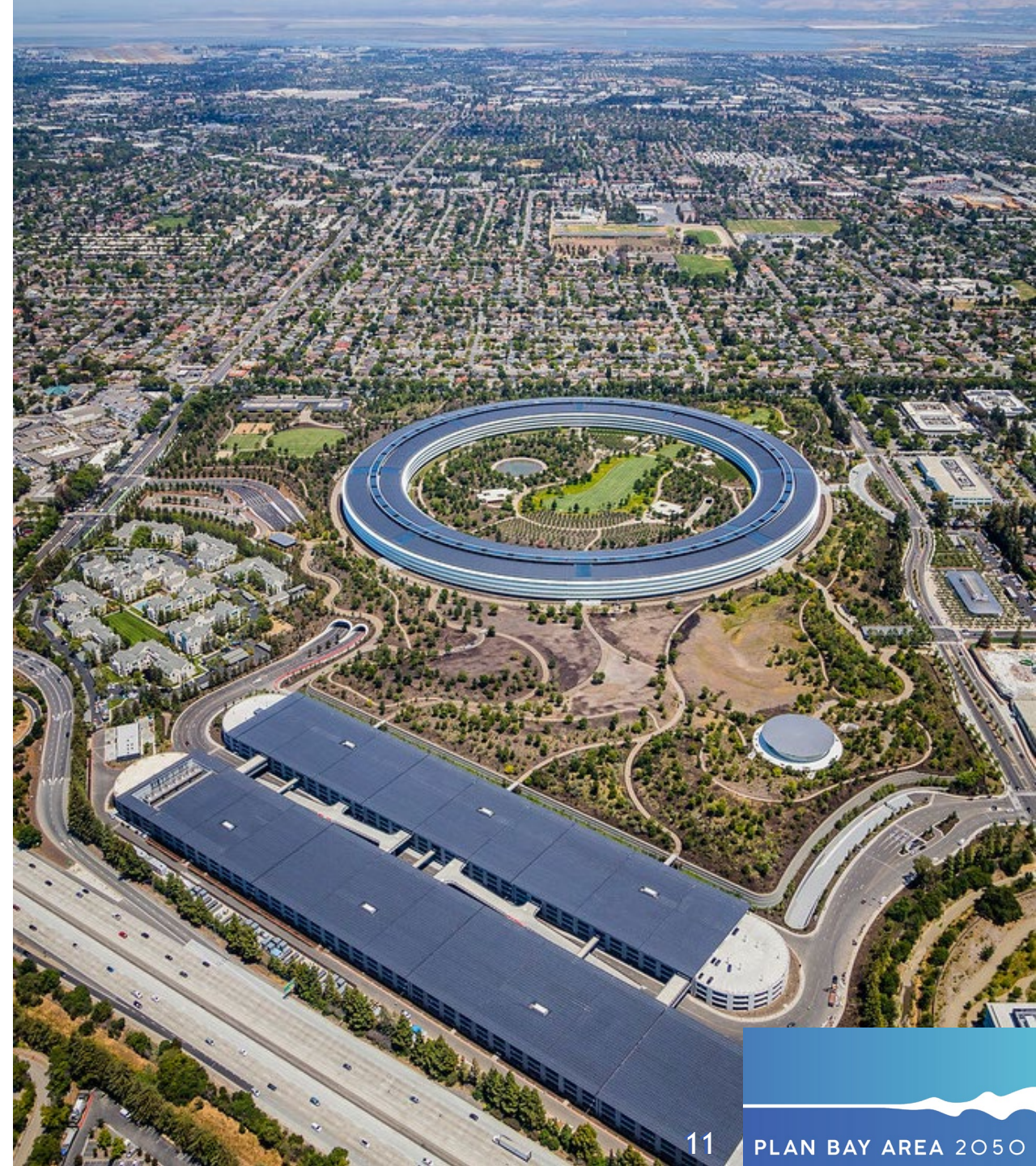
- **The Regional Growth Forecast** estimates employment and population, households by income category, and how much in-commuting may change.
- **Key underlying assumptions:**
  - Bay Area employment is driven by national trends in population growth and employment.
  - Overall U.S. population growth will likely slow over next three decades.
  - Competitiveness of Bay Area sectors relative to the equivalent sectors in the U.S. will affect how fast the region's economy grows.





# Key Factors in the Employment Forecast

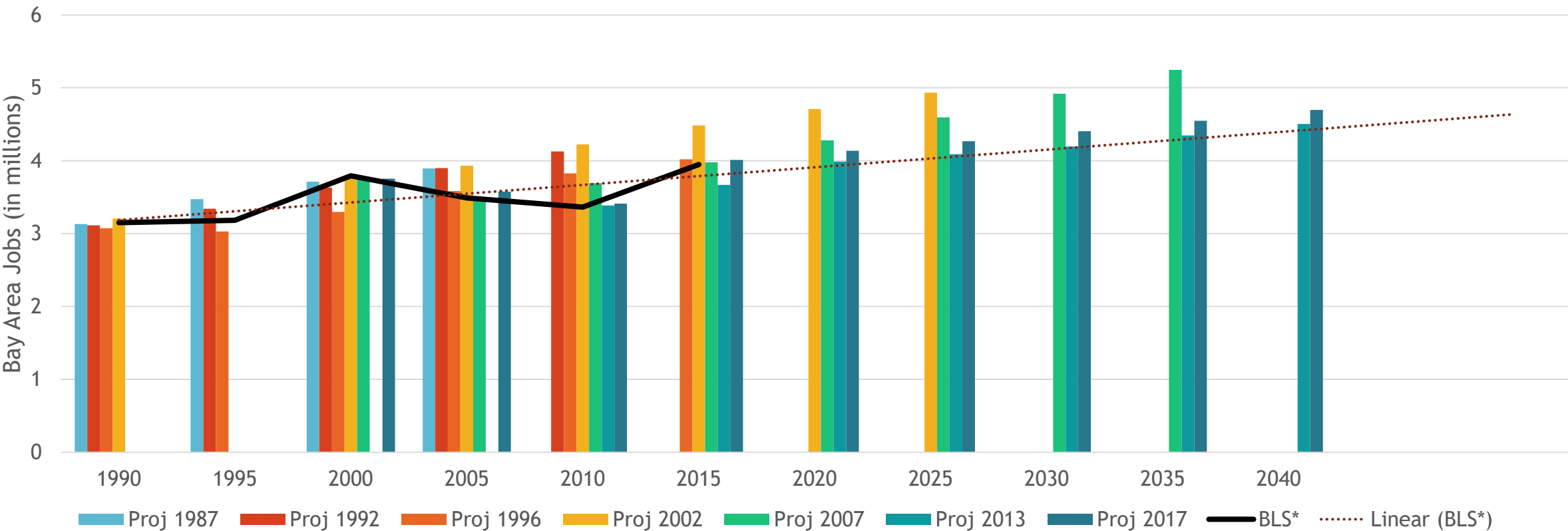
- Will the sectors driving growth today continue to be tomorrow's drivers?
- What factors will affect industry competitiveness?
- How do we balance short terms shifts and long term trends?
- How do we balance what the models tell us with what our research and experts say?



# Exploring Past Plans: Jobs Projections



Vintages of Projections Compared to Trend Line Forecast Since 1990





# Key Factors in the Population Forecast

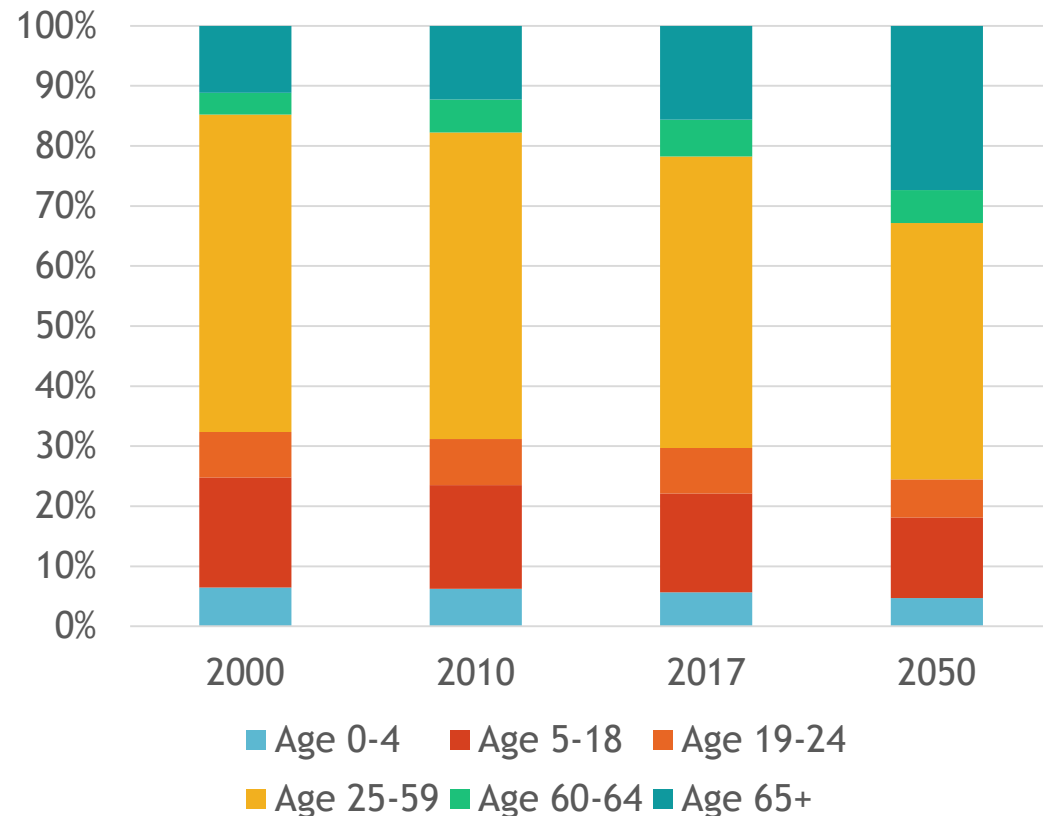
- How does the current demographic mix by age and ethnicity affect our population 30 years from now?
- How might people moving into or out of the region change our future?
- How do key age cohorts — baby boomers, millennials — shape labor supply and demand for housing?



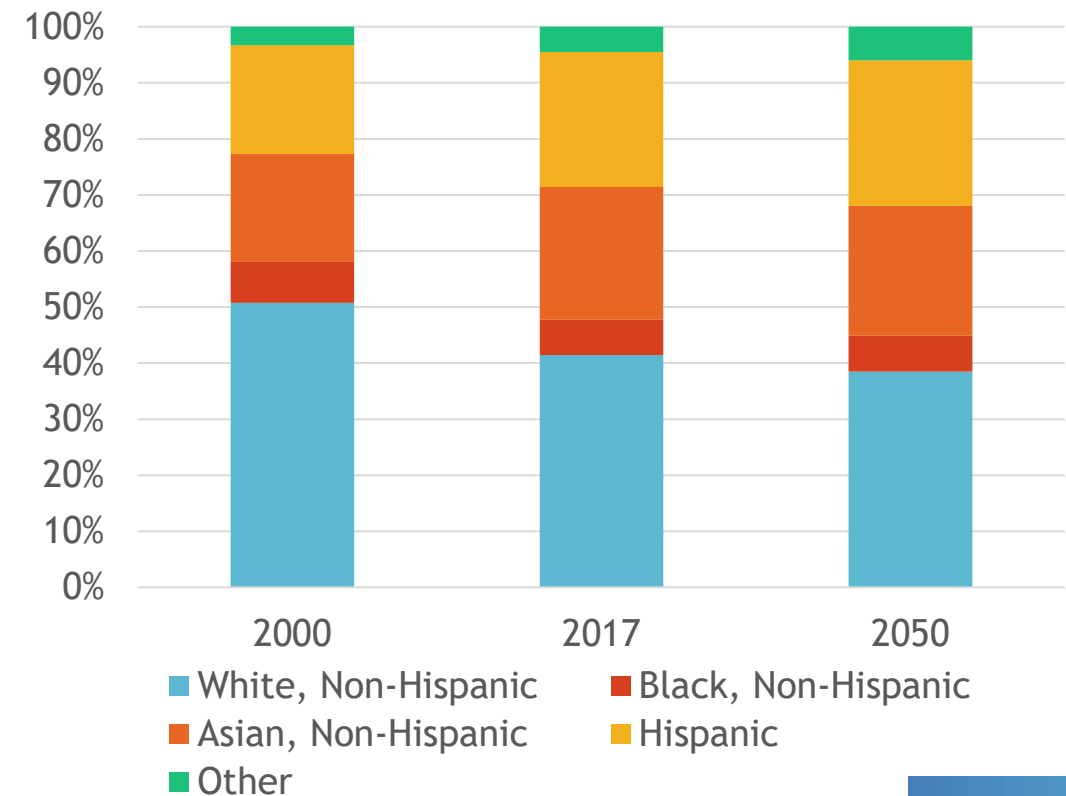
# Exploring Population Trendlines: How DOF Foresees a Changing Population

Regional  
Forecast

## An Aging Population



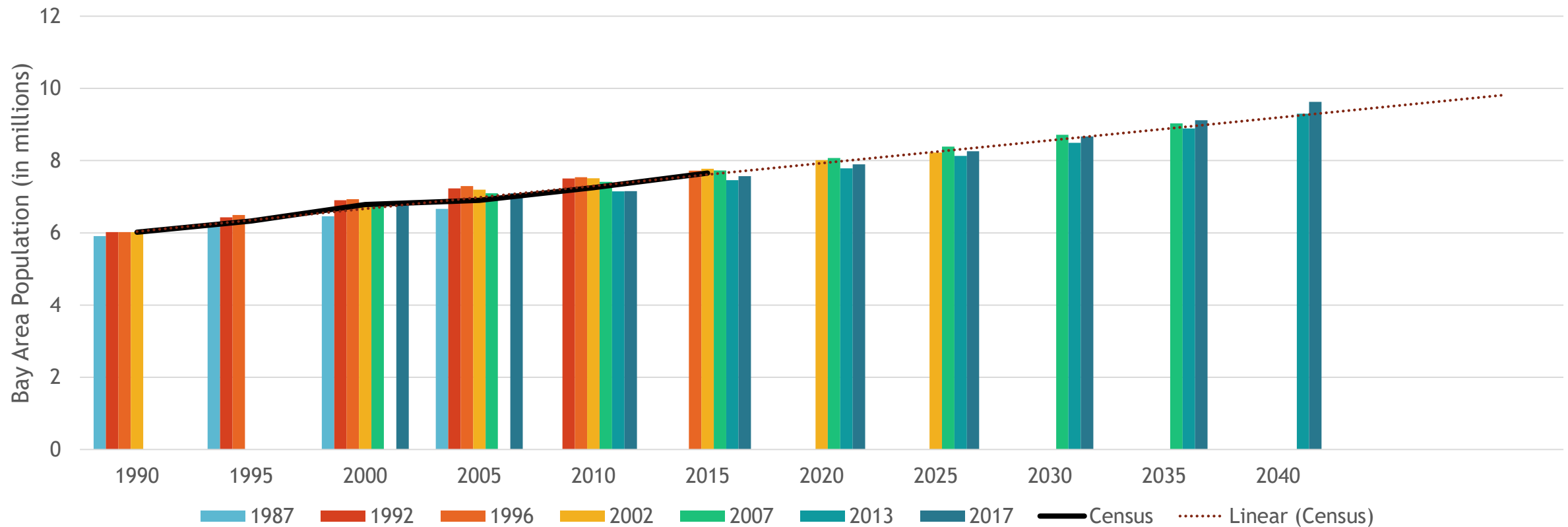
## A More Diverse Population



# Exploring Past Plans: Population Projections

Regional  
Forecast

Vintages of Projections Compared to Trend Line Forecast Since 1990



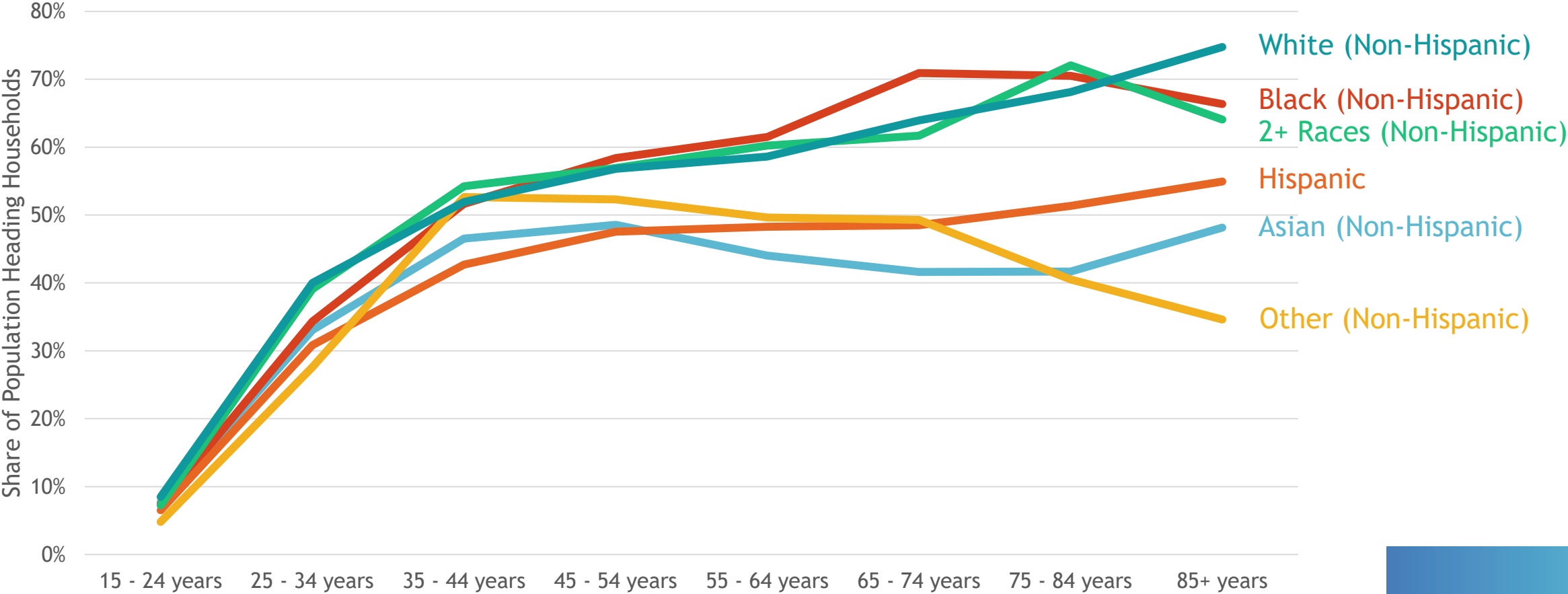


# Key Factors in Estimating Households and Income

- Number, size of households is affected by age, ethnicity of the population.
- Household size, workers per household vary with economic conditions.
- What shapes multigenerational households? Immigration? Income levels and housing costs?
- How do economic and demographic factors affect household incomes?

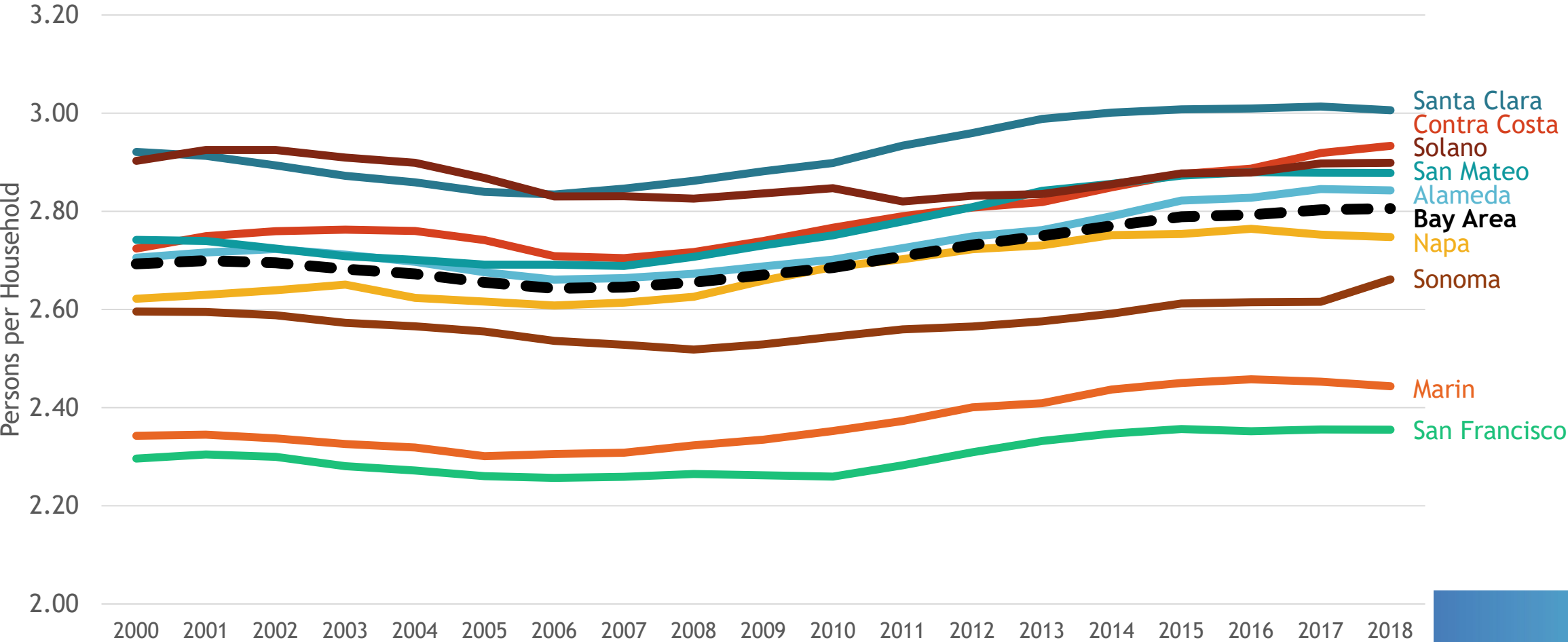


# Exploring Household Formation: Differences by Race/Ethnicity



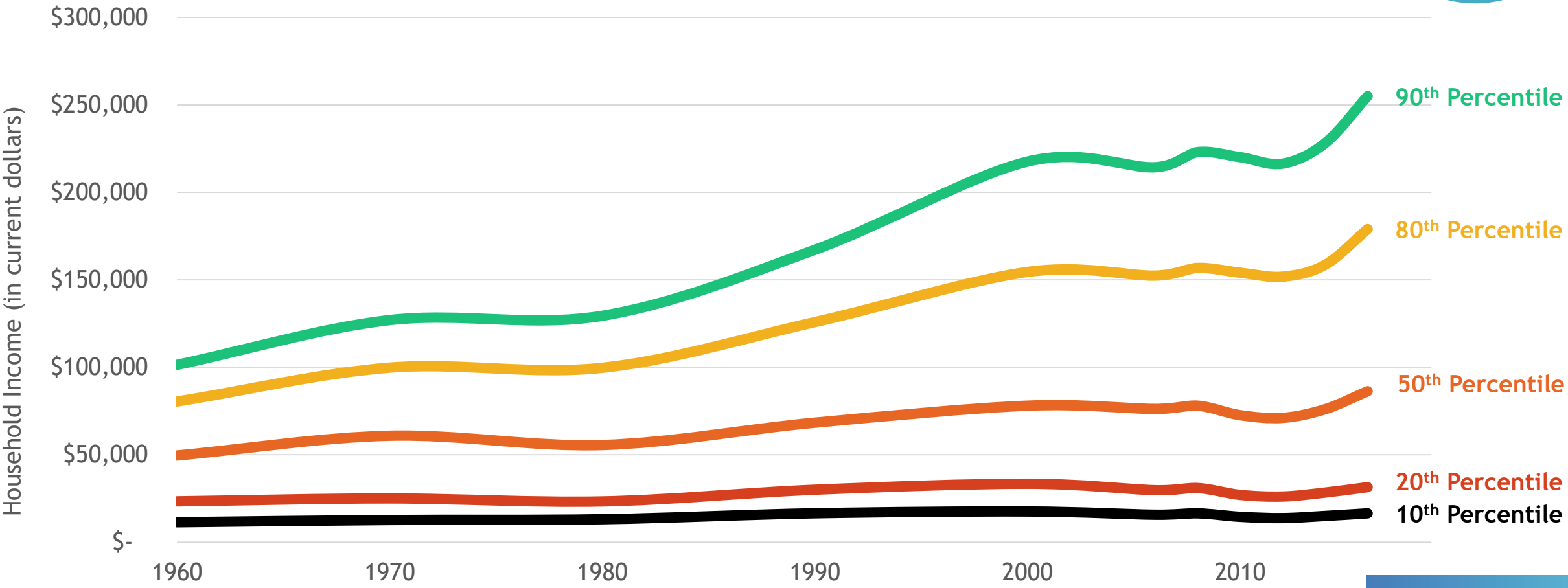


# Exploring Household Trendlines: How Big is Your Household?



# Exploring Income Trendlines: Rising Income Inequality in the Bay Area

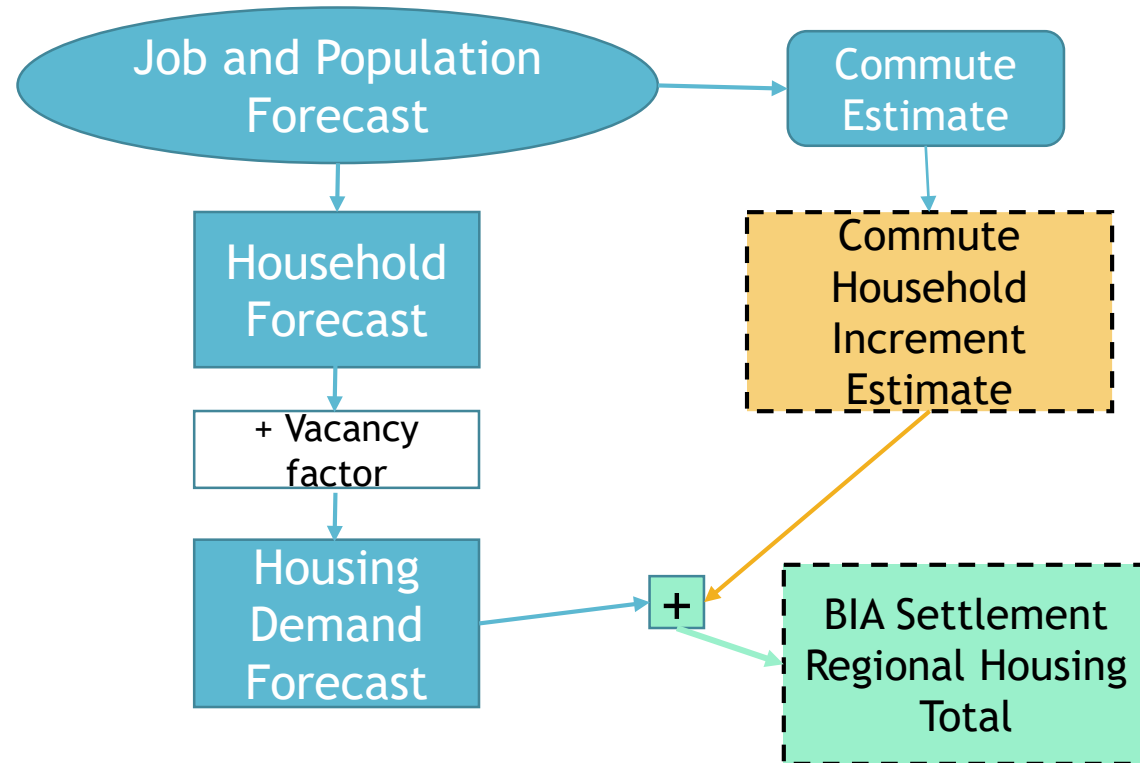
Regional  
Forecast



# Incorporating Key Assumptions on In-Commuting

Regional  
Forecast

How we did it for Plan Bay Area 2040:

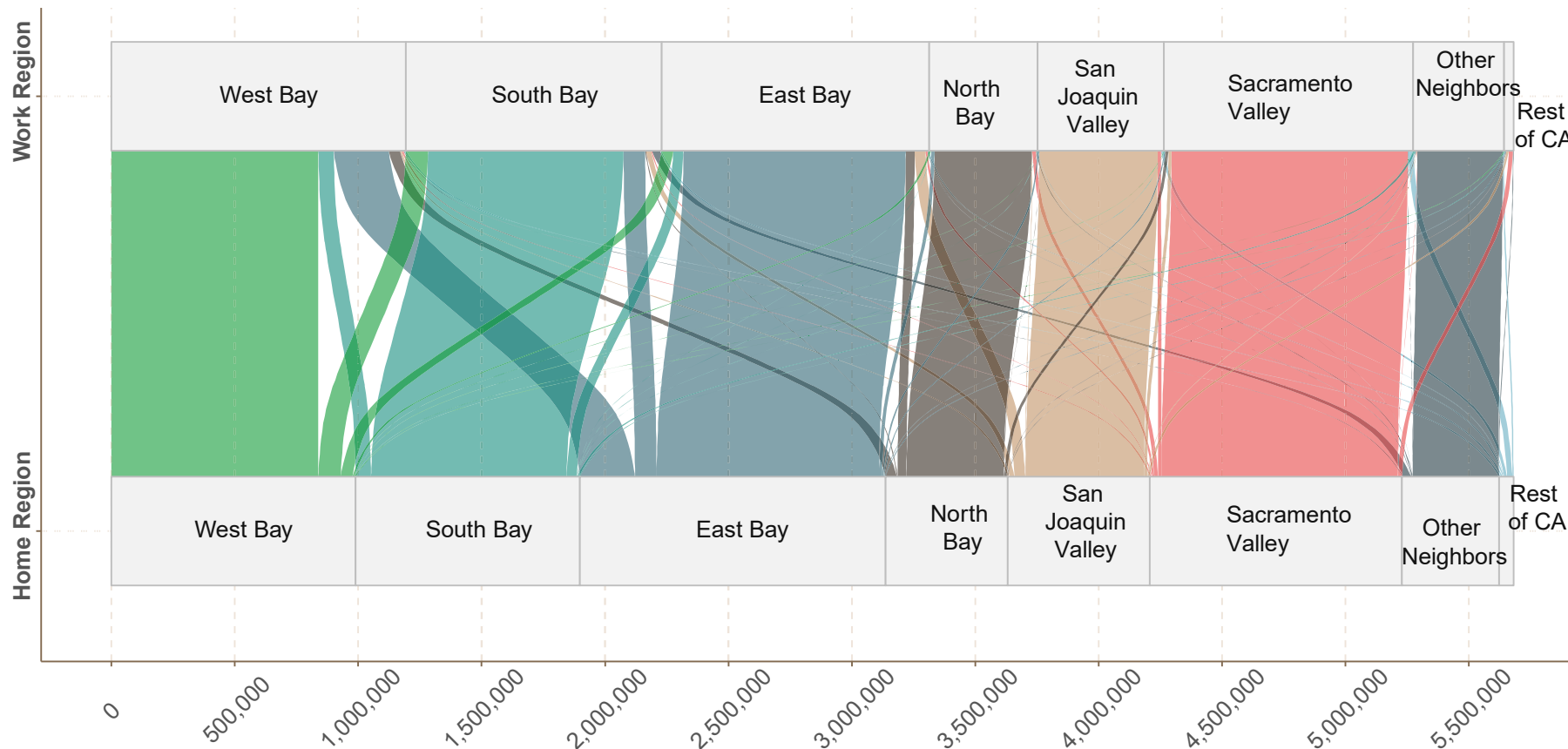


*The Regional Growth Forecast for Plan Bay Area 2050 will be consistent both with Senate Bill 375 and the legal requirements of the BIA Bay Area legal settlement from Plan Bay Area (2013).*

# Exploring In-Commuting: A Small but Growing Share of Trips

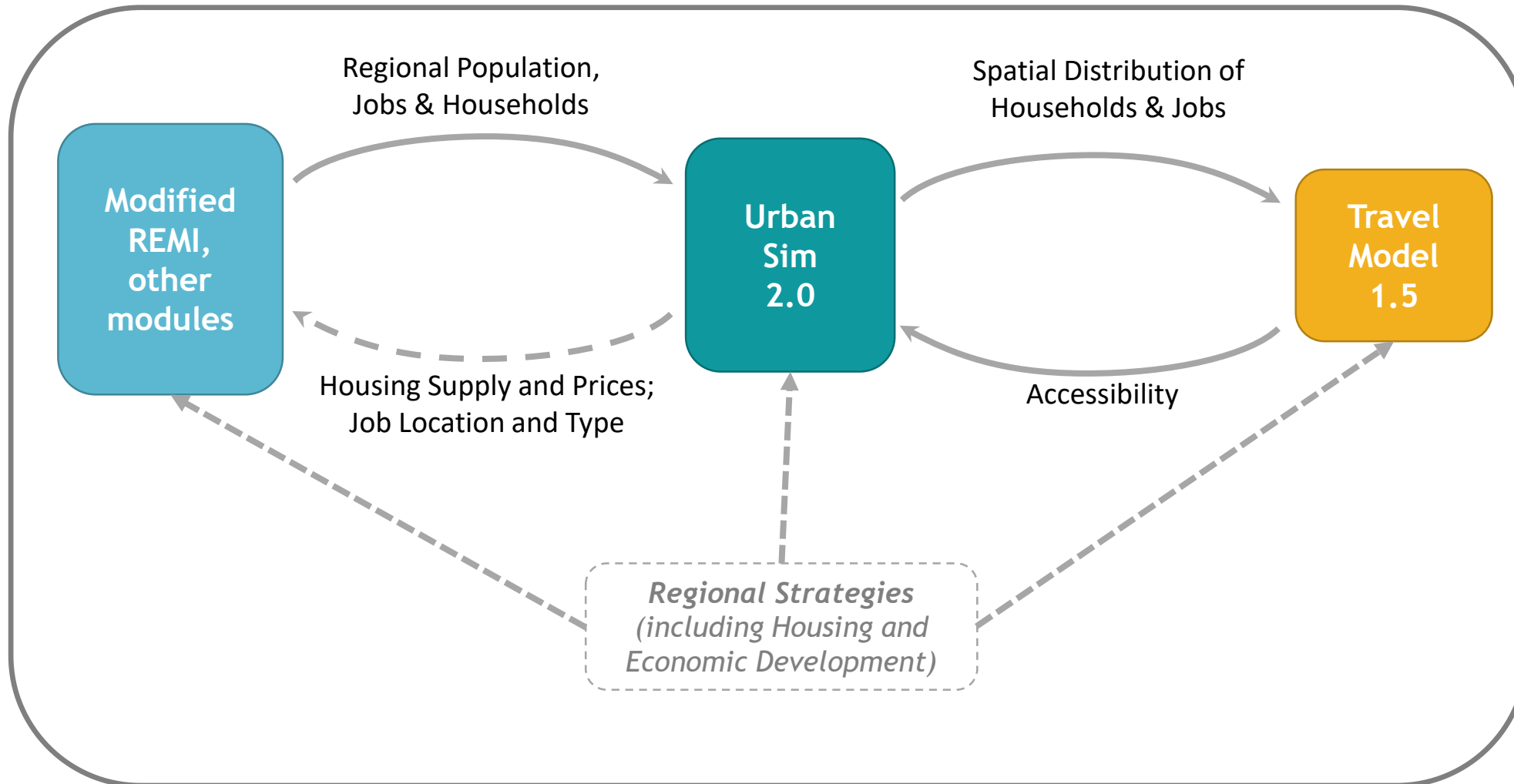
Regional  
Forecast

Subregion-to-Subregion Commute Flow Chart



- Most workers commute *within* their county.
- The East Bay provides the most commuters working in other Bay Area counties.
- Of commuters leaving the San Joaquin Valley, the largest number goes TO the East Bay.
- 6% of Silicon Valley workers come from outside the region.

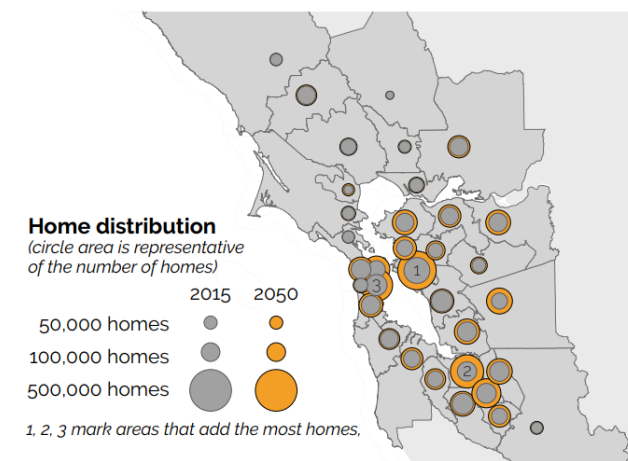
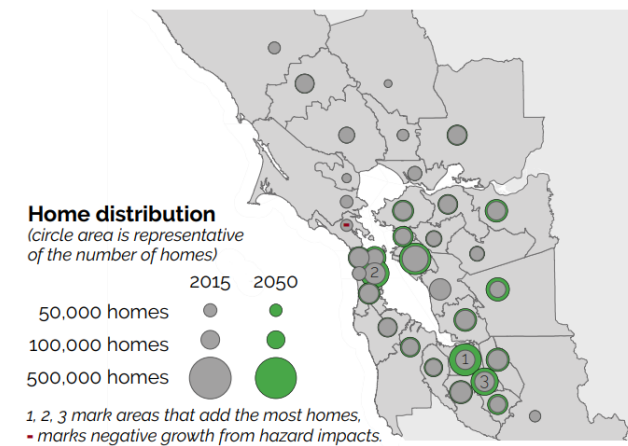
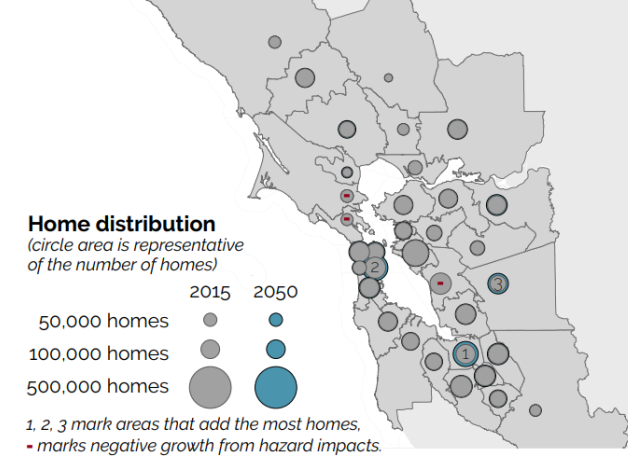
# Integrating Strategies: An Iterative Approach to Forecasting





# Building upon Horizon: Stress-Testing Strategies

- MTC/ABAG is already exploring some of these big questions through the **Horizon initiative**. Forecasts for three divergent Futures were showcased in the Futures Interim Report, released in March.
- Through Futures Round 2, further testing of a suite of housing and economic development strategies using UrbanSim 1.5 will take place this summer.



Questions? Comments?

Contact Cynthia Kroll at  
[ckroll@bayareametro.gov](mailto:ckroll@bayareametro.gov)

PLAN BAY AREA 2050

# What's Next for the Regional Growth Forecast?

- Public Comment Period - through August 19, 2019
- Seek Methodology Adoption - September 19, 2019
- Draft Regional Growth Forecast - Fall 2019
- Final Regional Growth Forecast - Spring 2020