



Metropolitan Transportation Commission

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

Meeting Agenda

Policy Advisory Council

Randi Kinman, Chair
Cynthia L. Murray, Vice Chair

Wednesday, June 13, 2018

1:30 PM

Board Room - 1st Floor

This meeting is scheduled to be webcast live on the Metropolitan Transportation Commission's Website: <http://mtc.ca.gov/whats-happening/meetings> and will take place at 1:30 p.m.

1. [18-0415](#) Welcome

Action: Information

Presenter: Randi Kinman, Council Chair

2. Roll Call / Confirm Quorum

Quorum: A quorum of this council shall be a majority of its regular voting members (15).

3. [18-0416](#) Approval of May 9, 2018 Meeting Minutes
(5 minutes)

Action: Approval

Presenter: Randi Kinman, Council Chair

Attachments: [03_Minutes_May 2018.pdf](#)

4. [18-0417](#) Subcommittee Reports
(5 minutes)

The subcommittee may refer an item from its agenda to the full Council for action at its next meeting if needed.

- Action: Information

Presenter: Jim Blacksten, Subcommittee Chair

5. [18-0418](#) Election Update
 (15 minutes)
- Update on the election results in regards to Regional Measure 3 and Proposition 69.
- Action:** Discussion
- Presenter:** Rebecca Long
- Attachments:** [05 Election Update.pdf](#)
6. [18-0419](#) Horizon: Perspective Paper #1 Preview - Autonomous Vehicles
 (45 minutes)
- Preview of Horizon Perspective Paper #1, focused on strategies and policies to prepare the region for autonomous vehicles.
- Action:** Discussion
- Presenter:** Adam Noelting
- Attachments:** [06_Horizon-Perspective Paper 1 Preview - AV.pdf](#)
7. [18-0420](#) Horizon: Futures Shortlist
 (30 minutes)
- Preview of the proposed shortlist of futures to be analyzed in the Horizon process, guided by stakeholder input and technical analysis over the past month.
- Action:** Discussion
- Presenter:** Dave Vautin and Michael Germeraad
- Attachments:** [07_Horizon- Futures Shortlist.pdf](#)
8. [18-0421](#) Staff Liaison Report
 (5 minutes)
- Relevant MTC policy decisions and other activities.
- Action:** Information
- Presenter:** Marti Paschal, Staff Liaison
- Attachments:** [08_Staff_Liaison_Report June 2018.pdf](#)

9. [18-0422](#) Council Member Reports
 (10 minutes)

Members of the Council may report on locally relevant issues or events.

Action: Information

Presenter: Randi Kinman, Council Chair

10. [18-0423](#) New Business
 (5 minutes)

Members of the Council may bring up new business for discussion or addition to a future agenda.

Action: Discussion

Presenter: Randi Kinman, Council Chair

11. Public Comments / Other Business

12. Adjournment / Next Meeting

The next meeting of the Policy Advisory Council will be held Wednesday, July 11, 2018 at 1:30 p.m. at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.

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) 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.

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.

MTC's Chair and Vice-Chair are ex-officio voting members of all standing Committees.



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 18-0415 **Version:** 1 **Name:**

Type: Report **Status:** Informational

File created: 5/11/2018 **In control:** Policy Advisory Council

On agenda: 6/13/2018 **Final action:**

Title: Welcome

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:
Welcome

Presenter:
Randi Kinman, Council Chair

Recommended Action:
Information



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 18-0416 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 5/11/2018 **In control:** Policy Advisory Council
On agenda: 6/13/2018 **Final action:**
Title: Approval of May 9, 2018 Meeting Minutes
(5 minutes)
Sponsors:
Indexes:
Code sections:
Attachments: [03_Minutes_May 2018.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:
Approval of May 9, 2018 Meeting Minutes
(5 minutes)

Presenter:
Randi Kinman, Council Chair

Recommended Action:
Approval

Attachments:



Metropolitan Transportation Commission

Meeting Minutes - Draft

Policy Advisory Council

*Randi Kinman, Chair
Cynthia L. Murray, Vice Chair*

Agenda Item 3

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

Wednesday, May 9, 2018

1:30 PM

Board Room - 1st Floor

1. Welcome

2. Roll Call / Confirm Quorum

Roll Call

Present: 20 - Baker, Blacksten, Burnett, Chaudhary, Coates, Cochran, Diep, Hedges, Kallins, Levin, Lopez, Madden, Mendoza, Miller, Momoh, Vice Chair Murray, Saver, Williams, Winter and Wolff

Excused: 3 - Castellanos, Chair Kinman and Lee

Absent: 4 - Florez, Hernandez, Regan and Schweng

3. [18-0294](#) Approval of April 11, 2018 Meeting Minutes (5 minutes)

Action: Approval

Presenter: Cynthia L. Murray, Council Vice Chair

Upon the motion by Hedges and second by Wolff, the April 11, 2018 meeting minutes were approved. The motion carried by the following vote:

Aye: 19 - Blacksten, Burnett, Chaudhary, Coates, Cochran, Diep, Hedges, Kallins, Levin, Lopez, Madden, Mendoza, Miller, Momoh, Vice Chair Murray, Saver, Williams, Winter and Wolff

Absent: 8 - Baker, Castellanos, Florez, Hernandez, Chair Kinman, Lee, Regan and Schweng

4. [18-0295](#) Equity and Access Subcommittee: Report on subcommittee's discussion on the Regional Means-Based Transit Fare Program Framework (5 minutes)

Report to the Council on its discussion on the Regional Means-Based Transit Fare Program Framework, and may seek action from the Council. At the subcommittee, staff will have presented the revised program framework as presented to the Programming and Allocations Committee for consideration.

Action: Discussion

Presenter: Jim Blacksten, Subcommittee Chair

Upon the motion by Levin and second by Hedges, the Council voted to concur with the MTC Programming and Allocations Committee's support of Option 1 for the Regional Means-Based Transit Fare Program Framework and to recommend that staff consider implementing regional passes with fare integration in a future phase of the program.

The Council also reaffirmed its April 11, 2018 recommendation to the Committee that the framework include an evaluation of the success of the initial rollout in terms of rider/user experience and the impact on transit operators. The Council's April 11th vote recommended that the framework also require the identification of additional revenue sources to support further expansion of the program, actions to achieve the participation of additional transit operators, and an analysis of the potential implementation of deeper discounts and better fare integration. The motion carried by the following vote:

Aye: 18 - Blacksten, Burnett, Chaudhary, Coates, Cochran, Diep, Hedges, Kallins, Levin, Lopez, Madden, Mendoza, Miller, Momoh, Vice Chair Murray, Saver, Williams and Winter

Absent: 8 - Baker, Castellanos, Florez, Hernandez, Chair Kinman, Lee, Regan and Schweng

Abstain: 1 - Wolff

5. [17-3009](#) Operations Section Orientation (20 minutes)

Briefing on the role and responsibilities of the Operations Section.

Action: Discussion

Presenter: Ashley Nguyen, Operations

Jerry Grace was called to speak.

Baker arrived during the Operations Section Orientation.

6. [18-0314](#) Horizon and Plan Bay Area 2050: Project Performance Assessment Overview
(35 minutes)

Overview of the proposed Project Performance Assessment process for Horizon and Plan Bay Area 2050 and input requested on proposed changes from the Plan Bay Area 2040 framework.

Action: Discussion

Presenter: Dave Vautin

7. [18-0358](#) Council Work Plan
(40 minutes)

Continued discussion on the council members work plan for the coming year.

Action: Discussion / Approval

Presenter: Randi Kinman, Council Chair

Upon the motion by Hedges and second by Baker, the Council Work Plan was adopted. The motion carried by the following vote:

Aye: 20 - Baker, Blacksten, Burnett, Chaudhary, Coates, Cochran, Diep, Hedges, Kallins, Levin, Lopez, Madden, Mendoza, Miller, Momoh, Vice Chair Murray, Saver, Williams, Winter and Wolff

Absent: 7 - Castellanos, Florez, Hernandez, Chair Kinman, Lee, Regan and Schweng

8. [18-0296](#) Staff Liaison Report
(5 minutes)

Relevant MTC policy decisions and other activities.

Action: Information

Presenter: Marti Paschal, Staff Liaison

9. [18-0297](#) Council Member Reports
(5 minutes)

Members of the Council may report on locally relevant issues or events.

Action: Information

Presenter: Cynthia L. Murray, Council Vice Chair

10. [18-0298](#) New Business
(5 minutes)

Members of the Council may bring up new business for discussion or addition to a future agenda.

Action: Discussion

Presenter: Cynthia L. Murray, Council Vice Chair

11. Public Comments / Other Business

12. Adjournment / Next Meeting

The next meeting of the Policy Advisory Council will be held Wednesday, June 13, 2018 at 1:30 p.m. at the Bay Area Metro Center, 375 Beale Street, San Francisco, CA.



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San Francisco, CA 94105

Legislation Details (With Text)

File #:	18-0417	Version:	1	Name:	
Type:	Report	Status:		Informational	
File created:	5/11/2018	In control:		Policy Advisory Council	
On agenda:	6/13/2018	Final action:			
Title:	Subcommittee Reports (5 minutes)				

The subcommittee may refer an item from its agenda to the full Council for action at its next meeting if needed.

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:

Subcommittee Reports
(5 minutes)

The subcommittee may refer an item from its agenda to the full Council for action at its next meeting if needed.

Presenter:

Jim Blacksten, Subcommittee Chair

Recommended Action:

Information

Attachments:



Metropolitan Transportation Commission

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Legislation Details (With Text)

File #:	18-0418	Version:	1	Name:	
Type:	Report	Status:		Informational	
File created:	5/11/2018	In control:		Policy Advisory Council	
On agenda:	6/13/2018	Final action:			
Title:	Election Update (15 minutes)				

Update on the election results in regards to Regional Measure 3 and Proposition 69.

Sponsors:

Indexes:

Code sections:

Attachments: [05_Election Update.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Election Update
(15 minutes)

Update on the election results in regards to Regional Measure 3 and Proposition 69.

Presenter:

Rebecca Long

Recommended Action:

Discussion

Attachments:



METROPOLITAN
TRANSPORTATION
COMMISSION

Agenda Item 5

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105
TEL 415.778.6700
WEB www.mtc.ca.gov

Memorandum

TO: Policy Advisory Council

DATE: June 7, 2018

FR: Rebecca Long

RE: Election Update

Preliminary Results Show Majority Support for Regional Measure 3 (RM 3)

As of noon on Thursday, June 7th, the regionwide vote for Regional Measure 3 was 54 percent in favor (482,125) vs. 46 percent opposed (410,122). Election offices across the Bay Area are still counting ballots due to the significant number of mail-in and provisional ballots and expect to deliver certified results by early July. Based on vote totals so far, shown below, the greatest support came from San Francisco City and County with 65 percent support, while the greatest opposition was in Solano County, where only 30 percent of voters favored the measure as shown below.

County	Yes	No	Vote in Favor	Votes Against
Alameda	87,048	76,922	53%	47%
Contra Costa	52,055	66,443	44%	56%
Marin	21,044	15,211	58%	42%
Napa	7,194	6,657	52%	48%
San Francisco	95,904	52,110	65%	35%
San Mateo	38,059	32,745	54%	46%
Santa Clara	124,965	80,555	61%	39%
Solano	20,792	48,131	30%	70%
Sonoma	35,064	31,348	53%	47%
Regionwide Total	482,125	410,122	54%	46%

Note: Vote totals are not complete and are based on information posted on each county's election office web site. Certified results are expected by early July.

Attachment A compares the RM 3 vote by county with each county's support for RM 1 and RM 2 for those counties that also voted on those measures (i.e. not including Napa and Sonoma). RM 1 standardized Bay Area state-owned toll bridge rates at \$1.00, resulting in a range increase from zero to 60-cents. RM 2 was a single dollar increase and RM 3 is \$3 increase phased in over six years.

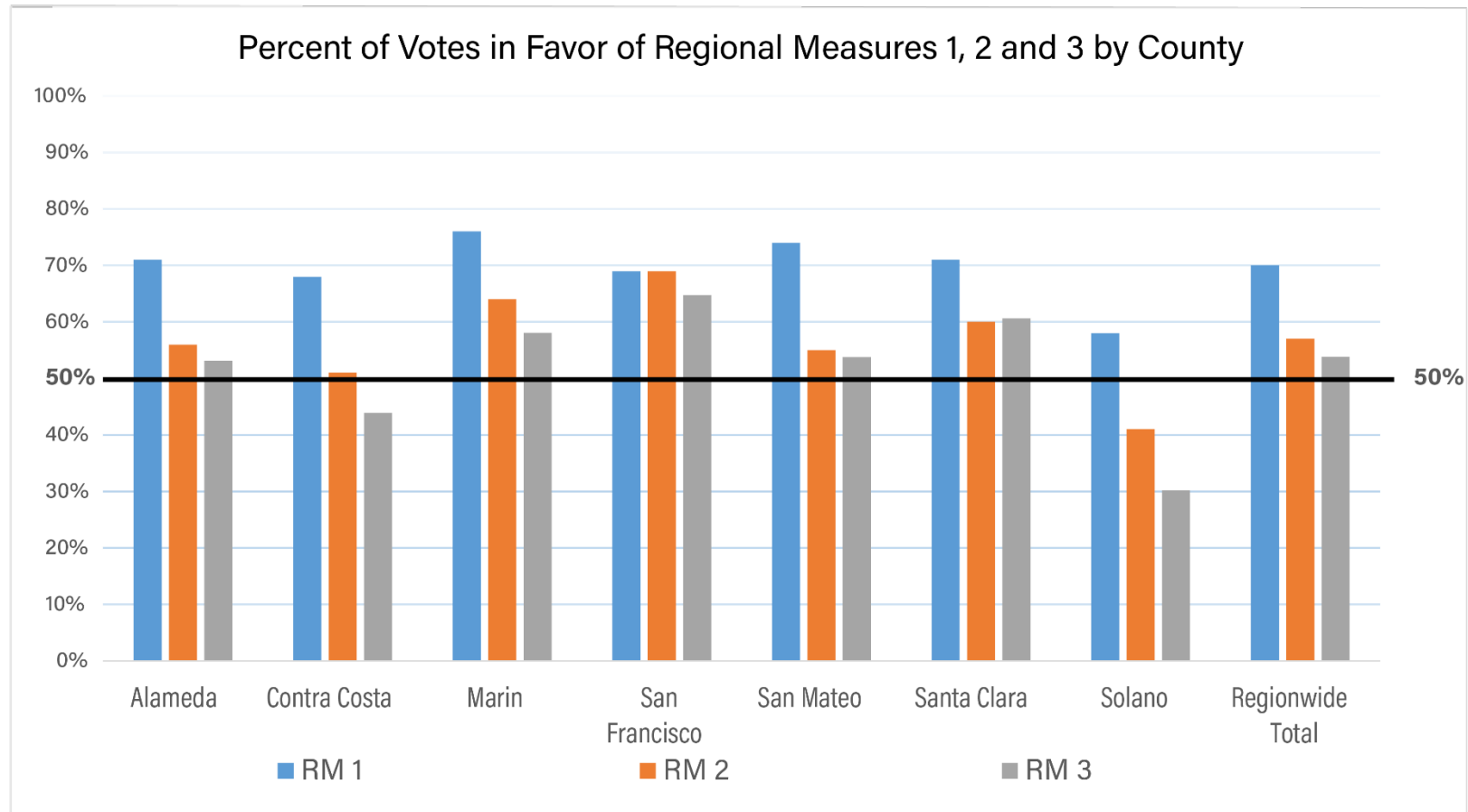
Statewide & Local Measures

While not as crowded a ballot as we typically see in a General Election, there were a number of noteworthy statewide propositions and local measures on the June 2018 primary ballot related to transportation and housing. Attachment B provides a snapshot of the measures staff was tracking. Highlights include:

- Proposition 68, authorizing a \$4 billion park bond, including flood protection and climate adaptation, passed by 56 percent.
- Proposition 69, which ensures some of the new revenue streams added by Senate Bill 1 (Beall) are constitutionally protected from diversion passed by a whopping 80 percent.
- Proposition 70, mandating a 2/3 vote of the Legislature for Cap and Trade fund appropriations in 2024 (and thereafter) failed by 64 percent.
- Emeryville voters approved a \$50 million general obligation bond for housing projects and services for people experiencing homelessness.
- San Francisco voters rejected Proposition D, which proposed raising funding for housing and homelessness via a new tax on commercial real estate tax of 1.7 percent, but approved Proposition F providing for legal representation for tenants facing eviction.
- Among two competing measures in San Jose, voters supported Measure C, a city council-sponsored measure placed on the ballot to counter Measure B, a developer-sponsored measure that would have eased the way for converting employment land in the Evergreen Campus Industrial Area to housing.
- Among two competing measures in Martinez related to voter approval prior to the city making changes to changes to areas designated for open space, park and recreation land (both of which secured more than a majority), voters favored Measure F, the city-sponsored measure.

Attachments:

- Attachment A: Percent of votes in favor of Regional Measure 1,2, and 3 by County
- Attachment B: June 5, 2018 Election Results Related to Transportation Housing



Note: RM 1 (1988) standardized Bay Area state-owned bridge toll rates at \$1.00, as follows: No change for the Richmond-San Rafael Bridge, 25-cent-increase for the San Francisco-Oakland Bay Bridge, Dumbarton & San Mateo Hayward bridges; 50-cent increase for the Antioch Bridge and 60-cent increase for the Benicia-Martinez & Carquinez bridges. RM 2 (2004) was a \$1 surcharge on all bridges and RM 3 (2018) is a \$3 toll increase on all bridges phased in over six years.

June 5, 2018 Election Results Related to Transportation Housing

County/Local Jurisdiction	Measure Name	Description	Vote Threshold	Annual Estimated Revenue	Outcome	Vote (Y-N)
Statewide						
Statewide	Proposition 68	Authorizes a \$4 billion general obligation bond for parks, natural resources, climate adaptation, water quality and supply and flood protection.	Majority		Pass	56% - 44%
Statewide	Proposition 69	Constitutional amendment to prevent the legislature from redirecting transportation tax revenues for non-transportation purposes.	Majority		Pass	80.4% - 19.6%
Statewide	Proposition 70	Requirement for a one-time 2/3 approval by the legislature for the cap-and-trade spending plan.	Majority		Fail	36.4% - 63.6%
Alameda County						
Emeryville	Measure C	\$50 million GO bond for housing projects and assistance for people experiencing homelessness; \$4.912 per \$100 of assessed value to fund housing projects and assistance.	2/3	\$3.4 million*	Pass	71.6% - 28.4%
Contra Costa County						
Martinez	Measure F	Voter-approval requirement for changes to public open space, park and recreation land (city council measure).	Majority		Pass	52.2% - 47.9%
Martinez	Measure I	Voter-approval requirement for changes to public open space, park and recreation land (citizen initiative).	Majority		Pass	51.2% - 48.8%
Lafayette	Measure L	Lafayette Homes at Deer Park Hill Development - 44 housing units and a development agreement for park facilities and rezoning land from admin professional office to low-density single family residential.	Majority		Fail	44.5% - 55.5%
Napa County						
Napa County	Measure C	Napa County General Plan/Zoning to create water quality buffer zones within the Agricultural Watershed district, regulate oak tree and oak woodland removal, and establish a permit program for tree removal.	Majority		TBD	50.1% - 49.9%

June 5, 2018 Election Results Related to Transportation Housing

Attachment B
Agenda Item 5

County/Local Jurisdiction	Measure Name	Description	Vote Threshold	Annual Estimated Revenue	Outcome	Vote (Y-N)
San Francisco City & County						
San Francisco City & County	Proposition A	Revenue bonds for power facilities excluding fossil fuels and nuclear energy. Authorizes the PUC to issue revenue bonds for power facilities with two-thirds approval from the SF Board of Supervisors. The proposition was designed to prohibit the PUC from funding power plants run by fossil fuels or nuclear energy.	Majority		Pass	75.9% - 24.1%
San Francisco City & County	Proposition D	Commercial Property Tax for Housing & Homelessness. Gross receipts of leased commercial space over \$50 million would be taxed at 1.7%.	2/3	\$70 million**	Fail	44.6% - 55.4%
San Francisco City & County	Proposition F	Legal representation for tenants facing eviction.	Majority		Pass	55.6% - 44.4%
San Francisco City & County	Proposition I	Discouraging the relocation of professional sports teams to SF .	Majority		Fail	42.6% - 57.4%
San Mateo County						
Foster City	Measure P	Levee measure	2/3	\$5.1 million*	Pass	79.8% - 20.2%
Jefferson Union High School District	Measure J	Jefferson Union High School District \$33 million for 80 rental housing units for teachers & staff.	55 percent		Fail	54.1% - 45.9%
Santa Clara County						
San Jose	Measure B	Developer-sponsored measure to amend the 2040 San Jose general plan to rezone employment lands for senior housing, including a senior housing center in the Evergreen Campus Industrial Area allowing for up to 910 residential units.	Majority		Fail	43.9% - 56.1%
San Jose	Measure C	City Council-sponsored measure to require additional studies before land designated for employment use is redesignated in San Jose, designed as a counter to Measure B.	Majority		Pass	58.9% - 41.1%

Note: No land use or transportation-related measures were on the ballot in Marin, Solano or Sonoma counties

Source:

Ballotpedia.org

* California Tax Association

** Sponsor estimate



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #: 18-0419 **Version:** 1 **Name:**
Type: Report **Status:** Informational
File created: 5/11/2018 **In control:** Policy Advisory Council
On agenda: 6/13/2018 **Final action:**

Title: Horizon: Perspective Paper #1 Preview - Autonomous Vehicles
(45 minutes)

Preview of Horizon Perspective Paper #1, focused on strategies and policies to prepare the region for autonomous vehicles.

Sponsors:

Indexes:

Code sections:

Attachments: [06 Horizon-Perspective Paper 1 Preview - AV.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Horizon: Perspective Paper #1 Preview - Autonomous Vehicles
(45 minutes)

Preview of Horizon Perspective Paper #1, focused on strategies and policies to prepare the region for autonomous vehicles.

Presenter:

Adam Noelting

Recommended Action:

Discussion

Attachments:



**METROPOLITAN
TRANSPORTATION
COMMISSION**

Agenda Item 6

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700
www.mtc.ca.gov

TO: Policy Advisory Council

DATE: June 6, 2018

FR: Adam Noelting

RE: Horizon: Perspective Paper #1 Preview - Autonomous Vehicles

Policy Advisory Council Agenda Item 6, Horizon: Perspective Paper #1 Preview - Autonomous Vehicles, is attached as presented on June 7 to the Regional Advisory Working Group meeting.

MTC staff will be at your June 13 meeting to present a preview of Horizon Perspective Paper #1, focused on strategies and policies to prepare the region for autonomous vehicles; input is requested.

Attachment

J:\COMMITTEE\Policy Advisory Council\Meeting Packets\2018\06_2018_Poli_Advi_Coun\06a_Horizon-Perspective Paper 1 Preview - AV_CoverMemo.docx



M E M O R A N D U M

TO: Regional Advisory Working Group
FR: Adam Noelting
RE: Perspective Paper #1 Preview - Autonomous Vehicles

DATE: May 31, 2018

Background

Automated or autonomous vehicles (AVs) may be the most significant change to transportation since Henry Ford first made automobiles accessible to the working class. The technology is likely to have a profound impact on the Bay Area. AVs use an array of technological systems, including GPS, radar, and LIDAR backed by powerful computers and machine learning to navigate complex driving environments. With AV technologies, vehicles will eventually be capable of driving themselves – human operators and occupants optional. This capability could have dramatic implications for personal mobility, public transportation, and the movement of goods.

This report is the first in a series of *Perspective Papers* that will contribute to *Horizon*, a regional initiative exploring a range of external forces that have the potential to fundamentally alter the region's trajectory. The *Autonomous Vehicles Perspective Paper* focuses on priority policy interventions and planning strategies for the Bay Area to seize opportunities and proactively address challenges that AVs are likely to introduce. The strategies advanced via this report will be incorporated across a series of divergent *Futures* (planning scenarios), depending upon a range of assumptions including AV penetration, sharing preferences, and electric vehicle penetration.

Bay Area AV Pilot Programs and Policy Responses

Many communities in the Bay Area are beginning to proactively explore applications of AV technology. For instance, the City of San Jose has advanced a series of pilot programs to develop communications infrastructure, implement spatial data collection, and provide service with Level 4 (high automation) fleets. GoMentum Station (Concord) is a robust AV testing facility with city-like road networks, tunnels, over- and under-passes, and railroad crossings that accurately simulate real-world conditions. Bishop Ranch (San Ramon) is piloting AV shuttles to transport workers around the office park. The pilot will move into its final phase this year, operating outside of the office park to connect with local transit.

In addition to the explicit AV pilot programs, many other entities are exploring future-facing policies, programs, and regulations. The San Francisco Municipal Transportation Agency (SFMTA) recently developed *Guiding Principles for Emerging Mobility*, a policy framework to evaluate new mobility services for all SFMTA and SFCTA decisions. The Santa Clara Valley Transportation Authority (VTA) is developing an *Automated Driving System Draft Policy*, an effort to address the issues and opportunities AVs present and explore pathways to incrementally introduce automation into VTA's business model and practices. Finally, the California Public Utilities Commission (CPUC) has moved forward on releasing a proposed framework for regulating two AV pilot programs, one with drivers in the vehicle, and one without drivers in the vehicle.

Opportunities, Risks, and Strategies for the Bay Area

There remains tremendous uncertainty related to the timing and overall market penetration of autonomous vehicles, the extent to which driverless vehicles will be shared rather than owned, and the impacts they could have on labor, public transit, congestion, air quality, safety, and equity. To corral these uncertainties, the *Perspective Paper* relies heavily on the Horizon Guiding Principles— Affordable, Connected, Diverse, Healthy, and Vibrant— to describe the opportunities and risks of an AV future. For example, under the *Connected* principle, the Paper describes the opportunity that shared AV services could introduce a transit renaissance with improved on-demand services. However, there is also a risk that AVs would worsen congestion with more induced travel and empty vehicle circulation.

The Paper then turns to a shortlist of “priority strategies” to seize the opportunities or overcome the risks. Sticking with the *Connected* principle example, the paper describes the importance of pricing mobility fairly, designing smart streets, developing industry-wide data sharing protocols, and re-envisioning investments and innovations in our public transit system. While the presentation today focuses on a “shortlist” of strategies, the final *Perspective Paper* will also include a longer list of potential policy responses to explore, with more detail on feasibility and effectiveness. The Paper will also detail pilot programs and policy responses from across the U.S., and review the best available recent literature on the topic.

Next Steps

The *Automated Vehicles Perspective Paper* introduces opportunities and risks, while also introducing a set of priority strategies for the region to consider. It is important to emphasize that the paper is intended to serve as an interim deliverable of the overall *Horizon* process. The strategies described in the Paper serve as a starting point for a more robust discussion this fall, when MTC and ABAG staff will engage stakeholders on strategies that can overcome various challenges facing the region across multiple *Futures*. This process will identify a narrowed-down list of strategies most effective in multiple futures to carry forward into Plan Bay Area 2050.

Finally, MTC and ABAG will hold a public event releasing the Autonomous Vehicles Perspective Paper on the evening of Tuesday, June 26, 2018, here at the Bay Area MetroCenter, 375 Beale Street, San Francisco. The event will highlight a similar presentation of the material and engage experts and the audience in a panel discussion about these topics.



HORIZON

Autonomous Vehicles Perspective Paper

Strategies for the Bay Area

Horizon is exploring how economic, environmental, technological, and political uncertainties may create new challenges – or exacerbate existing ones – for the Bay Area over the coming decades.

H O R I Z O N

Futures Planning

Perspective Papers

Project Performance

For more information, go to:
mtc.ca.gov/horizon

PLAN BAY AREA 2050

Overview

- **Autonomous Vehicles 101**
- **Implications and Strategies**
 - Horizon Guiding Principles
 - Opportunities and Risks
 - “Big Ideas” and Applications for the Bay Area
- **Next Steps**



HORIZON

Autonomous Vehicles 101

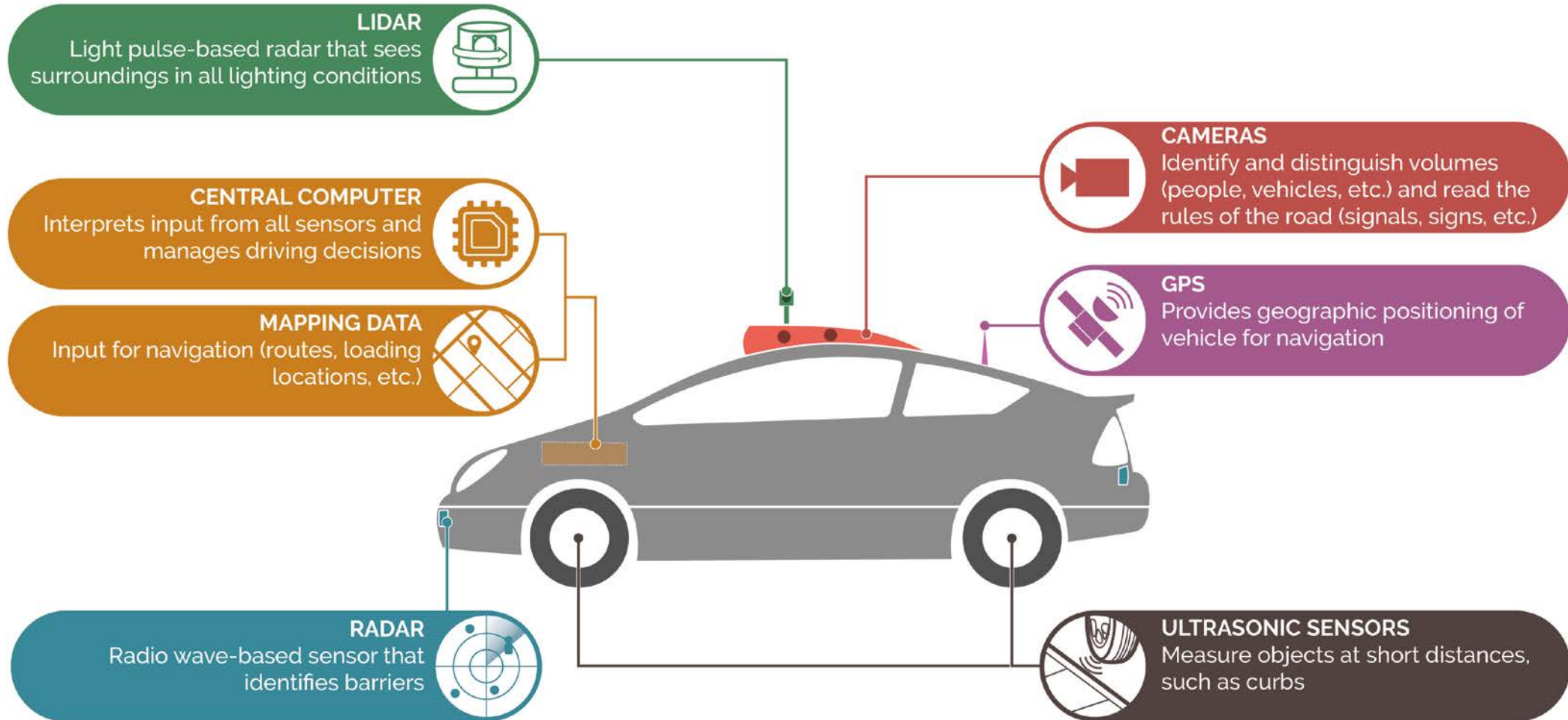
"Automated" versus "Connected"

AUTOMATED The increasing ability to drive without human assistance.

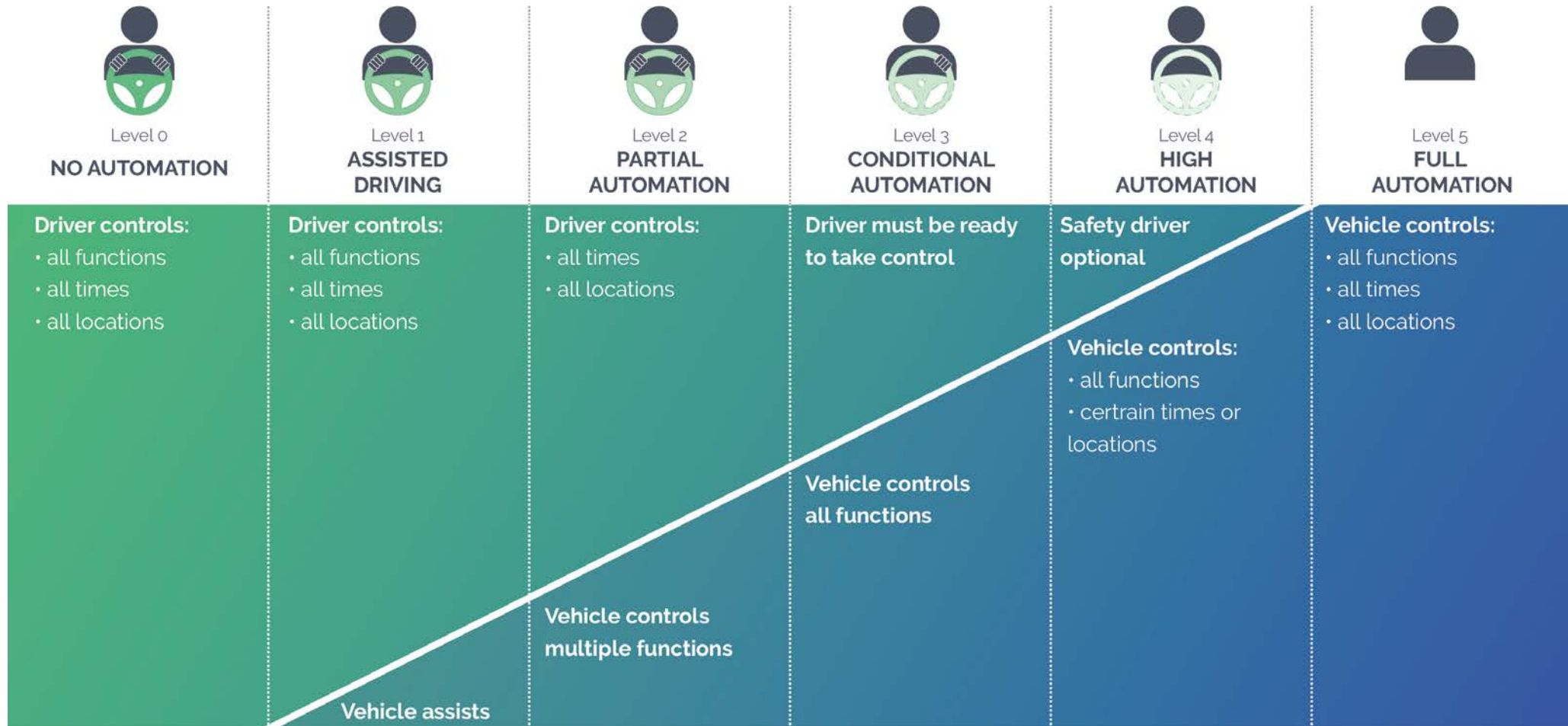
CONNECTED The increasing ability to share mobility or safety information among other vehicles, infrastructure, systems, etc.

None of the automation technologies require a vehicle to be connected.

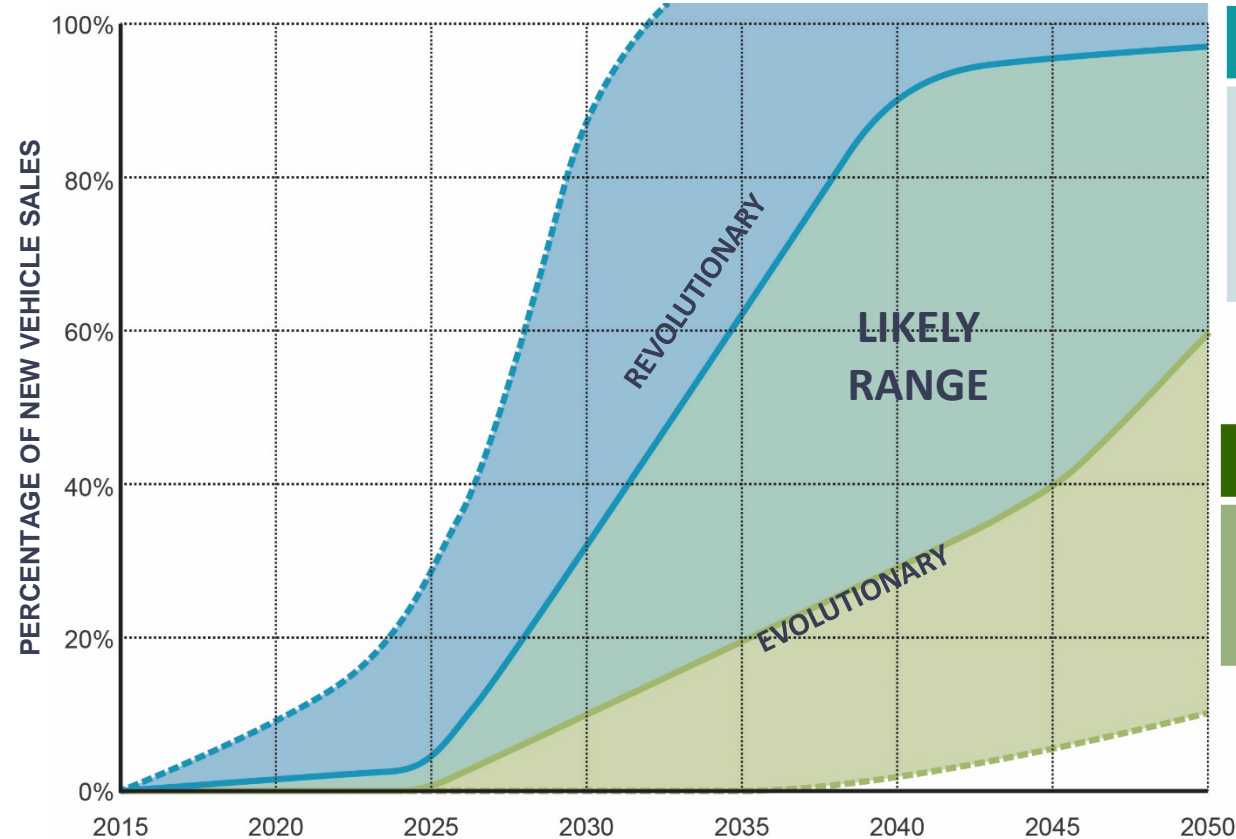
Autonomous Vehicles Components



Levels of Automation



When do AVs become commonplace?



Fully Autonomous Vehicle (L4/5) uptake predictions based on high disruption scenarios, indicates possible percentage of new car sales 2016 to 2050.

Revolutionary

- Technology breakthroughs
- Regulatory resolutions
- Shared model, at much lower cost than ownership
- Rapid adoption

Evolutionary

- Slower technology development and rollout
- Owned AV model with cost premium
- Slower adoption

The future is highly uncertain

TIMING 3 to 13 years until L5 AVs available for purchase

SAFETY +40% to +90% increase in safety

CAPACITY 0% to +45% increase in roadway capacity

DEMAND +5% to +40% increase in VMT

ENERGY/EMISSIONS -50% to + 100% change in GHGs

Bay Area Pilot Programs and Companies

Guiding Principles for Emerging Mobility, San Francisco

Lead Agency: SFMTA

Policy framework to evaluate new mobility services for all SFMTA and SFCTA decisions, including:

- Safety
- Transit
- Equitable Access
- Disabled Access
- Sustainability
- Congestion
- Accountability
- Labor
- Financial Impact
- Collaboration

Companies licensed to test AVs on California public roads

Almotive	NVIDIA
Apex.AI	Phantom AI
Apple	PlusAi
Aurora Innovation	Pony.AI
AutoX Technologies Inc	Qualcomm Technologies
Baidu	Renovo.auto
Bauer's Intelligent Transportation	Roadstar.AI
BMW	SAIC Innovation Center
Bosch	Samsung Electronics
Continental Automotive Systems	SF Motors Inc.
CYNGN	Subaru
Delphi Automotive	Telenav
Drive.ai	Tesla Motors
Ford	Toyota Research Institute
GM Cruise	Uber
Jingchi CorpLyft	Udacity
Mercedes Benz	Valeo North America
NIO	Volkswagen
Nissan	Voyage
Nullmax	Waymo
Nuro	Zoox

GoMentum Station, Concord

Lead Agency: CCTA

- Robust testing facility with city-like road networks, tunnels, over-and under-passes, and railroad crossings that simulate real world conditions.
- Testing partners include EasyMile (low-speed electric shuttles), Honda (passenger AVs), Toyota (passenger AVs), Otto (long-haul automated trucks), and Sumitomo Electric (supplier of electronics).

Shared Autonomous Vehicle Demonstration

Lead Agency: LAVTA

- First/Last mile to Dublin-Pleasanton BART station
- Low speed autonomous shuttle on public streets
- Complements fixed route buses
- Funded with BAAQMD Grant
- Partnership with County Connection, GoMentum Station, City of Dublin

AV Pilot Program, San José

Lead Agency: City of San José

- RFI for how AVs could help advance broader goals for the city.
- Six specific project areas for AV deployment, but allowed respondents to propose their own project areas.
- Two main pilot programs: small-area or corridor-specific transit service and technology to support broader AV operations in the future.



HORIZON

Implications and Strategies

The San Francisco Bay Area Aspires To Be:



AFFORDABLE

All Bay Area residents and workers have sufficient housing options they can afford – households are economically secure.



CONNECTED

An expanded, well-functioning transportation system connects the Bay Area – fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.



DIVERSE

The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place – with access to the region's assets and resources.



HEALTHY

The region's natural resources, open space, clean water and clean air are conserved – the region actively reduces its environmental footprint and protects residents from environmental impacts.

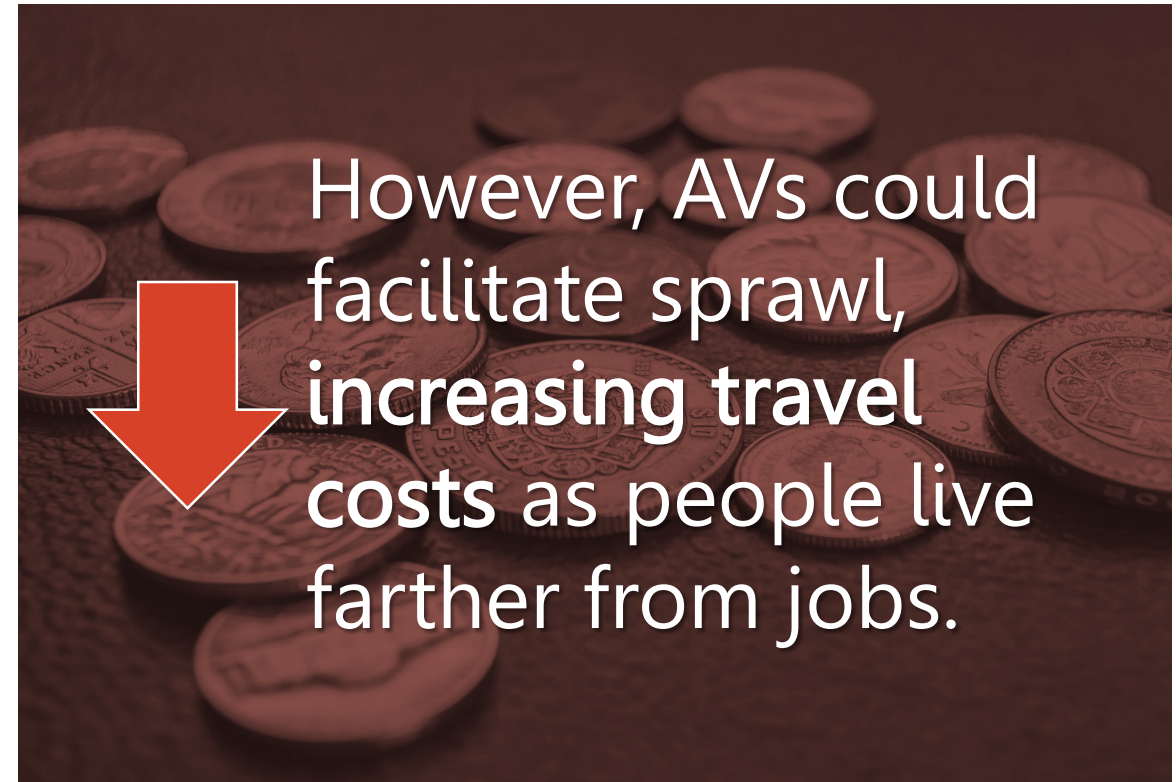


VIBRANT

The Bay Area region is an innovation leader, creating quality job opportunities for all and ample fiscal resources for communities.



For lower income households, housing and transportation costs could increase to 67% of household budgets by 2040.



Housing Opportunity Sites



AFFORDABLE

Priority Strategies

Repurpose off-street parking for **infill development**

Institute **parking maximums** for both on- and off-street parking supply

Retain urban growth boundaries to **control greenfield development**

- Decreasing parking **demand** with AV services
- Reduce parking **requirements**
- Obsolete parking could be replaced with **infill development**

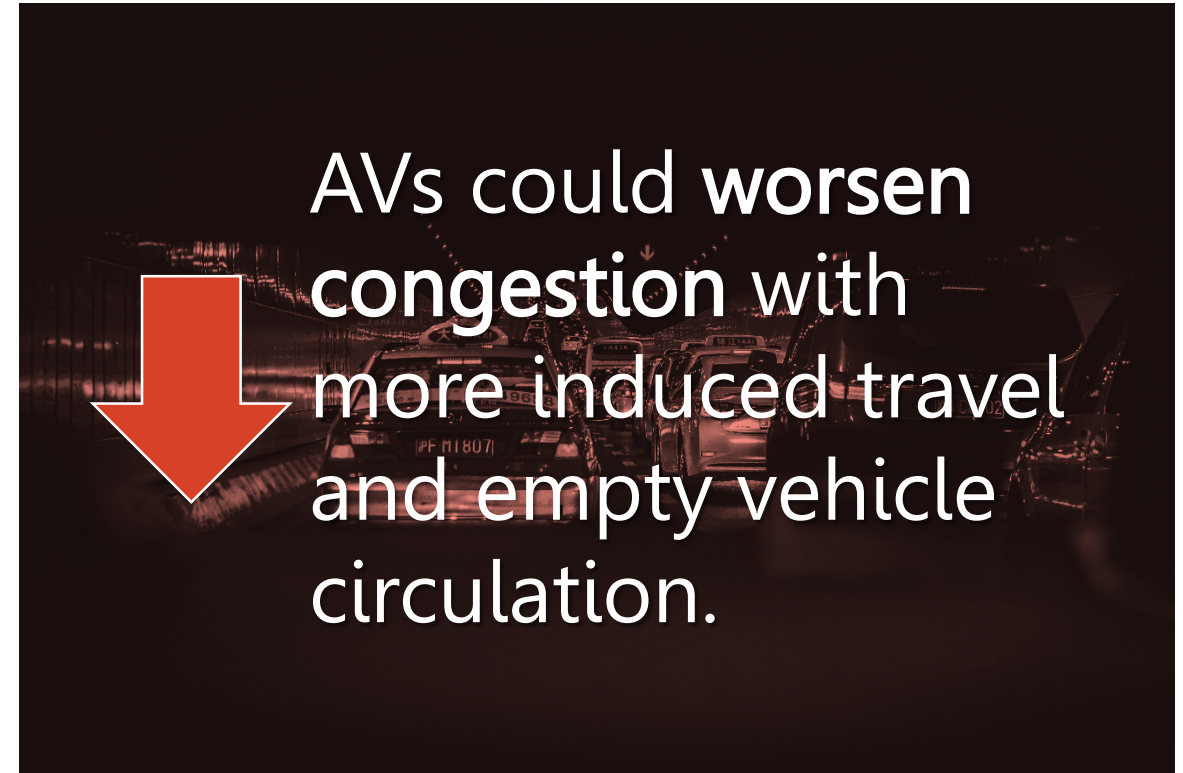
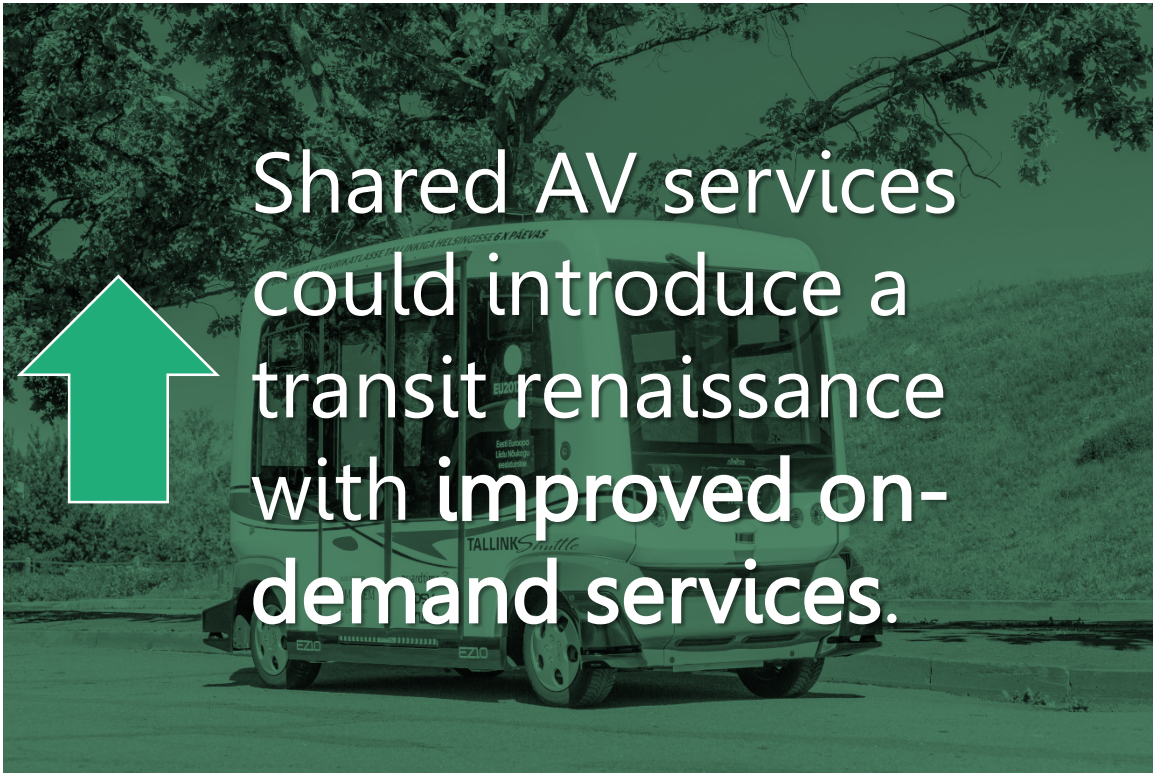
■ Parking lots and garages

Scale 1:990,000

0 5 10 15 20 25 Miles



Congestion in the Bay Area has worsened 64% since 2000, putting Bay Area traffic worst in the nation behind only Los Angeles.



Regional On-Demand, Autonomous Microtransit



CONNECTED

- High frequency regional **trunk lines** + on demand local service
- Autonomous **BRT** network
- On-demand, **door-to-door** and first/last-mile service
- **Mobility as a Service** models

— Railway network
- - - - - Railway: Future Extension
■ Autonomous BRT / Urban Bus
■ Intercity Express Bus
■ Suburban Microtransit

Scale 1:990,000
0 5 10 15 20 25 Miles

Priority Strategies

Double down on high-capacity bus and rail corridors

Innovate suburban transit with autonomous, on-demand **microtransit**

Develop a **mobility as a service** platform to provide a unified and equitable gateway to services and information

HORIZON

Price Mobility Fairly



CONNECTED

Priority Strategies

Price mobility fairly through **dynamic road user charging**

Design **smart streets** with dynamic allocation of street and curb space

Develop industry-wide **data sharing** protocols to provide real-time information to connected vehicles

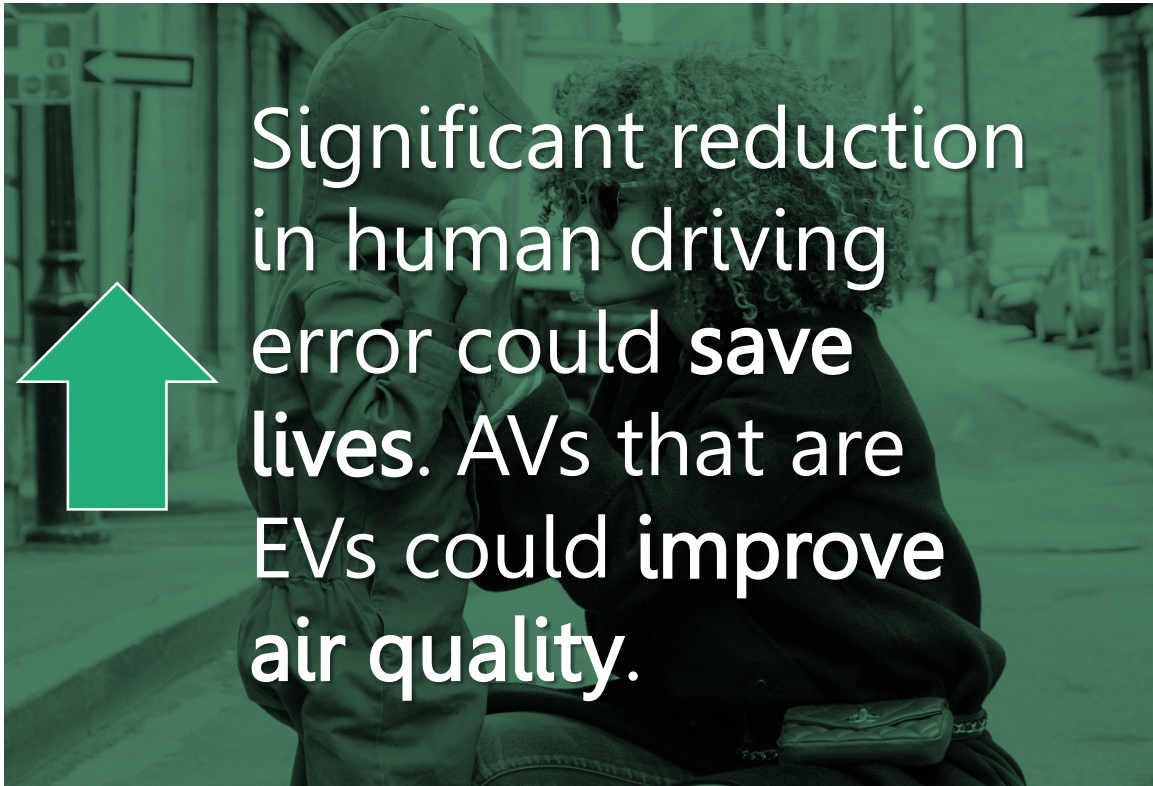
HORIZON

- New **data and platform** capabilities with AVs
- Dynamic pricing to manage **limited capacity**

● CBD cordon price zones
— Dynamic highway tolling

Scale 1:990,000
0 5 10 15 20 25 Miles

Over the last 15 years, more than 6,500 people have died on Bay Area roads with an average of 6 in 100,000 residents losing their lives in traffic incidents.



Vision Zero 2.0



- 
- A photograph of a family walking across a street crosswalk. A woman on the left carries a baby in a carrier, wearing a colorful patterned dress. A man in a dark shirt and light pants walks in the center, holding the hand of a young girl in a white dress. They are walking from left to right across the frame.
- Train **first responders**
 - Address **cybersecurity** vulnerabilities
 - Mandate **eco-driving**
 - **EV** incentives and sharing infrastructure
 - **Vehicle-to-grid** innovation

Priority Strategies

Cap **speed limits** in downtowns, neighborhoods

Mandate that **all AVs are EVs** and invest in the necessary infrastructure

Develop **hacking vulnerability** “bounty program”



Nearly 600,000 people were employed in the trade, transportation, and utilities industry in 2016.



"New Deal" for Mobility



VIBRANT

- Comprehensive program to maximize local **economic benefits** of the AV industry
- **Workforce advancement** programs
- Related **new industries** (manufacturing, data, services, goods, repair, etc.)

Priority Strategies

Strengthen the capacity of **training programs** to expand opportunities for workers in the AV industry

Target job clusters on **industrially-zoned land** for production, distribution, and repair

Pilot **innovative AV applications** that could spur new job opportunities

Racial minorities now make up 59% of the Bay Area's population.



Require Equitable Outcomes



DIVERSE

- **Require accountability**: targets, metrics, monitoring, improvement
- Target strategies for **specific equitable outcomes**.
- Focus all strategies on **inclusive prosperity**.

Priority Strategies

Mandate **equitable** provision of mobility services with transparent reporting

Subsidize public **transit** innovations replacing fixed route transit in Communities of Concern

Establish **prioritization** programs for AV mobility services that target Communities of Concern



Affordable



Connected



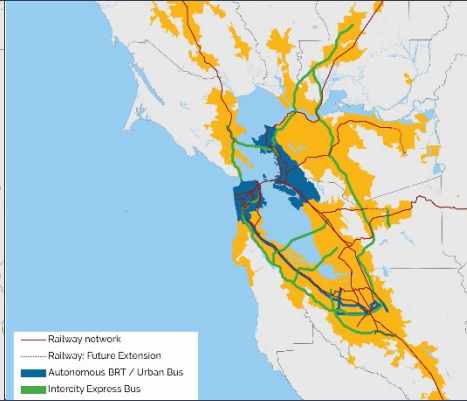
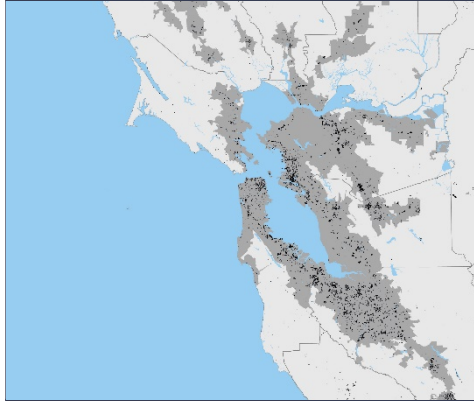
Healthy



Vibrant



Diverse



Housing Opportunity Sites

Fair Pricing & Autonomous Transit

Vision Zero 2.0

New Deal for Mobility

Equitable Outcomes

Increase affordable housing supply

Expand access to high quality transportation

Save lives and improve air quality

Expand prosperity and access to jobs

Hold mobility service providers accountable



HORIZON

Next Steps

Incorporating Strategies to Inform Horizon and Plan Bay Area 2040

Planning for an Uncertain Future



- This fall, the strategies advanced in the AV perspective paper will be incorporated across some or all futures, depending upon assumptions about AV penetration, sharing preferences, EV penetration, etc.
- We will identify a short-list of strategies most effective in multiple futures to carry forward into Plan Bay Area 2050.

HORIZON

Thank you!



Metropolitan Transportation Commission

375 Beale Street, Suite 800
San Francisco, CA 94105

Legislation Details (With Text)

File #:	18-0420	Version:	1	Name:	
Type:	Report	Status:		Informational	
File created:	5/11/2018	In control:		Policy Advisory Council	
On agenda:	6/13/2018	Final action:			
Title:	Horizon: Futures Shortlist (30 minutes)				

Preview of the proposed shortlist of futures to be analyzed in the Horizon process, guided by stakeholder input and technical analysis over the past month.

Sponsors:

Indexes:

Code sections:

Attachments: [07 Horizon- Futures Shortlist.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Horizon: Futures Shortlist
(30 minutes)

Preview of the proposed shortlist of futures to be analyzed in the Horizon process, guided by stakeholder input and technical analysis over the past month.

Presenter:

Dave Vautin and Michael Germeraad

Recommended Action:

Discussion

Attachments:



**METROPOLITAN
TRANSPORTATION
COMMISSION**

Agenda Item 7

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700
www.mtc.ca.gov

TO: Policy Advisory Council

DATE: June 6, 2018

FR: Dave Vautin and Michael Germeraad

RE: Horizon: Futures Shortlist

Policy Advisory Council Agenda Item 7, Horizon: Futures Shortlist, is attached as presented on June 7 to the Regional Advisory Working Group meeting.

MTC staff will be at your June 13 meeting to present a preview of the proposed shortlist of futures to be analyzed in the Horizon process; input is requested.

Attachment

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M E M O R A N D U M

TO: Regional Advisory Working Group
FR: Dave Vautin and Michael Germeraad
RE: Horizon: Futures Shortlist

DATE: May 31, 2018

Summary

Leveraging the eleven futures developed by teams of stakeholders at the April *Horizon* Peer Exchange – and stakeholder input on the futures selection process in May – staff has developed a proposed shortlist of three futures to study in the *Horizon* process. These widely-divergent futures are designed to test strategies and investments to identify those that are the most effective in multiple futures. This should help ensure that the decisions we make today are resilient to ever-changing circumstances. Rather than selecting a “preferred scenario” from this process as in past plans, the specific strategies and investments that perform best in multiple futures will be incorporated into *Plan Bay Area 2050*.

Draft Shortlist of Futures

Narrowing down the list of futures from eleven to three incorporated a combination of stakeholder input and technical refinements; a brief summary of stakeholder survey responses is included in the presentation attached. In the end, staff believes that the three futures featured in the shortlist each present unique opportunities and challenges for Bay Area planners and stakeholders that merit exploration through June 2019. The futures themselves are clearly divergent, with a broad spectrum of inputs for each external force. Staff anticipates that this will lead to differing outcomes across the four topic areas of *Horizon* – transportation, land use, economic development, and resilience.

The three proposed futures for *Horizon* are listed below, and each can be distilled to a central “what-if” question:

- **Clean and Green**: what if... new technologies and a **national carbon tax** enabled telecommuting and **distributed job centers**?
- **Rising Tides, Falling Fortunes**: what if... the federal government **cuts spending and reduces regulations**, leaving decisions to states and regions?
- **Back to the Future**: what if... an **economic boom** and new transportation options spur a **new wave of development**?

Attachments to this cover memo include the descriptions of each future as well as a preliminary table comparing the external forces included in each future. Staff is looking for your input today on whether these three futures are the most appropriate to select to achieve the goals of the *Horizon* process, and if any changes should be made to the futures before they are finalized in early July.

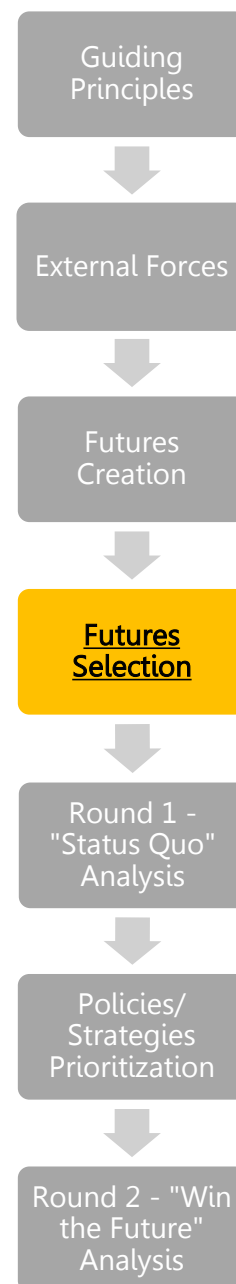


Figure 1: Primary steps of the Futures element of *Horizon*.

Next Steps

In lieu of a July RAWG, staff will hold a webinar in advance of the Joint MTC Planning/ABAG Administrative Committee presentation on the Futures Shortlist. This webinar will highlight preliminary regional forecasts for each future, including population trends, employment trends, demographic trends, and revenue impacts associated with each.

After getting feedback from the Joint Committees, staff will commence round 1 of travel & land use modeling for the futures, exploring what would happen to the Bay Area if “status quo” policies continue – despite the unique external forces incorporated in each. This will allow for a robust policy discussion in the fall. The public, stakeholders, elected officials, and staff will work to brainstorm solutions to better align outcomes with the Final Guiding Principles (and ideally, “win the future”).

Attachments

- Presentation (*including high-level survey findings*)
- Attachment A: Futures: Summary Table & Descriptions
- Attachment B: Futures Shortlist: Preliminary Summary of Model Inputs

DV

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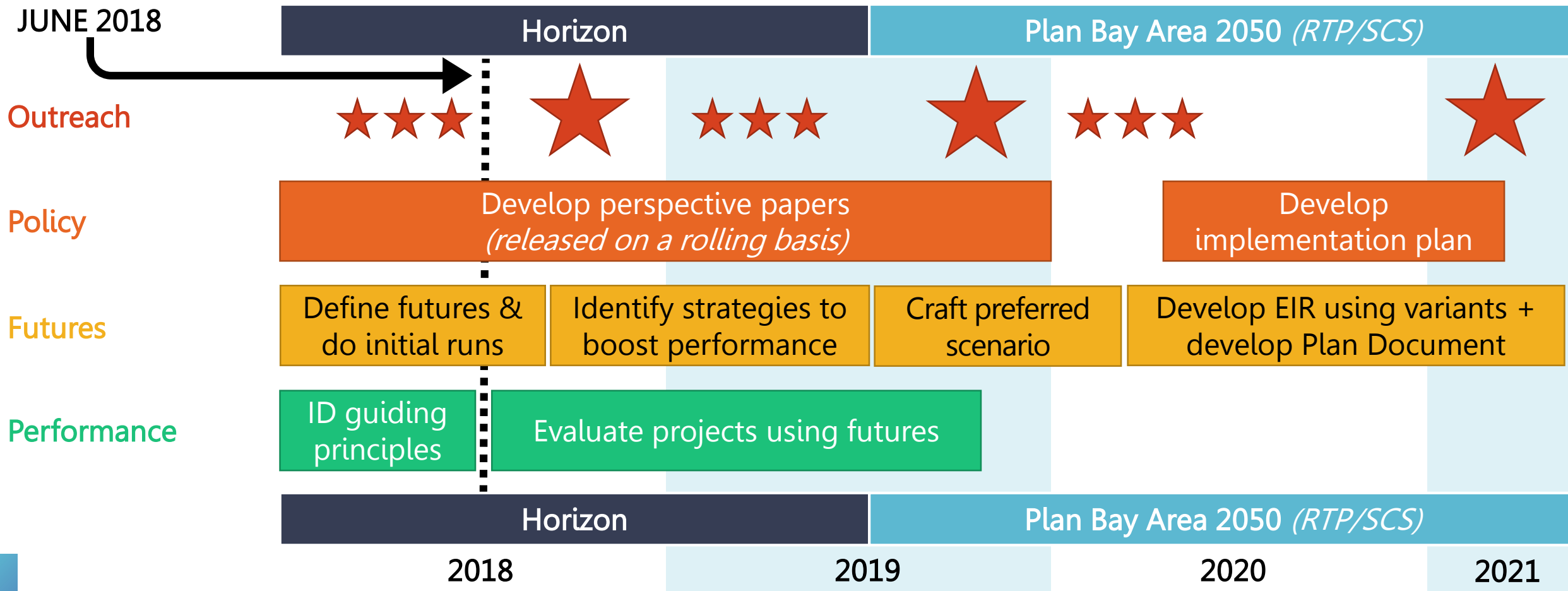
HORIZON

Futures Shortlist

Dave Vautin, MTC/ABAG

Regional Advisory Working Group -- June 7, 2018

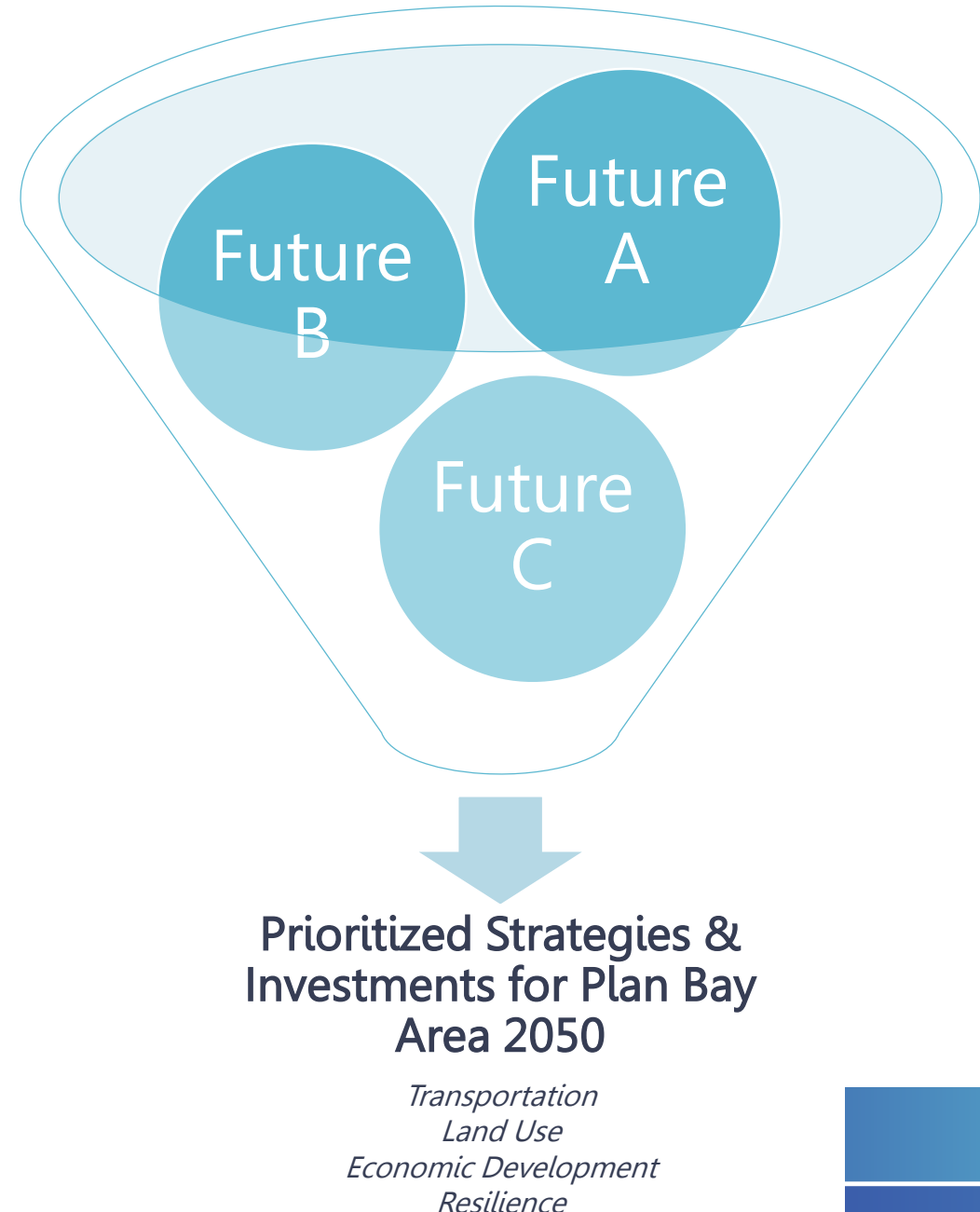
Horizon + Plan Bay Area 2050 Overview



Why Are We Creating Futures?

Creating a range of divergent futures will allow us to envision how the San Francisco Bay Area would respond to a wide range of external forces. Each future should create unique opportunities and challenges for the public, stakeholders, elected officials, and staff to explore.

However, this is not a traditional scenario planning process – none of the futures is likely to be selected as a “preferred”. Instead, the process is designed to test the resilience of policies and projects to determine which should be considered for inclusion in Plan Bay Area 2050.



How Were Futures Created?

3-Minute Video –
Summary of April 23rd
Horizon Peer Exchange

<https://youtu.be/1rDmygU5yn0>



Futures were developed based on external forces beyond the region's control. For the shortlisted futures, preliminary socioeconomic forecasts for the Bay Area should be ready in July (e.g., forecasted income distribution).

Feedback from Stakeholder Outreach

53
responses

Likelihood	
Rapidly Rising Tides	2.4
Shake and Remake	2.3
Rise of the Region	2.1
Freedom to Roam	2.1
Sustainable Downsizing	2.0
Clean and Green	1.8
Back to the Future	1.8
American Dream	1.7

(Adverse) Impact on Region	
Rapidly Rising Tides	2.9
Shake and Remake	2.9
Rise of the Region	2.8
Freedom to Roam	2.5
Sustainable Downsizing	2.5
American Dream	2.5
Back to the Future	2.4
Clean and Green	2.2

Ability to Respond to Impacts	
Clean and Green	2.6
Freedom to Roam	2.2
American Dream	2.0
Sustainable Downsizing	1.9
Rise of the Region	1.9
Rapidly Rising Tides	1.8
Shake and Remake	1.8
Back to the Future	1.8

Feedback from Stakeholder Outreach

Likelihood	
Rapidly Rising Tides	2.4
Shake and Remake	2.3
Rise of the Region	2.1
Freedom to Roam	2.1
Sustainable Downsizing	2.0
Clean and Green	1.8
Back to the Future	1.8
American Dream	1.7

(Adverse) Impact on Region	
Rapidly Rising Tides	2.9
Shake and Remake	2.9
Rise of the Region	2.8
Freedom to Roam	2.5
Sustainable Downsizing	2.5
American Dream	2.5
Back to the Future	2.4
Clean and Green	2.2

Ability to Respond to Impacts	
Clean and Green	2.6
Freedom to Roam	2.2
American Dream	2.0
Sustainable Downsizing	1.9
Rise of the Region	1.9
Rapidly Rising Tides	1.8
Shake and Remake	1.8
Back to the Future	1.8

Feedback from Stakeholder Outreach

Likelihood	
Rapidly Rising Tides	2.4
Shake and Remake	2.3
Rise of the Region	2.1
Freedom to Roam	2.1
Sustainable Downsizing	2.0
Clean and Green	1.8
Back to the Future	1.8
American Dream	1.7

(Adverse) Impact on Region	
Rapidly Rising Tides	2.9
Shake and Remake	2.9
Rise of the Region	2.8
Freedom to Roam	2.5
Sustainable Downsizing	2.5
American Dream	2.5
Back to the Future	2.4
Clean and Green	2.2

Ability to Respond to Impacts	
Clean and Green	2.6
Freedom to Roam	2.2
American Dream	2.0
Sustainable Downsizing	1.9
Rise of the Region	1.9
Rapidly Rising Tides	1.8
Shake and Remake	1.8
Back to the Future	1.8

Highlighted Comments on Each Future

#	Future		Highlighted Comments
1+6	Sustainable Downsizing		"Description of elements within the scenario is contradictory and likely to increase angst and dysfunction. "
2	Clean and Green	★	"I agree with the initial elements of this scenario, but any sentence that combines "federal government" with "ambitious" seems unlikely. "
3	Rapidly Rising Tides	★	"After decades of warnings, humans finally respond once problems are impossible to ignore - sounds like a believable headline. "
4	Freedom to Roam		"This is a realistic short-term future , which I don't think is sustainable in the long term due to the economic disparity that is amplified by technology."
5+11	Rise of the Region	★	"Reduced federal funding is likely and should be studied."
8	American Dream	★	"This would likely be the "American Dream" for only some people."
9	Shake and Remake	★	"I don't [think] this scenario would provide much opportunity to reconfigure dramatically the Bay Area."
10	Back to the Future		" Another unlikely combo - everything seems plausible except setting back self-driving cars for decades."

How Was the Shortlist Created?

1. Merged three sets of similar futures together
 - a. **New Clean and Green**
 - a. Includes “status quo” growth rate from **Freedom to Roam**
 - b. Includes carbon tax structure from **Clean and Green**
 - b. **New Back to the Future**
 - a. Includes most assumptions from **American Dream**
 - b. Includes future name from **Back to the Future**
 - c. **Rising Tides, Falling Fortunes**
 - a. Includes reduction in environmental regulations from **Rapidly Rising Tides**
 - b. Includes populist policies and devolution to states & regions from **Rise of the Region**

5 FUTURES
REMAIN
2. Considered feedback from survey and made revisions accordingly
 - a. **Sustainable Downsizing** eliminated from consideration due to perceived internal inconsistencies
 - b. **Shake and Remake** eliminated based on internal decision to include *Haywired* in all futures on the shortlist

3 PROPOSED
FUTURES

Three Potential Futures – “What If?” Scenarios



**Clean
and Green**

What if... new technologies and a national carbon tax enabled telecommuting and distributed job centers?



**Rising Tides,
Falling
Fortunes**

What if... the federal government cuts spending and reduces regulations, leaving decisions to states & regions?



**Back to
the Future**

What if... an economic boom and new transportation options spur a new wave of development?



Recognizing the growing impacts of climate change, the federal government significantly tightens environmental regulations and implements an **ambitious, nationwide carbon tax**. New technologies thrive, with **virtual reality** enabling telecommuting and **smaller-scale workplaces** distributed across town centers. While high-tech manufacturing thrives in the United States, **economic growth slows for other more energy-intensive sectors**.



Potential Opportunities:

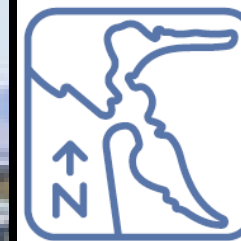
- Regional economy well-positioned to succeed in this future
- Reduced funding needs for transport & SLR infrastructure

Potential Challenges:

- Significant economic impacts on certain sectors
- Increased divisions between rich and poor communities



Nationwide tax cuts and spending caps result a significant reduction in federal infrastructure funding. Combined with autonomous vehicles failing to live up to the hype, **cities, regions, and states are forced to pay for much-needed traditional infrastructure** projects themselves. Lack of regulatory action on climate change worldwide results in **sea levels rising by three feet by 2050** – creating a new set of infrastructure needs in an era of slow growth.



Rising Tides,
Falling
Fortunes

Potential Opportunities:

- Greater independence to set regional policies & funding framework
- Reduced pressures from growth, including lower risk of displacement

Potential Challenges:

- Sea level rise impacts & lack of funding to address them
- Lower incomes for all and reduced economic opportunity



The U.S. experiences **continued prosperity** and renewed respect on the world stage, thanks to smart and strategic policy decisions on the national level. **Rapid job growth** means more people want to move to the U.S., and **increased public investment in infrastructure** makes the nation more attractive for businesses. **Silicon Valley technologies** are dominant **worldwide** in everything from cars to e-commerce. Wealthy Americans seek larger suburban homes and **many depend on new technologies (such as high-speed rail)** to access urban job centers.






Potential Opportunities:

- Rising wages and low unemployment
- Significantly more **funding available** to address transportation & resilience needs

Potential Challenges:

- Risk of **urban sprawl** and associated environmental impacts
- **Extreme transit crowding** and traffic congestion

Summary of Proposed Futures

#	FUTURE NAME	IMMIGRATION AND TRADE	NATIONAL TAXES AND FUNDING	NATIONAL GROWTH	LAND USE PREFERENCES	NATIONAL ENVIRONMENTAL POLICY	NEW TECHNOLOGIES
2+4	 Clean and Green	Similar to today	Higher funding via carbon tax	Similar to today	Housing: more urban	Stricter regulations (1' SLR)	Widespread
					Jobs: more dispersed		
3+5+11	 Rising Tides, Falling Fortunes	Reduced	Lower funding due to tax cuts	Limited	Housing: more urban	Relaxed regulations (3' SLR)	More limited
					Similar to today		
8+10	 Back to the Future	Increased	Similar to today	Rapid	Housing: more dispersed	Similar to today (2' SLR)	Widespread
					Jobs: more urban		

One final reminder: it is important to have a range of divergent futures with unique challenges – rather than reflecting “the world as we would like it to be”. **None of the futures is likely to be selected as the “preferred” for Plan Bay Area 2050.**

The San Francisco Bay Area Aspires To Be:



AFFORDABLE

All Bay Area residents and workers have sufficient housing options they can afford – households are economically secure.



CONNECTED

An expanded, well-functioning transportation system connects the Bay Area – fast, frequent and efficient intercity trips are complemented by a suite of local transportation options, connecting communities and creating a cohesive region.



DIVERSE

The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place – with access to the region's assets and resources.



HEALTHY

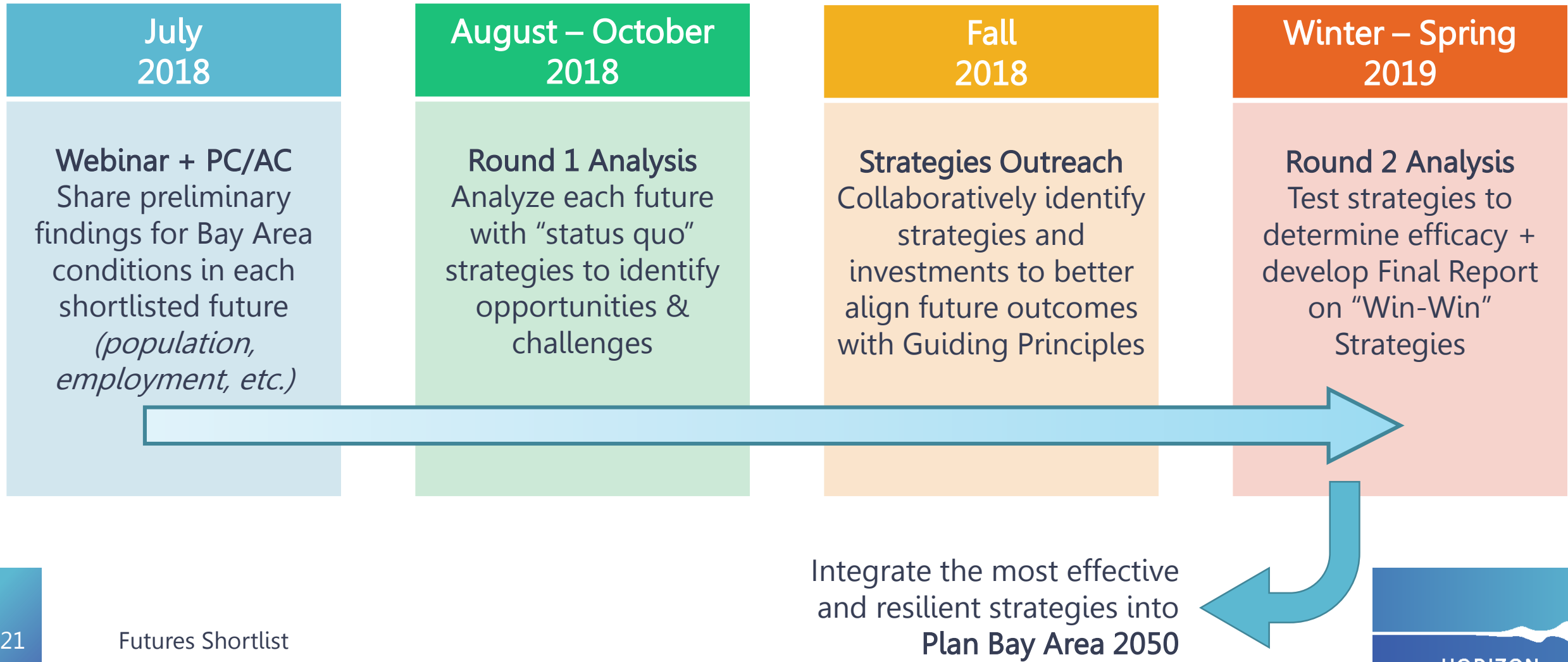
The region's natural resources, open space, clean water and clean air are conserved – the region actively reduces its environmental footprint and protects residents from environmental impacts.






VIBRANT

The Bay Area region is an innovation leader, creating quality job opportunities for all and ample fiscal resources for communities.



What's Next for the Futures in Horizon








Proposed Shortlist

#	FUTURE NAME	IMMIGRATION AND TRADE	NATIONAL TAXES AND FUNDING	NATIONAL GROWTH	LAND USE PREFERENCES	NATIONAL ENVIRONMENTAL POLICY	NEW TECHNOLOGIES	NATURAL DISASTERS
2+4	 Clean and Green	Similar to today	Higher funding via carbon tax	Similar to today	Housing: more urban	Stricter regulations (1' SLR)	Widespread	Magnitude 7.0 Hayward Fault earthquake
					Jobs: more dispersed			
3+5 +11	 Rising Tides, Falling Fortunes	Reduced	Lower funding due to tax cuts	Limited	Housing: more urban	Relaxed regulations (3' SLR)	More limited	Magnitude 7.0 Hayward Fault earthquake
					Similar to today			
8+10	 Back to the Future	Increased	Similar to today	Rapid	Housing: more dispersed	Similar to today (2' SLR)	Widespread	Magnitude 7.0 Hayward Fault earthquake
					Jobs: more urban			

Other Futures Considered

1+6	 Sustainable Downsizing	Reduced	Higher funding via income tax	Limited	Housing: more urban	Stricter regulations (1' SLR)	Widespread	Magnitude 7.0 Hayward Fault earthquake
					Similar to today			
9	 Shake and Remake	Similar to today	Higher funding via income tax	Similar to today	Housing: more urban	Stricter regulations (1' SLR)	Widespread	Series of Magnitude 7.0 earthquakes
					Jobs: more urban			

Future #7: America Divided has been deprioritized from further consideration, given that the Bay Area would not be well-positioned to mitigate the impacts from a national shift to plutocratic government. Slight modifications to the other futures under consideration have been made to improve their internal consistency.

#	FUTURE NAME	FUTURE DESCRIPTION
1 + 6	 Sustainable Downsizing	Economic growth has significantly slowed due to strict caps on immigration, hefty tariffs, and rising tax rates required to pay for the needs of an aging population. Still, the private sector powers forward with widespread adoption of autonomous vehicles and online shopping eclipsing traditional retail stores. A combination of federal incentives and shifting consumer preferences result in growing popularity for clean-fuel vehicles and an increased preference for smaller housing units in walkable locations.
2 + 4	 Clean and Green	Recognizing the growing impacts of climate change, the federal government significantly tightens environmental regulations and implements an ambitious, nationwide carbon tax. New technologies thrive, with virtual reality enabling telecommuting and smaller-scale workplaces distributed across town centers. While high-tech manufacturing thrives in the United States, economic growth slows for other more energy-intensive sectors.
3 + 5 + 11	 Rising Tides, Falling Fortunes	Nationwide tax cuts and spending caps result in a significant reduction in federal infrastructure funding. Combined with autonomous vehicles failing to live up to the hype, cities, regions, and states are forced to pay for much-needed traditional infrastructure projects themselves. Lack of regulatory action on climate change worldwide results in sea levels rising by three feet by 2050 – creating a new set of infrastructure needs in an era of slow growth.
8 + 10	 Back to the Future	The U.S. experiences continued prosperity and renewed respect on the world stage, thanks to smart and strategic policy decisions on the national level. Rapid job growth means more people want to move to the U.S., and increased public investment in infrastructure makes the nation more attractive for businesses. Silicon Valley technologies are dominant worldwide in everything from cars to e-commerce. Wealthy Americans seek larger suburban homes and many depend on new technologies (such as high-speed rail) to access urban job centers.
9	 Shake and Remake	Earthquakes transform the Bay Area, with magnitude 7.0 events striking the Hayward, San Andreas, and Great Valley faults in sequence between 2025 and 2035. The resulting damage hobbles regional growth. Fortunately, new technologies – especially those developed by the private sector – create opportunities to rebuild the region in a markedly different form.

			2 + 4	3 + 5 + 11	8 + 10
External Forces			Clean and Green	Rising Tides, Falling Fortunes	Back to the Future
Environmental	1	Sea Level Rise	1 Foot	3 Feet	2 Feet
	2	Natural Disasters	2035 Hayward Fault Earthquake (magnitude 7.0)	2035 Hayward Fault Earthquake (magnitude 7.0)	2035 Hayward Fault Earthquake (magnitude 7.0)
Political	3	U.S. Political System	Healthy Democracy	Flawed Democracy	Healthy Democracy
	4	U.S. Standing in the World	Multiple Superpowers	Declining Power	Preeminent Global Power
	5a	U.S. Tax Rates	Higher Tax Rates	Lower Tax Rates	Similar to Today
	5b	U.S. Tax Structure	Carbon Tax	Income Tax (Similar to Today)	Income Tax (Similar to Today)
	6a	U.S. Spending Levels	Higher Expenditures	Lower Expenditures	Similar to Today
	6b	U.S. Spending Distribution	Similar Share to Today	Reduced Share for Metro Areas	Larger Share for Metro Areas
	7	Immigration Policy	80,000 Annual Immigrants (to Bay Area)	20,000 Annual Immigrants (to Bay Area)	240,000 Annual Immigrants (to Bay Area)
	8	Trade Policy	3% Average Tariff Rate	10% Average Tariff Rate	0% Average Tariff Rate
	9	Environmental Policy	Increased Regulations	Reduced Regulations	Similar to Today
Economic	10	U.S. Population Annual Growth Rate	+1.0%	+0.5%	+2.5%
	11	U.S. Jobs Annual Growth Rate	+0.5%	+0.5%	+2.5%
	12	U.S. Jobs Distribution	currently being refined	currently being refined	currently being refined
	13	U.S. Productivity	+4.0%	+2.0%	+2.0%
Land Use	14	Housing Preferences	Greater Preference for Urban Housing	Greater Preference for Urban Housing	Greater Preference for Dispersed Housing
	15	Workplace Preferences	Greater Preference for Dispersed Employment Centers	Similar Preference to Today	Greater Preference for Urban Employment Centers
	16	Telecommute Share	30%	15%	6%
	17	E-Commerce Market Share	50%	20%	50%
	18	Interregional Volumes	Current Growth Rates	Limited Growth Rates	Faster Growth Rates
Transportation	19	Transportation Technologies	High Speed Rail, Autonomous Rail and Buses, Freight Aerial Drones	Autonomous Buses	Hyperloop, Autonomous Rail and Buses, Freight Aerial Drones, Lower-Cost Helicopter Transport
	20	Autonomous Vehicle Market Share	95%	10%	75%
	21	Electric Vehicle Market Share	95%	10%	75%
	22	Sharing Preferences	Greater Preference	Similar Preference to Today	Reduced Preference
	23	Per-Mile Vehicle Operating Cost	\$0.50 per Mile	\$0.30 per Mile	\$0.15 per Mile
	24	Annual Federal Transportation Funding (Bay Area)	\$2.5 Billion	\$0.5 Billion	\$2.5 Billion



Metropolitan Transportation Commission

375 Beale Street, Suite 800
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Legislation Details (With Text)

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Title:	Staff Liaison Report (5 minutes)				

Relevant MTC policy decisions and other activities.

Sponsors:

Indexes:

Code sections:

Attachments: [08_Staff_Liaison_Report_June_2018.pdf](#)

Date	Ver.	Action By	Action	Result
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Subject:

Staff Liaison Report
(5 minutes)

Relevant MTC policy decisions and other activities.

Presenter:

Marti Paschal, Staff Liaison

Recommended Action:

Information

Attachments:



METROPOLITAN
TRANSPORTATION
COMMISSION

Agenda Item 8

Bay Area Metro Center
375 Beale Street
San Francisco, CA 94105
TEL 415.778.6700
WEB www.mtc.ca.gov

Memorandum

TO: Policy Advisory Council
FR: Marti Paschal, Staff Liaison
RE: Staff Liaison Report – June 2018

DATE: June 6, 2018
W.I. 1114

MTC Commission Approves Pilot Program Offering Fare Discounts for Low-Income Transit Riders

At its May 23, 2018 meeting, the Commission voted to approve a revised program framework for a Regional Means-Based Fare Program. The program will provide a discount of 20 percent to eligible low-income adults on transit rides for four large Bay Area transit operators — BART, Caltrain, Golden Gate Transit and SFMTA — during a pilot period. Additional details are in [the item attachment](#).

MTC Commission Adopts \$53.2 Million RM2 Program

At its May meeting, the Commission also voted to adopt the \$53.2 million FY 2018-19 [Regional Measure 2](#) operating and marketing program and provide updates on programming, route changes and recommendations for three routes at risk of losing funding. Read more details in [the item attachment](#).

Grants Available for Students and Organizations Willing to Lead Green Transportation Projects

MTC and the Bay Area Air Quality Management District are again joining together to initiate the 2018 call for projects for the Spare the Air Youth grant program. Applications are due on Monday, June 18 at 5 p.m. The Spare the Air Youth grant program is offering \$6,000 to \$10,000 grants for high school student-led activities for the 2018-19 school year that have the potential to reduce greenhouse gas (GHG) emissions from transportation sources. The grant program aims to increase peer-to-peer encouragement among a diverse group of students for active and shared transportation options around the nine-county Bay Area.

The Spare the Air Youth grant program will select award recipients from Bay Area high schools to support activities that encourage students' use of active and shared transportation options including walking, biking, carpooling, and transit. Selected projects will be paired with a technical assistance vendor, which will receive funding to coordinate education and outreach activities and to buy materials on behalf of the students. Vendors interested in being matched with high school teams to provide technical assistance should submit the Statement of Interest form available on the Spare the Air Youth website.

Students or student groups interested in the grant program should go to www.sparetheairyouth.org for more information. Here are key grant program dates:

- **June 18, 2018:** Closing date for vendors' statements of interest.
- **July 2, 2018:** Grant awards announced via email; vendors matched with grant awardees.
- **August 2018:** Kick-off event or conference call to clarify funding and reporting requirements.

Spare the Air Youth, a partnership between MTC and the Air District, is a regional program that aims to educate, inspire and empower youth and families in the San Francisco Bay Area to walk, bicycle, carpool, and take transit.

Resilient by Design Final Design Presentations

The evidence is everywhere: sea levels are on the rise and countries around the world must adapt before disaster strikes. The San Francisco Bay Area is at the forefront of this nascent adaptation effort with the [Resilient by Design Bay Area Challenge](#), which in May 2017 selected nine high-powered teams from across the globe to come up with innovative design ideas that address sea level rise and resilience to climate change around the region.

Now, a year later, Resilient by Design has shared the final design concepts developed by local residents, community organizations, public officials and local, national, and international experts. These concepts are “meant to inspire, catalyze action, and push us along the path to a more resilient future.” On May 17, a 2 day summit was held to celebrate the work that has been done and to lay the groundwork for the work needed to make resiliency a reality. To see the final design presentations, go to www.resilientbayarea.org.

New Online Resources from the MTC-ABAG Library

What's new with bike sharing, housing development fees and high speed rail? Settle in for some in-depth reading on these and other topics of interest to regional government. Housing, transportation, the environment and the latest MTC publications are all included in this month's library link round-up. <https://blog.bayareametro.gov/posts/new-online-resources-mtc-abag-library>

Executive Director's Report

The following items are excerpts from the May 2018 Executive Director's Report to the Commission. To read the report in its entirety go to: <http://www.mtc.ca.gov/whats-happening/news/executive-directors-report>.

SB 1 Competitive Programs, April 26, Sacramento

The California Transportation Commission (CTC) and California State Transportation Agency (CalSTA) released their recommendations for spending some \$5.3 billion worth of gas tax and cap & trade revenue, and the Bay Area fared quite well. The tale of the tape is that the region is slated to receive nearly 30% of the funds statewide in four different funding pots: congestion relief, goods movement, local partnership, and transit/intercity rail investment.

Future Interstate Committee, May 8-9, Washington DC

I attended the last in-person meeting of the steering committee overseeing a major study of the future of the Interstate Highway System. We must deliver our report to the Congress by December 2018.

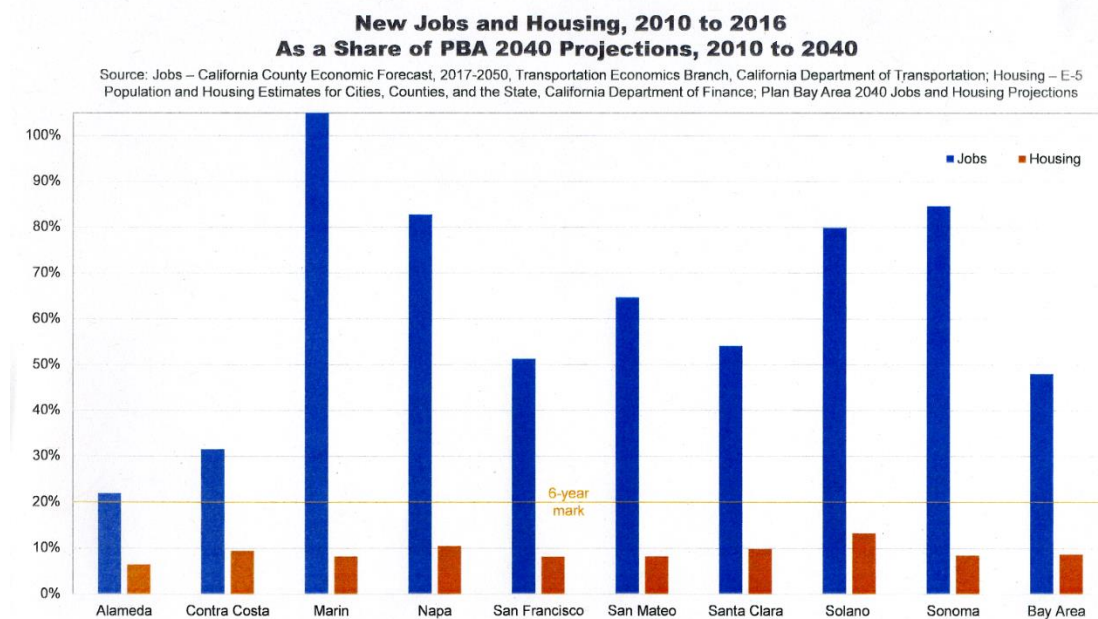
Bike to Work Day, May 10

Thanks to the record number of MTC Commissioners and ABAG Directors who participated in this annual event. There is plenty of [photographic evidence](#) on the MTC website. I rode for the second time this year, but for the first time on one of those snazzy Ford electric bikes. For those

of you who haven't tried one, it really feels like cheating. Early estimates are that nearly 100,000 Bay Area residents cycled on Bike to Work Day.

Chart of the Month

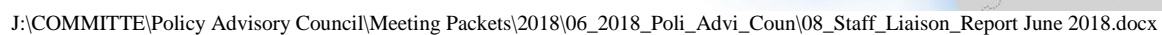
We've talked ad nauseam about the mismatch between the region's job creation and housing production during this lengthy recovery from the Great Recession, but I think [this chart](#) tells the story better than 1,000 more words. At the six-year milestone of the Plan Bay Area 30-year time period, every single county is over-performing its job forecast (some by massive amounts) and every single county is under-performing its housing forecast (almost all by a wide margin). It's a sobering reminder of how far we have to go to get the Bay Area's red-hot economy and its anemic residential sector into better balance.



Map of the Month: [When Will Bay Area Cities Reach Plan Bay Area 2040 Housing Targets?](#)

Each month Executive Director Steve Heminger presents a new map to the Commission to help explain important trends in the Bay Area, across the nation, and around the world. May's Map of the Month highlights the continued housing production challenges in the Bay Area, comparing Department of Finance housing production data between January 2010 and December 2017 with the Plan Bay Area 2040 housing forecasts by jurisdiction. This map shows the year that each city or town would meet its Plan Bay Area 2040 housing growth forecast if it continues on its recent production trajectory, during this lengthy economic expansion. Not surprisingly, most jurisdictions are lagging the Plan's housing goals – meaning that the region won't reach its 2040 housing goal until 2072 at the current pace. Notable bright spots for housing production include: Dublin, Pleasanton, and San Ramon in the Tri-Valley; Pittsburg and Brentwood in eastern Contra Costa County; Fairfield in Solano County; and Gilroy and Morgan Hill in southern Santa Clara County. Of the big three cities, San Francisco and San Jose are somewhat behind where they need to be, while Oakland would not reach its 2040 housing goal until 2295 given its pace of development since 2010. Additional analyses on housing trends through 2017 will be publicly released on the Vital Signs performance monitoring website next month.

Visit our Map of the Month page at <http://gis.mtc.ca.gov/home/motm.html> to review not just our current map, but those presented at previous Commission meetings as well.





Metropolitan Transportation Commission

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Title:	Council Member Reports (10 minutes)				

Members of the Council may report on locally relevant issues or events.

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:

Council Member Reports
(10 minutes)

Members of the Council may report on locally relevant issues or events.

Presenter:

Randi Kinman, Council Chair

Recommended Action:

Information

Attachments:



Metropolitan Transportation Commission

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Members of the Council may bring up new business for discussion or addition to a future agenda.

Sponsors:

Indexes:

Code sections:

Attachments:

Date	Ver.	Action By	Action	Result
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Subject:

New Business
(5 minutes)

Members of the Council may bring up new business for discussion or addition to a future agenda.

Presenter:

Randi Kinman, Council Chair

Recommended Action:

Discussion

Attachments: