



M E M O R A N D U M

Agenda Item 5b

TO: Planning Committee

DATE: June 1, 2018

FR: Executive Director

RE: Horizon and Plan Bay Area 2050: Project Performance Assessment Overview

Summary

Similar to past long-range planning cycles, staff proposes to conduct a project performance assessment of major transportation investments for *Horizon* and *Plan Bay Area 2050*. This effort seeks to identify high- and low-performing projects both to understand the efficacy of specific projects under varying external conditions (i.e., futures) and to inform the development of the Preferred Scenario's transportation investment element. Over the next few months, staff will work with stakeholders through the Regional Advisory Working Group to refine the methodology and conduct technical data needed to analyze major investments. A public solicitation for transformative transportation investments was also announced earlier this week.

Background and Proposed Approach

Plan Bay Area 2040 was the region's second long-range plan with a comprehensive evaluation of uncommitted transportation investments, scoring them with a quantitative benefit-cost ratio – evaluated using Travel Model One – and a qualitative targets score based on the adopted performance targets of that plan. The project performance assessment helped to identify 11 high-performing projects that were prioritized for regional discretionary funding in the Plan and 18 low-performing projects that were subject to further scrutiny through the compelling case process. The project performance assessment helped to identify the most effective investments and provide a transparent process to redirect billions of dollars from low-performing projects to higher-performers, given the fiscally-constrained nature of the Plan. For those seeking additional information on this effort, documentation¹ and final results² can be found on MTC's website.

Staff recommends conducting a third cycle of project performance assessment using a methodology that would be consistent between *Horizon* and *Plan Bay Area 2050* to ensure comparable results. Each project would be evaluated in the following ways:

- **Benefit-cost assessment** using Travel Model Two – primary assessment
- **Guiding principles assessment** using qualitative criteria – secondary assessment
- **Supplemental assessments:** project-level equity analysis; benefit-cost confidence assessment – similar to prior planning cycles

Proposed Enhancements to *Plan Bay Area 2040* Framework

- **Analysis of each transportation project across multiple futures** (resulting in a range of benefit-cost ratios) – this will allow stakeholders to understand how a project's performance might differ under a range of external conditions (autonomous vehicle fleet penetration, population/employment, gas prices, growth distributions, etc.).
- **Use of Travel Model Two to incorporate wider range of impacts** – upgrades to our travel demand model include autonomous vehicles, TNCs, transit crowding, and smaller zone sizes that will improve our ability to forecast project benefits.

¹ http://2040.planbayarea.org/sites/default/files/2017-07/Performance%20Assessment%20Report_PBA2040_7-2017_0.pdf

² <http://bayareametro.github.io/performance/dashboard/>

- **Use of Travel Model Two to incorporate wider range of impacts** – upgrades to our travel demand model include autonomous vehicles, TNCs, transit crowding, and smaller zone sizes that will improve our ability to forecast project benefits.
- **Reforms to the qualitative assessment** – in lieu of the targets assessment, a new “guiding principles assessment” would use qualitative criteria to identify how a project would affect the Guiding Principles being developed for Horizon. Unlike past cycles, the assessment would be used solely to flag projects that do not support one or more of the Guiding Principles. It would play a secondary role compared to the benefit-cost analysis.
- **Evaluation of operational strategies & resilience investments** – in addition to the assessment’s traditional focus on capacity-increasing projects, lower-cost operational strategies and investments needed to protect existing infrastructure from sea level rise would be evaluated to understand their relative performance.

Projects Subject to Performance Assessment

Prior cycles of project performance focused on uncommitted³ capacity-increasing projects with costs⁴ greater than \$50 million (in *Plan Bay Area*) or \$100 million (in *Plan Bay Area 2040*). Staff proposes to raise the threshold for major projects subject to analysis this cycle, expand the definition to include operational strategies & resilience projects, and establish two cost tiers:

- **Tier 1** major projects – greater than **\$1 billion** [priority for Phase 1 analysis – Horizon]
- **Tier 2** major projects – greater than **\$250 million** but less than **\$1 billion**⁵ [priority for Phase 2 analysis – Plan Bay Area 2050]

Staff will first work with CMAs and major transit operators to identify baseline projects and update uncommitted major projects that have been submitted in prior planning cycles. Later this summer, staff will review and evaluate submissions of Tier 1 major projects from government agencies, NGOs, and the general public – potentially transformative megaprojects to solve current and future transportation challenges.

Next Steps

Staff will provide updates on the project performance assessment throughout the *Horizon* and *Plan Bay Area 2050*. In the short term, priorities include updating project data, soliciting transformative projects ideas from stakeholders and the public, and updating evaluation methodologies. Staff expects the first cycle of project performance results to be available in early 2019.



Steve Heminger

SH:DV

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³ Uncommitted projects are projects that are seeking discretionary funding (i.e., not fully funded), are not yet under construction, and are not 100% funded with local dollars.

⁴ Costs were defined in 2013 dollars for *Plan Bay Area* and 2017 dollars for *Plan Bay Area 2040*. Costs will be in 2021 dollars for *Horizon* and *Plan Bay Area 2050*. Costs include capital costs and gross operating & maintenance costs between years 2021 and 2050.

⁵ This could include packages of similar projects each of which falls below the \$250 million threshold, such as a countywide network of low-cost rapid bus lines.



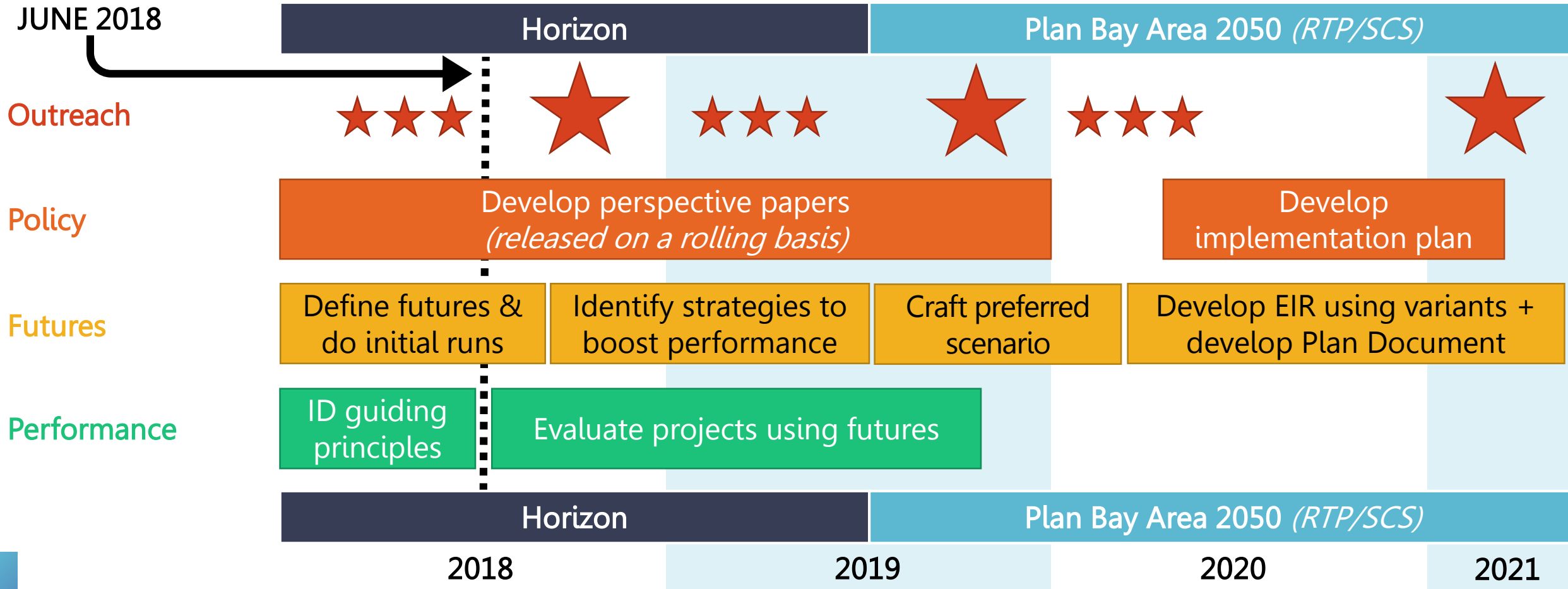
HORIZON

Project Performance Assessment Overview

Horizon & Plan Bay Area 2050

Dave Vautin, MTC/ABAG -- June 8, 2018

Horizon + Plan Bay Area 2050 Overview



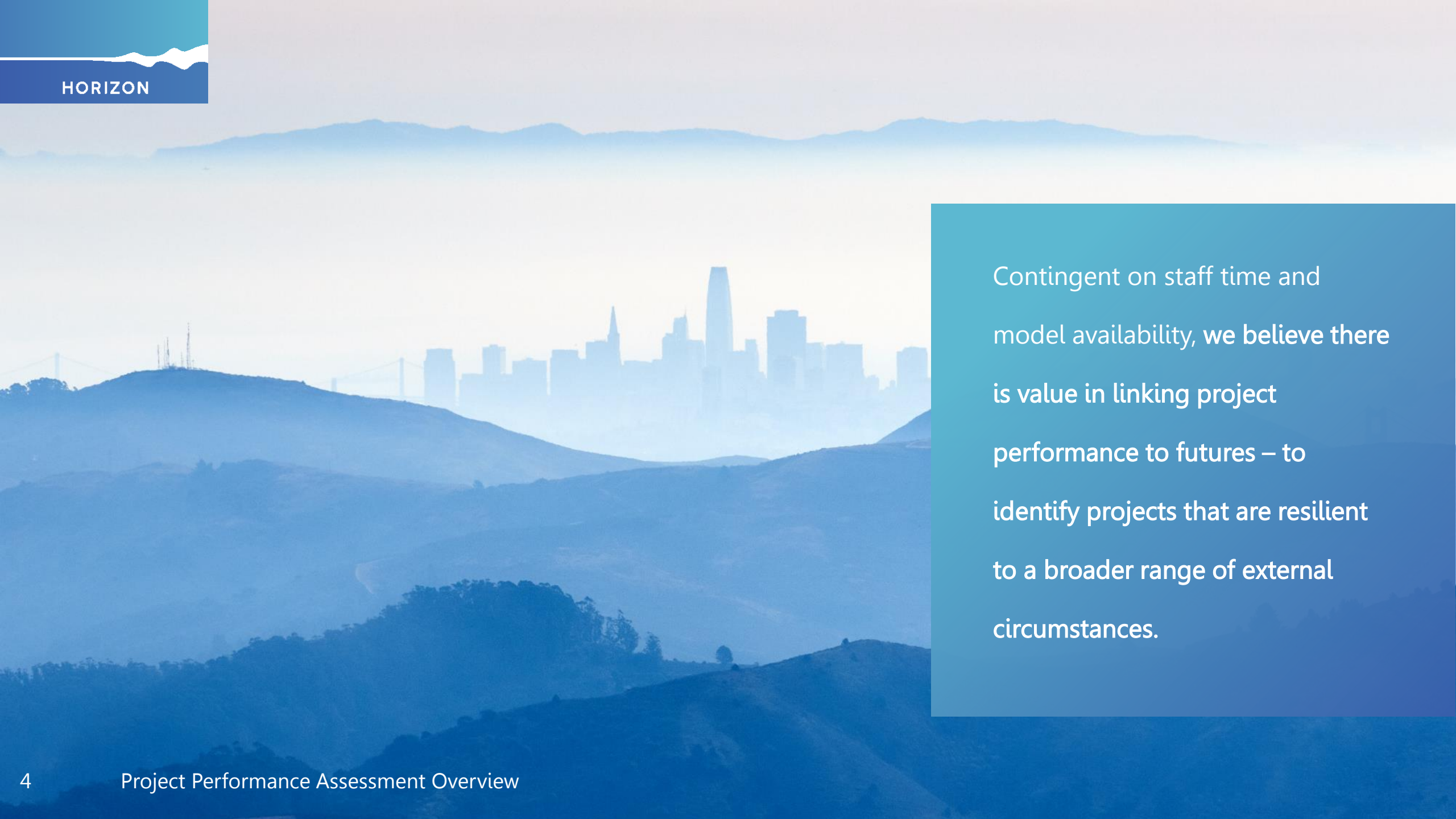
Two Primary Goals for Project Performance



Ensure
transparency and
accountability for
major investments



Assess next
generation of
transformative
projects



Contingent on staff time and model availability, we believe there is value in linking project performance to futures – to identify projects that are resilient to a broader range of external circumstances.

Building on Plan Bay Area 2040

Benefit-Cost
Assessment

Targets
Assessment

Supplemental
Assessments

Plan Bay Area 2040

Project Performance Assessment Overview



Benefit-Cost
Assessment

Guiding Principles
Assessment

Supplemental
Assessments

Horizon +
Plan Bay Area 2050

Proposed Approach for This Cycle

Benefit-Cost Assessment

- Propose analyzing cost-effectiveness in **each future**
- Update technical methodology to reflect current best practices & leverage new Travel Model Two features

Guiding Principles Assessment

- Use Final Guiding Principles as screening criteria to flag projects that do not support one or more principles

Supplemental Assessments

- Equity Assessment – similar to Plan Bay Area 2040
- Confidence Assessment – similar to Plan Bay Area 2040

Benefit-Cost Assessment *(draft)*

Benefits – for travelers & society



Travel Time



Noise



Travel Costs



Health



Safety

*Incorporates benefits
for all modes: autos,
trucks, transit,
walking, biking*



Emissions

Costs – for public sector



Capital Costs



Net Operating &
Maintenance Costs

$$\text{Benefit-Cost Ratio} = \frac{\text{Benefits}}{\text{Costs}}$$

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.

Guiding Principles Assessment *(draft)*

A project would be flagged if it does not support one or more Principle(s) using the questions below:

<u>Principle</u>	<u>Evaluation Question</u>
AFFORDABLE	Does the project increase travel costs for lower-income residents?
CONNECTED	Does the project increase travel times or eliminate travel options?
DIVERSE	Does the project displace lower-income residents or divide communities?
HEALTHY	Does the project increase emissions or consume open space?
VIBRANT	Does the project eliminate jobs?

How Might Projects Be Scored?

<i>Examples for reference purposes only. Final thresholds would be set by PC/AC in 2019.</i>	Future A Benefit-Cost Ratio	Future B Benefit-Cost Ratio	Future C Benefit-Cost Ratio	Future D Benefit-Cost Ratio	Guiding Principles Rating
Example High-Performing Project	High	Medium	High	Low	Support
Example Medium-Performing Project	Medium	Medium	Low	Medium	Support
Example #1 Low-Performing Project	Low	Low	High	Low	Support
Example #2 Low-Performing Project	Medium	Low	High	High	Does Not Support Principle X

Thresholds & Project Types

Cost Threshold for Evaluation

Project Types to be Evaluated

Opportunities for Project Submission



> \$100 million

Uncommitted Capacity-Increasing Projects Only

CMA & Major Operator Submissions Only



> \$1 billion
for Horizon

> \$250 million
for Plan Bay Area 2050

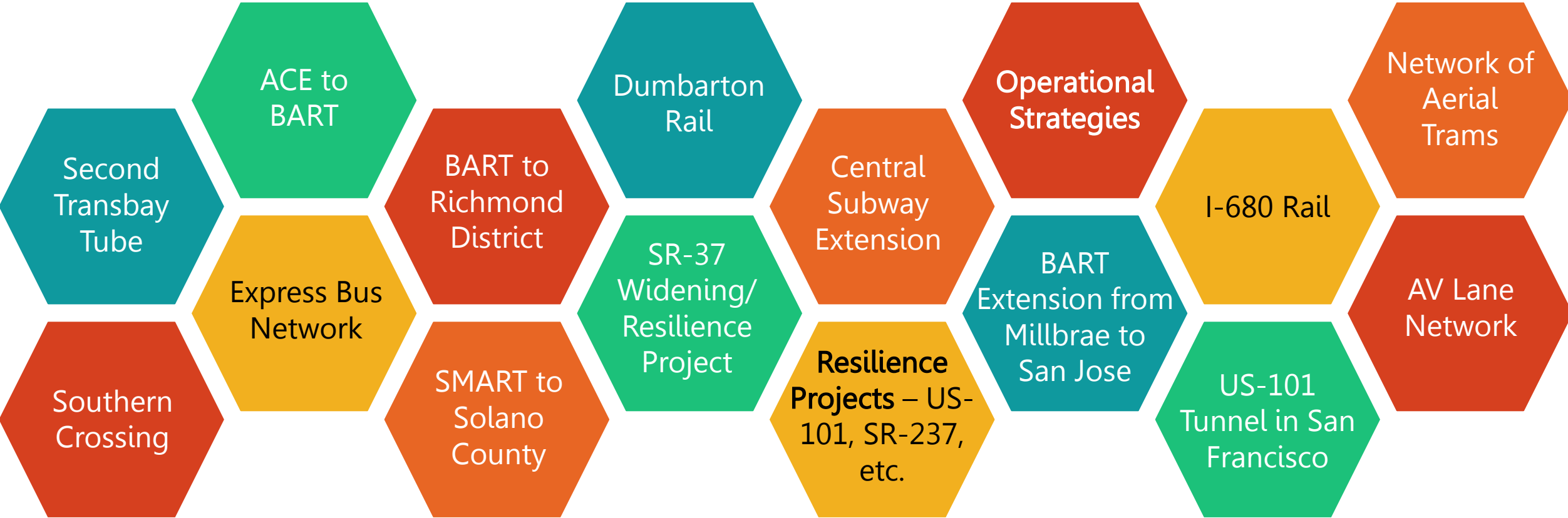
Uncommitted Projects:


- Capacity-Increasing
- Operations
- Resilience

Submissions from:

- CMAs & Operators
- Other Public Agencies
- NGOs
- Public at Large

What New Projects Might Be Submitted?





Projects and strategies submitted by the public will be screened in September by a “jury” of public- and private-sector experts. Criteria to identify a shortlist for evaluation may include feasibility, alignment with Guiding Principles, and potential efficacy.

What's Next for Project Performance?

- **Major Projects Update Process** – currently underway with CMAs and transit operators
- **Request for Transformative Projects** – open to all through September 6th
- **Project Performance Methodology** – developed in collaboration with RAWG stakeholders throughout summer

