

**Metropolitan Transportation Commission
Policy Advisory Council**

June 9, 2021

Agenda Item 9

Regional Transit Mapping and Wayfinding Scope

- Subject:** Presentation on the Regional Transit Mapping and Wayfinding Project's phase II findings and recommendations.
- Background:** Policy Advisory Council Agenda Item 9, Regional Mapping and Wayfinding Project Presentation, is attached. This report was presented to stakeholders in May, and a summary of the findings will be presented at an upcoming MTC's Operation Committee meeting.
- Staff will be at your June 9 meeting to deliver and discuss this presentation. The Council's input is requested.
- Attachments:** The presentation from the May 13, 2021, regional stakeholder meeting

Regional Transit Mapping & Wayfinding

Phase 2 findings
Policy Advisory Council
June 09, 2021

Agenda

30 mins **Presentation**

Welcome

Introduction: The journey so far

System design: Tiers and quantifying the impact

Summary

Next steps

15 mins **Q&A**

Introduction

The journey so far

Program

Phase 1	Phase 2	Phase 3	Future phases
Project development <ul style="list-style-type: none">• Stakeholder outreach• Regional map prototype	Harmonization Tiers & Business Case <ul style="list-style-type: none">• Tier development• User research• Business case• Map examples• Final recommendations	System development & pilots <ul style="list-style-type: none">• Regional standards• Mapping platform• Pilot projects	Implementation <ul style="list-style-type: none">• Phased regional implementation

Stakeholder engagement

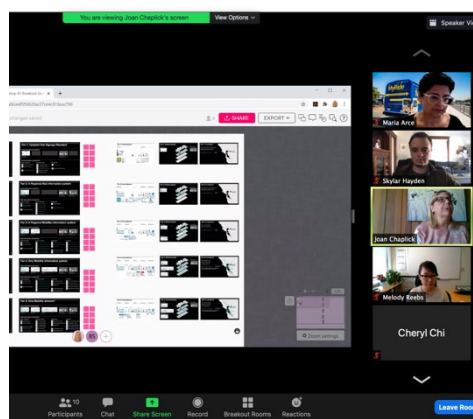
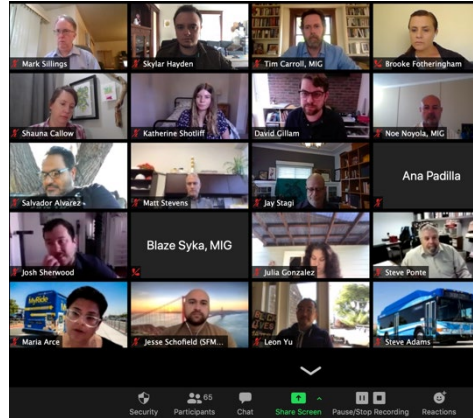
2018



2019

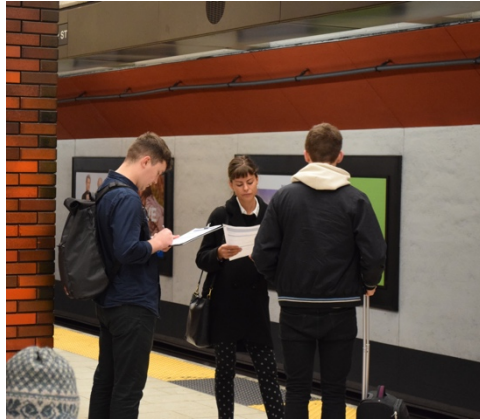


2020



User research

2017/18

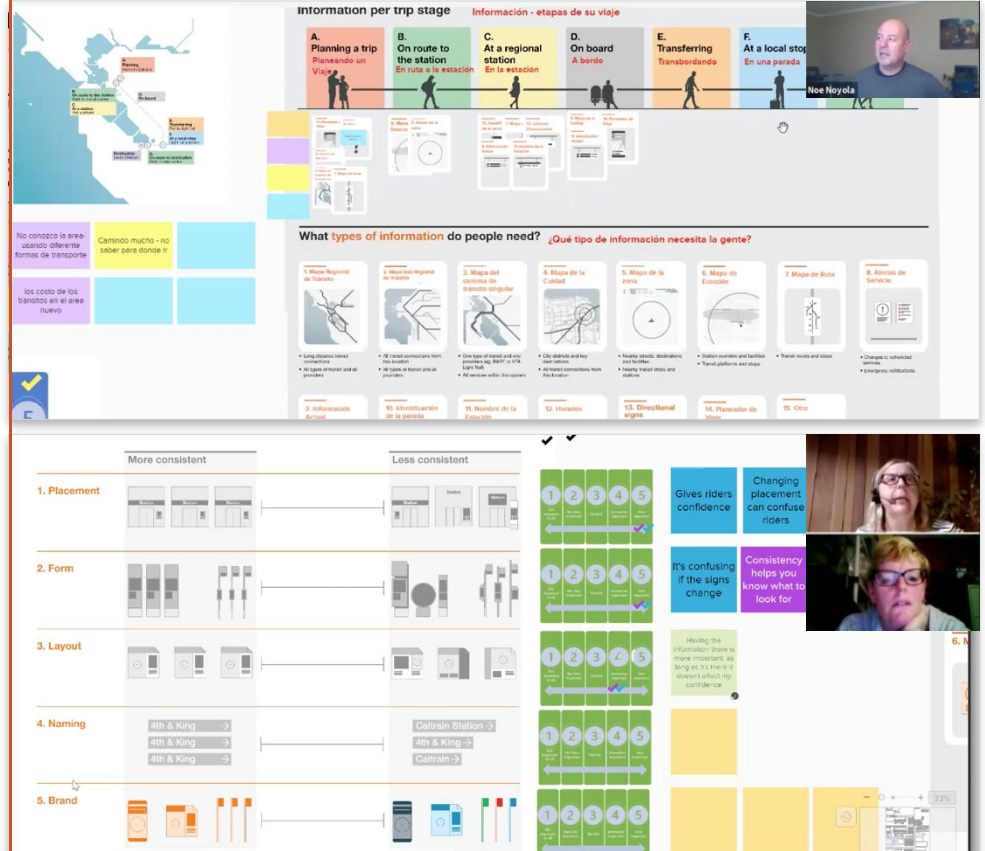


2019



Jacques Sun
Visiting from Los Angeles

2020



The challenge

Transit trips account for just **4%** of all trips in the Bay Area.

Transit



0.9m

Walk/bike



2.6m

Auto



18.5m

Impact of mode share

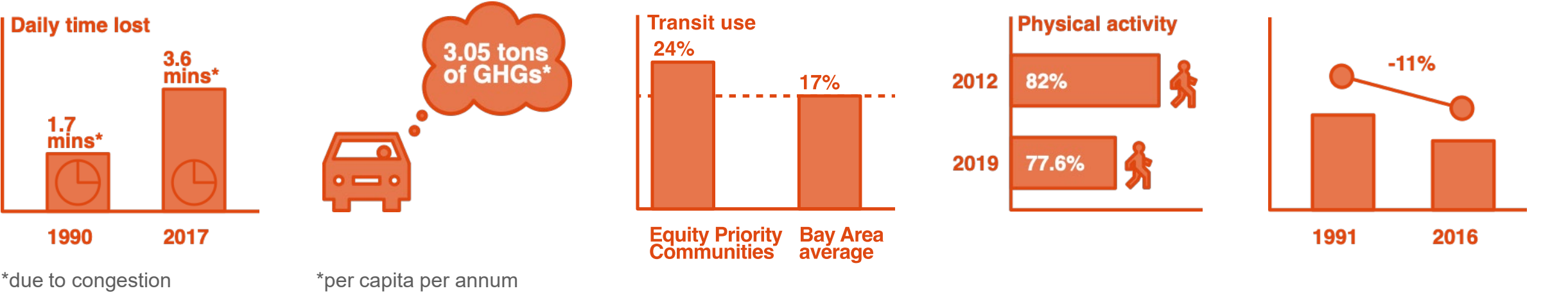
Productivity

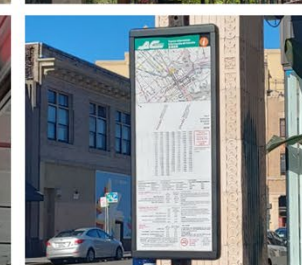
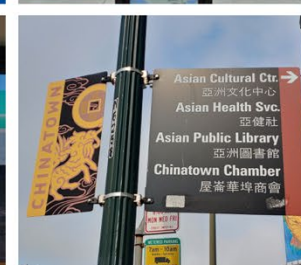
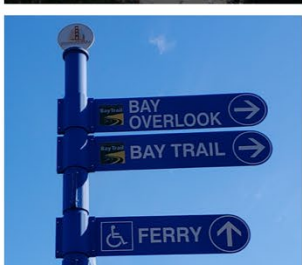
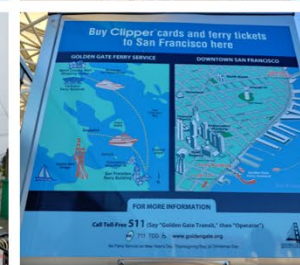
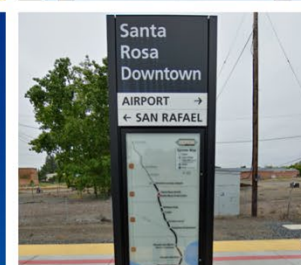
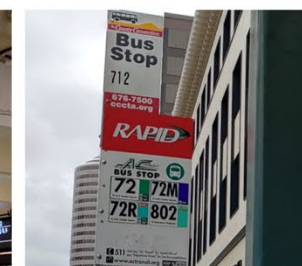
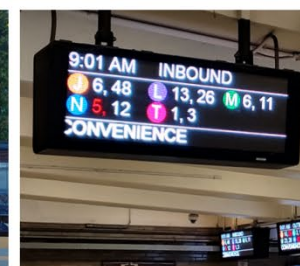
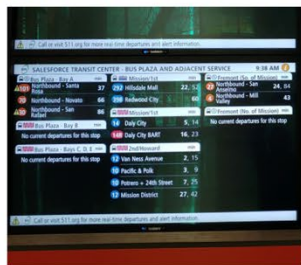
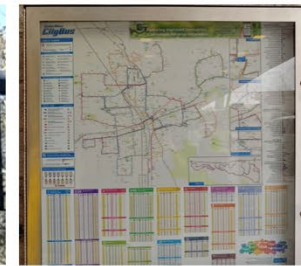
Environment

Equity

Health and well-being

Transit ridership



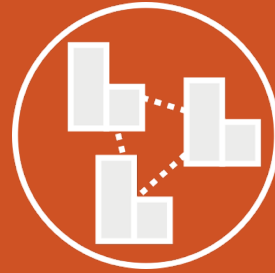


Program goals

**Better
information**
for travelers



**Better
ways of
working**
for providers



**Better
outcomes**
for the region



Dependable

Information where you need it

Predictable

Recognizable patterns

Familiar

Learn once, use anywhere

Common parts

Economies of scale

Common application

Efficiencies in O&M

Common standards

Effective processes

Social

Health, well-being & equity

Environmental

Sustainability & resilience

Economic

Ridership, visits & spend

Toward a recommendation

**The Business Case demonstrates
significant benefits for the Bay Area
and a strong return on investment.**

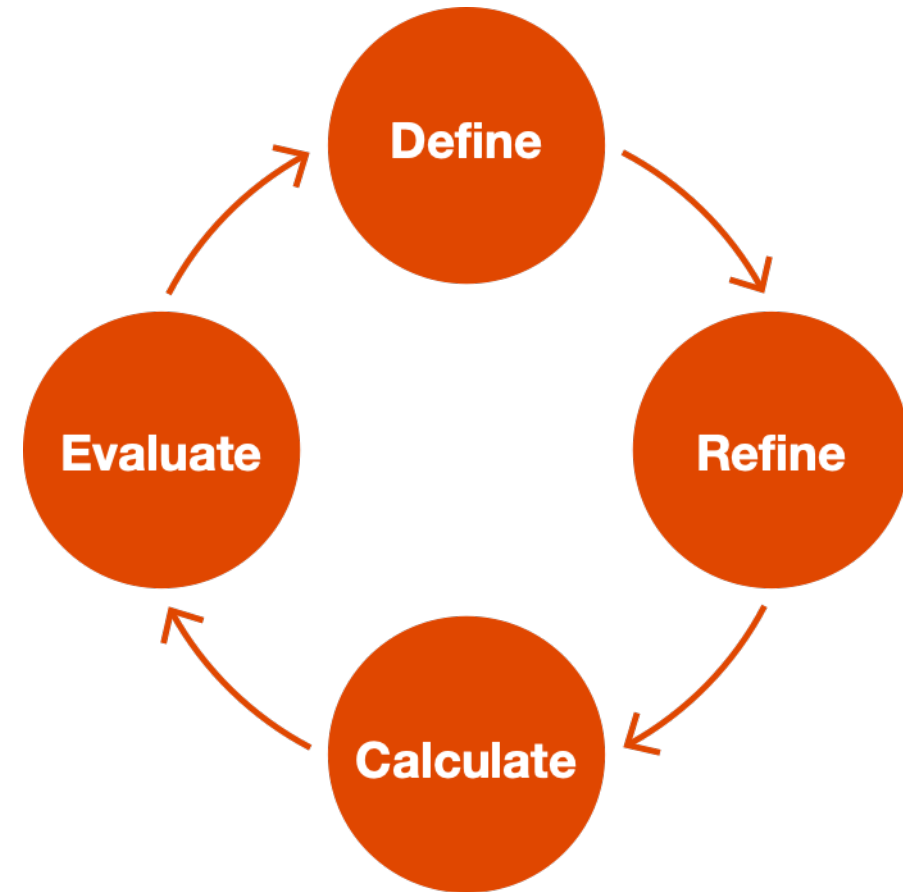
An initial recommendation is emerging for a fully harmonized system with an option to enable full brand integration over the longer-term, aligned to wider service and fare integration.

System design

Tiers and performance

Harmonization Tiers

- Tiers = incremental **options** for improving information
- Refined following **stakeholder feedback** and **user research**
- For comparing **costs**, **benefits** and **implications**











Harmonization is:

The act of creating **similarity** across different service providers, so that **systems work together** more easily.

Our focus is on the **harmonization** of information.

Tiers for comparison

Tier	Identity	Environments		
		Plan & Transfer Multi-provider environments	Regional Travel Rail, ferry & regional bus environments	Local Travel Light rail, streetcar & bus environments
1	    		 Design guidance	 Design guidance

All tiers include support for city wayfinding

Tier 1: Locations

Plan & Transfer environments

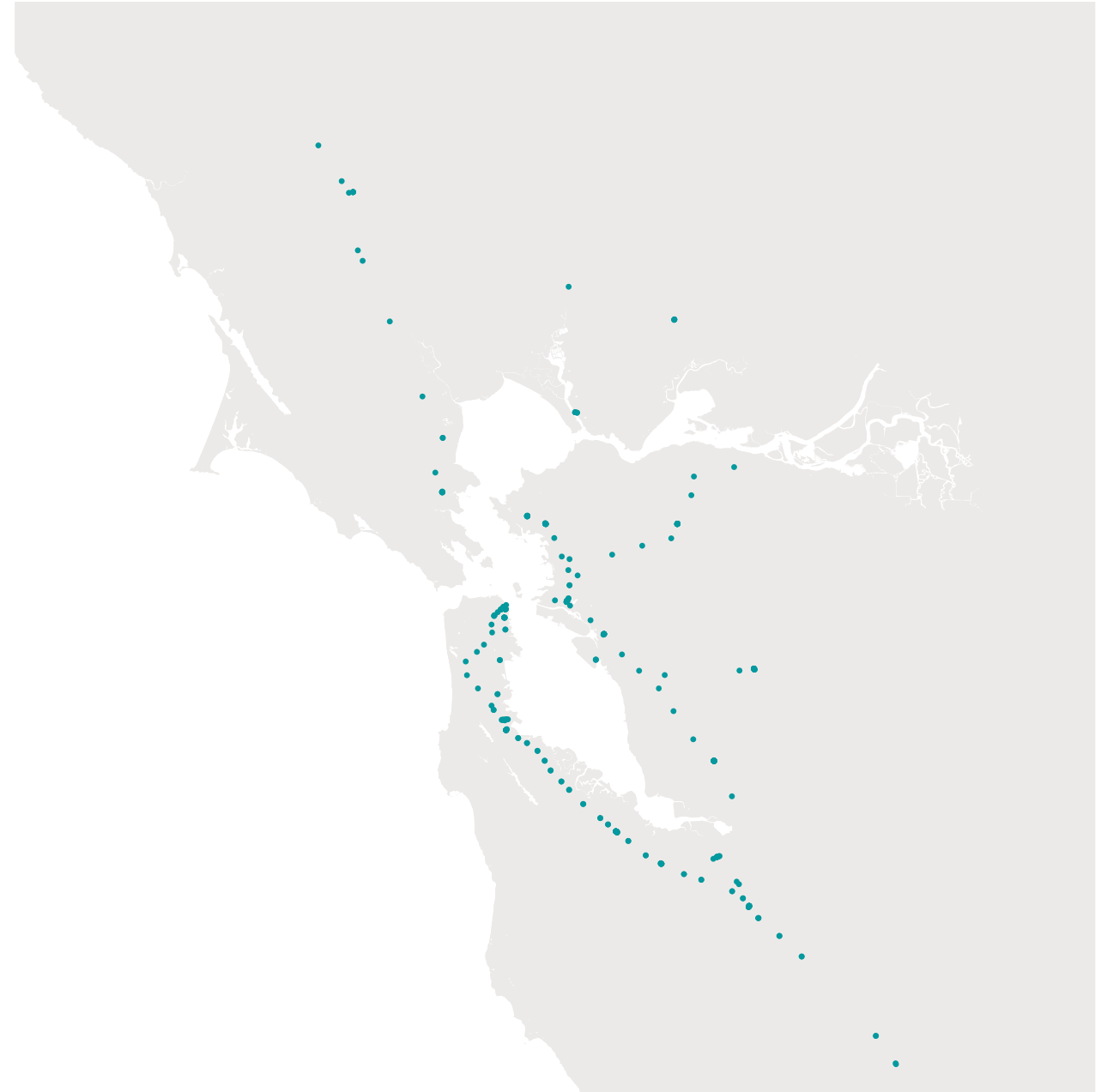
- Currently designated regional hubs
- Additional regional hubs (inc. all rail stations & ferry terminals)
- Local hubs
- Minor hubs

Regional travel environments















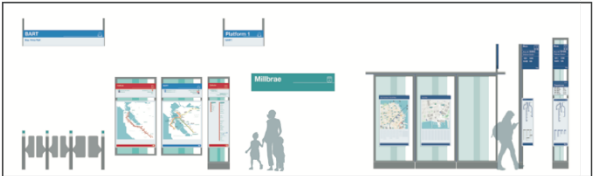

- Rail stations & ferry terminals
- Bus stops (regional routes)

Local travel environments

- Light rail stations & stops
- Streetcar & cable car stops
- Bus stops (BRT routes)
- Bus stops (local routes)



Tiers for comparison

Tier	Identity	Environments		
		Plan & Transfer Multi-provider environments	Regional Travel Rail, ferry & regional bus environments	Local Travel Light rail, streetcar & bus environments
1	 <div>   </div> <div>   </div>			
2	 <div>   </div> <div>   </div>			

All tiers include support for city wayfinding

Tier 2: Locations

Planning & Transfer environments

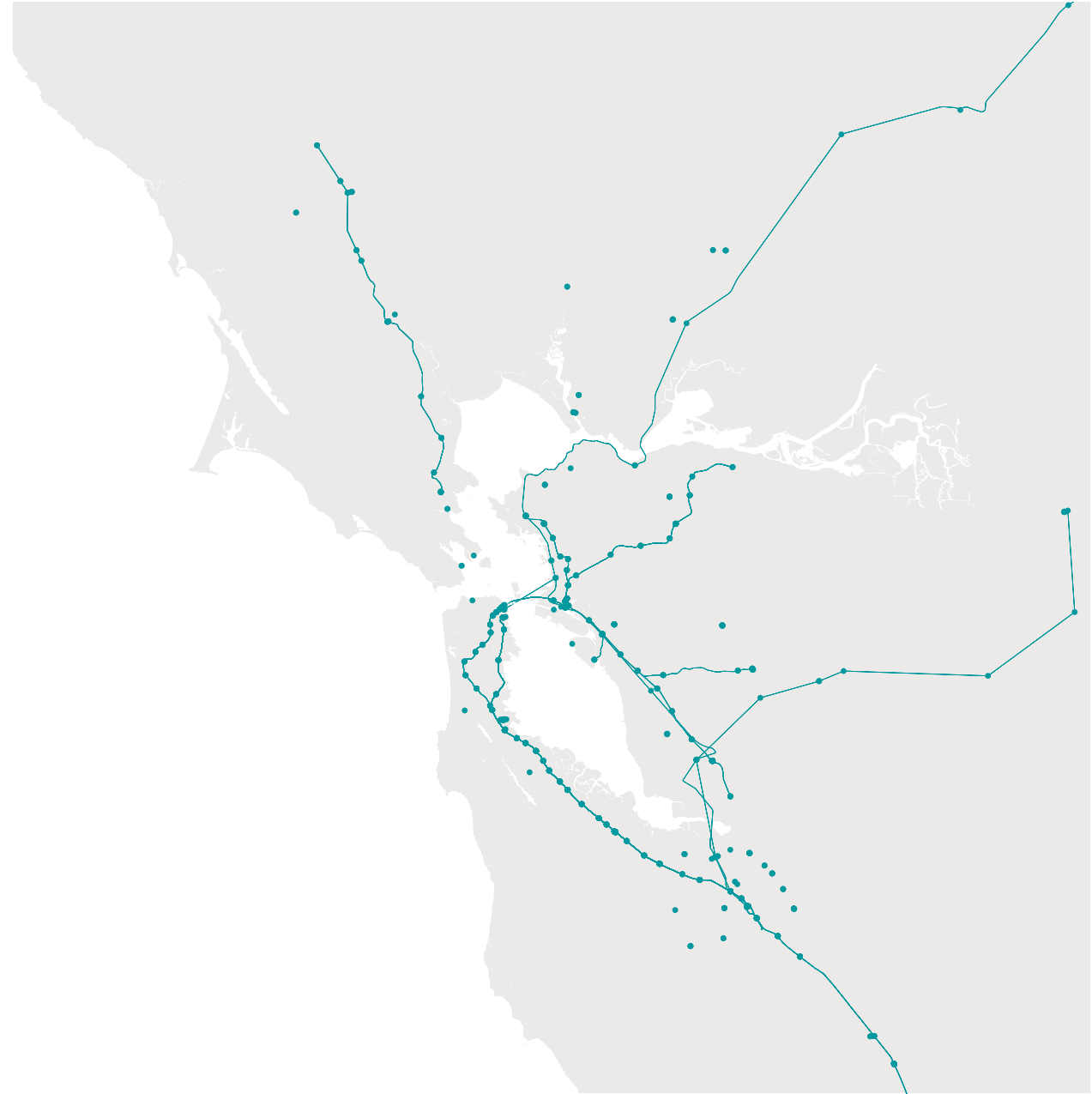
- Currently designated regional hubs
- Additional regional hubs (inc. all rail stations & ferry terminals)
- Local hubs
- Minor hubs

Regional travel environments













- Rail stations & ferry terminals
- Bus stops (regional routes)

Local travel environments

- Light rail stations & stops
- Streetcar & cable car stops
- Bus stops (BRT routes)
- Bus stops (Local routes)



Tiers for comparison

Tier	Identity	Environments		
		<div>Plan & Transfer</div> <div>Multi-provider environments</div>	<div>Regional Travel</div> <div>Rail, ferry & regional bus environments</div>	<div>Local Travel</div> <div>Light rail, streetcar & bus environments</div>
1				
2				
3				

All tiers include support for city wayfinding

All tiers include support for city wayfinding

Tier 3: Locations

Planning & Transfer environments

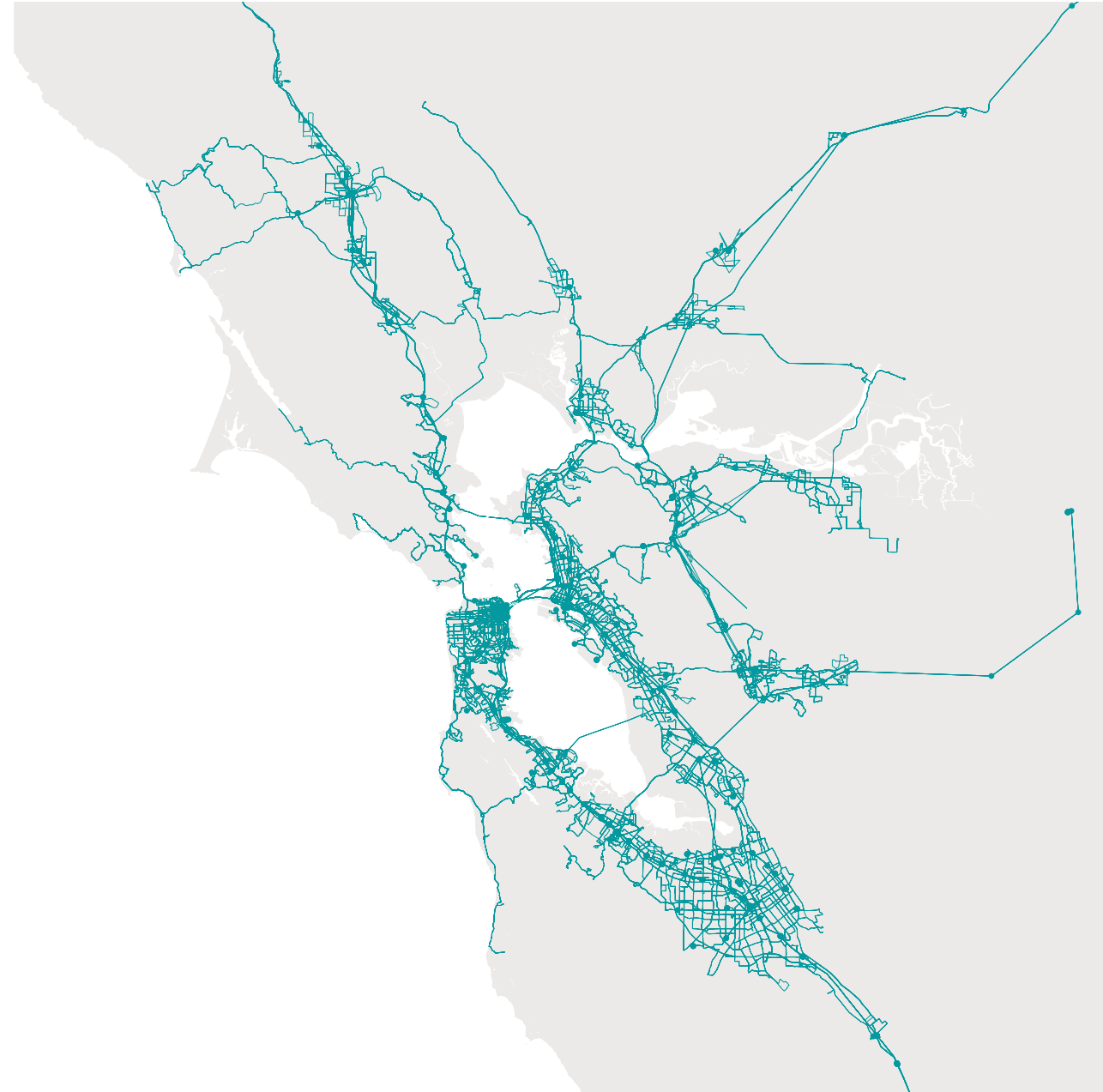
- Currently designated regional hubs
- Additional regional hubs (inc. all rail stations & ferry terminals)
- Local hubs
- Minor hubs

Regional travel environments













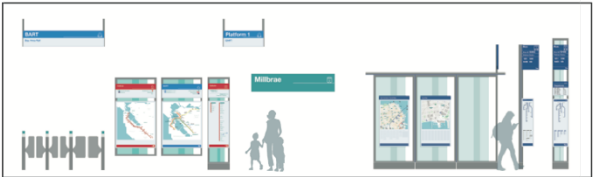






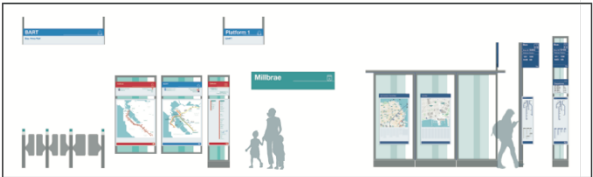







- Rail stations & ferry terminals
- Bus stops (regional routes)

Local travel environments

- Light rail stations & stops
- Streetcar & cable car stops
- Bus stops (BRT routes)
- Bus stops (local routes)



Tiers for comparison

Tier	Identity	Environments		
		Plan & Transfer Multi-provider environments	Regional Travel Rail, ferry & regional bus environments	Local Travel Light rail, streetcar & bus environments
1	    Others		 Design guidance	 Design guidance
2	    Others			 Design standards
3	    Others			
4	  			

All tiers include support for city wayfinding

Tier 4: Locations

Planning & Transfer environments

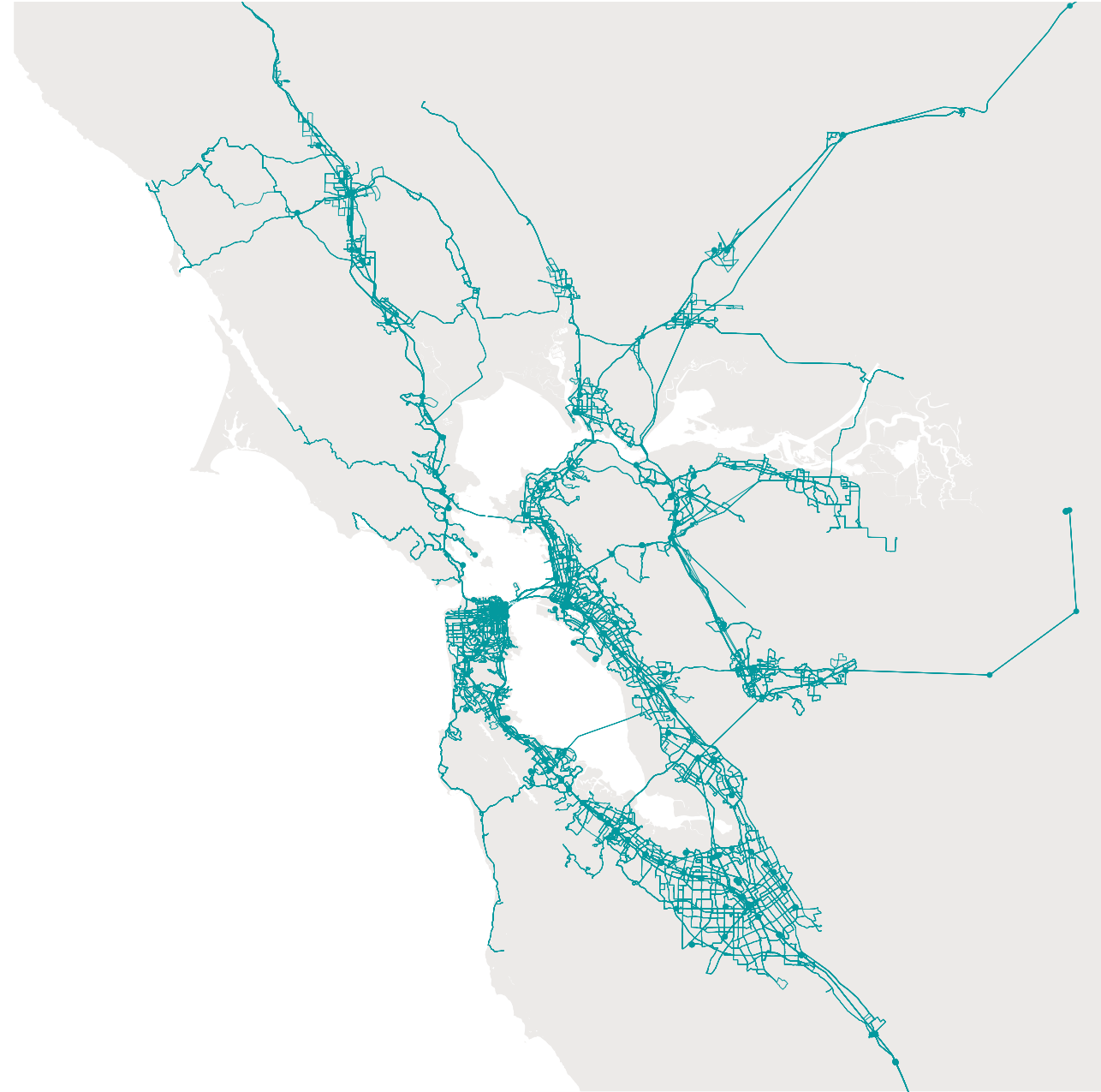
- Currently designated regional hubs
- Additional regional hubs (inc. all rail stations & ferry terminals)
- Local hubs
- Minor hubs

Regional travel environments

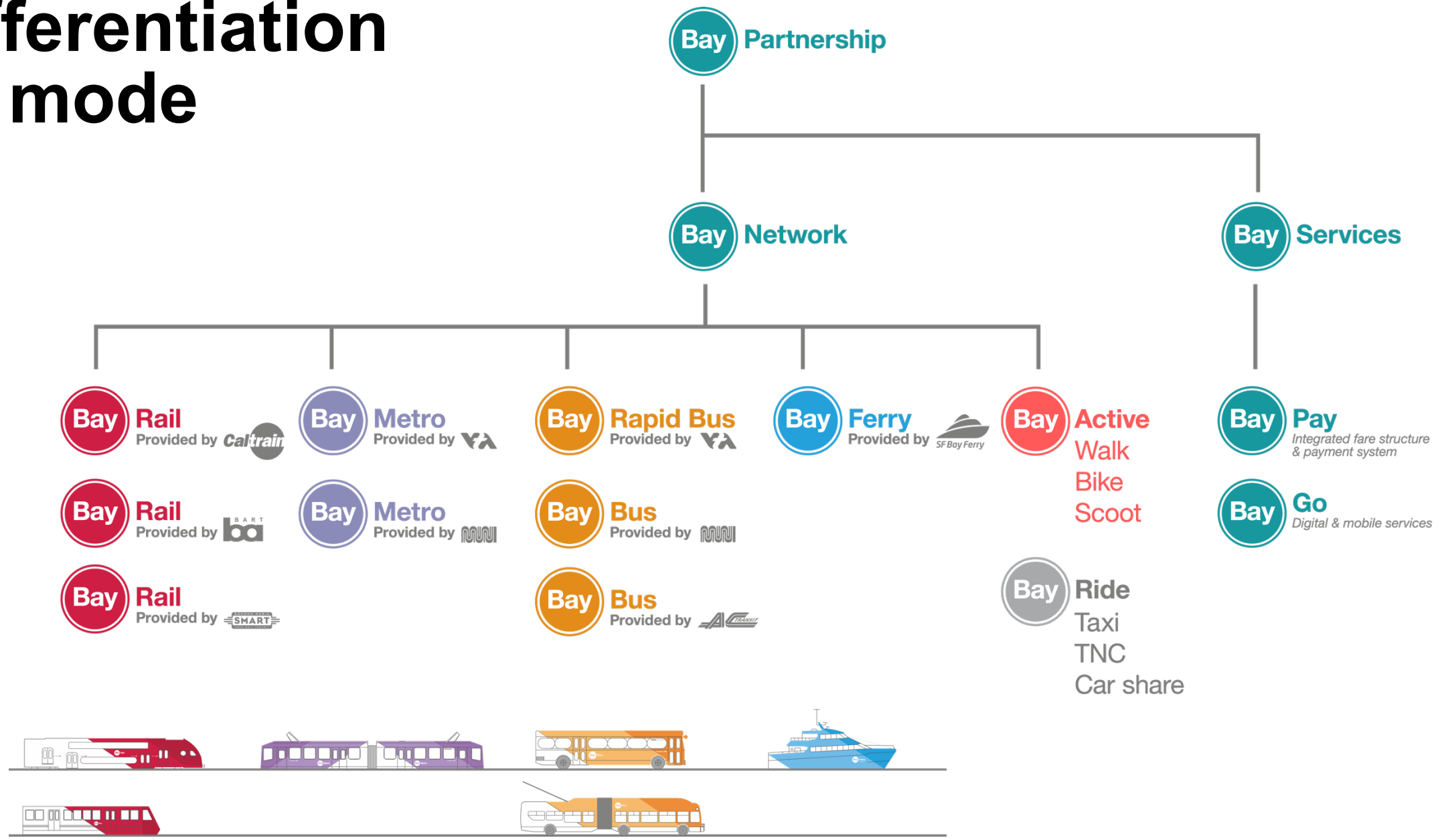
- Rail stations & ferry terminals
- Bus stops (regional routes)

Local travel environments

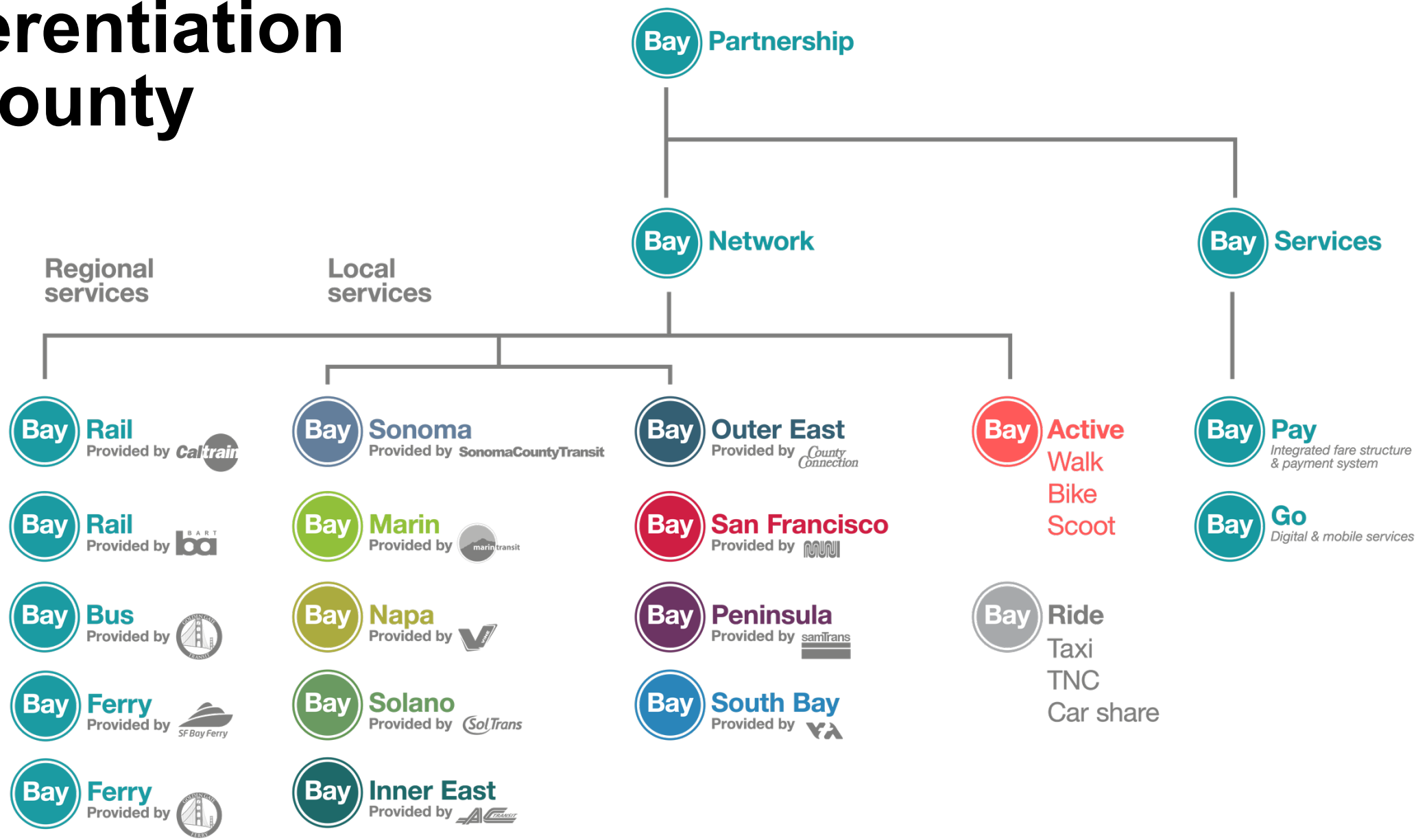
- Light rail stations & stops
- Streetcar & cable car stops
- Bus stops (BRT routes)
- Bus stops (local routes)



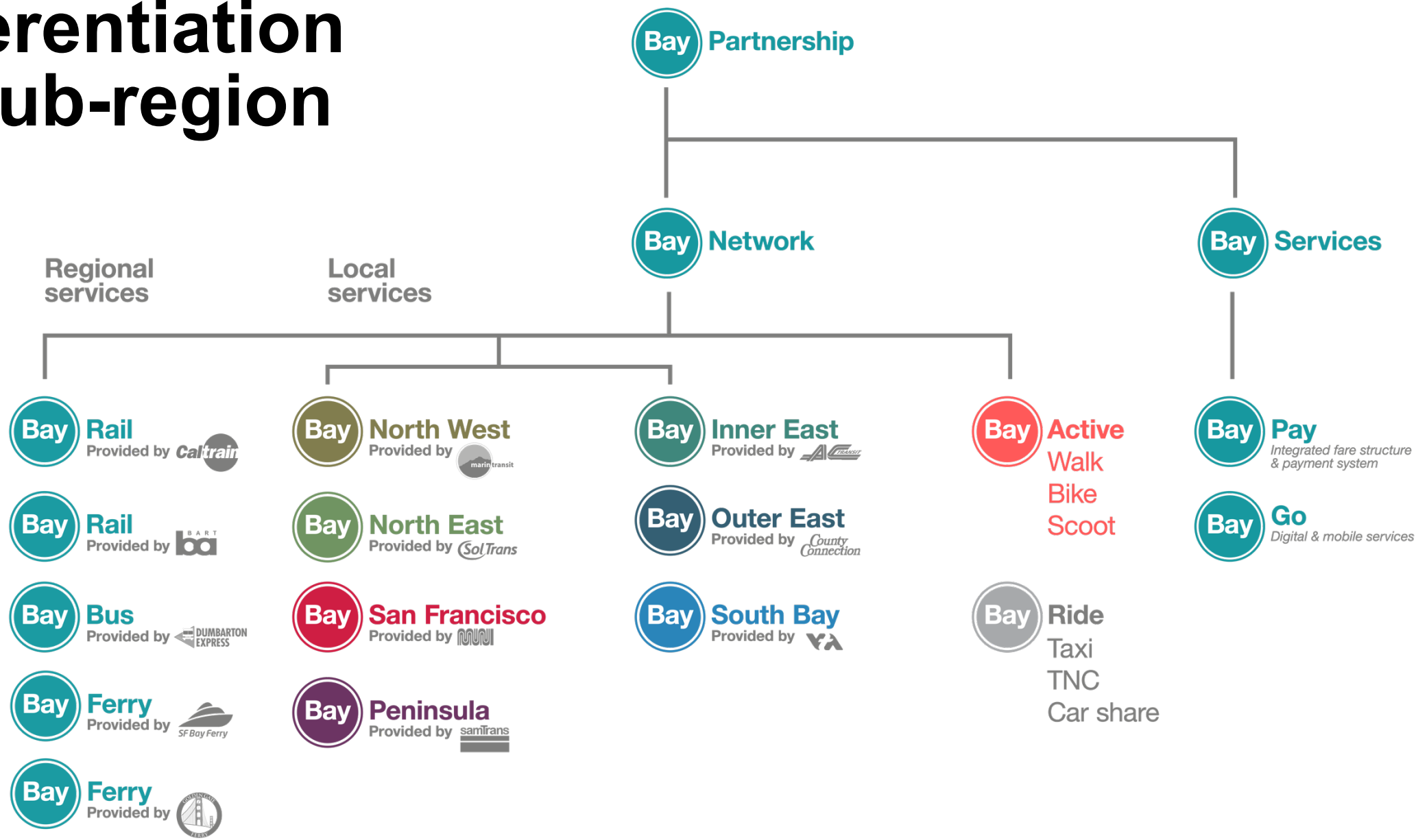
Differentiation by mode



Differentiation by county

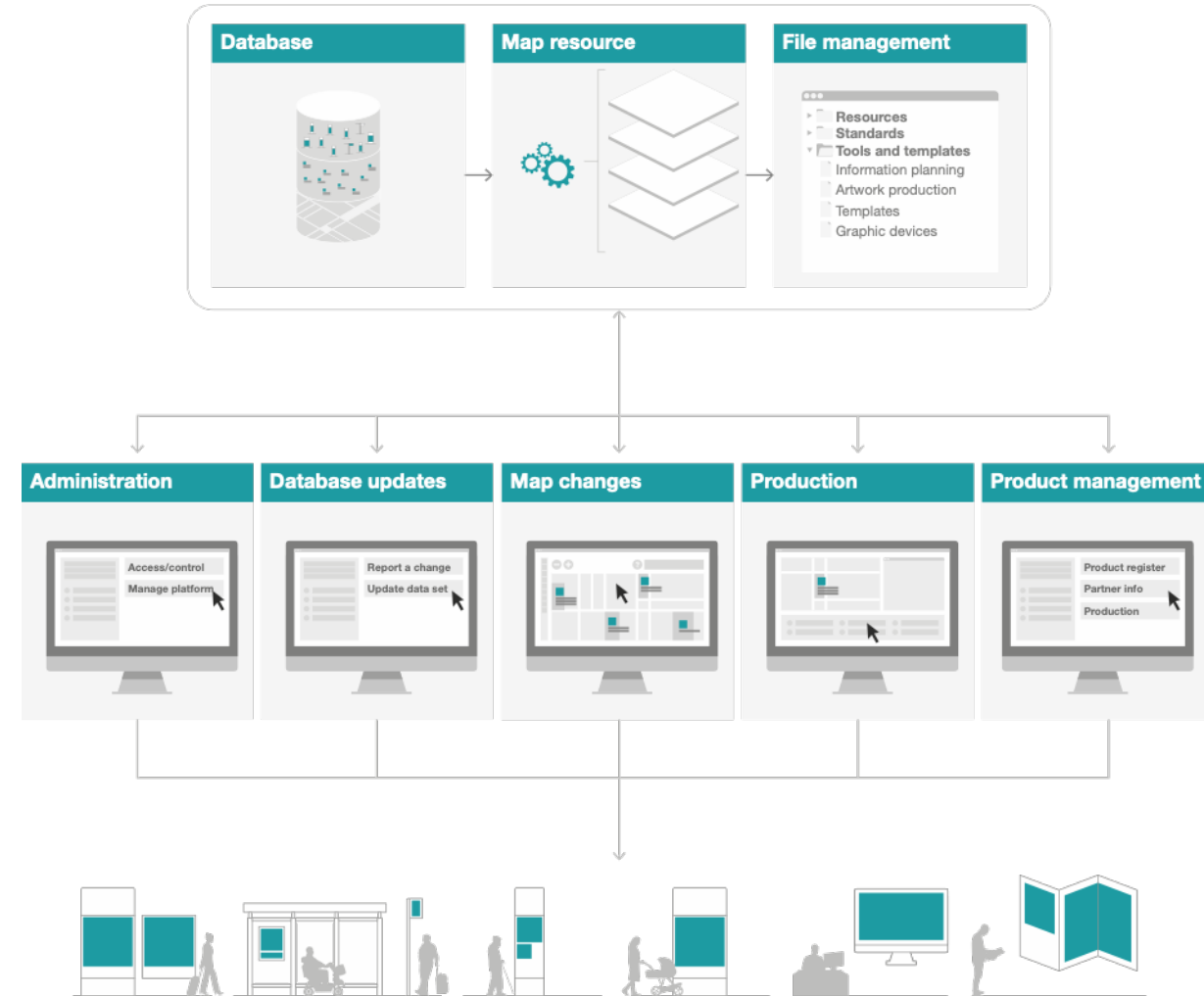


Differentiation by sub-region

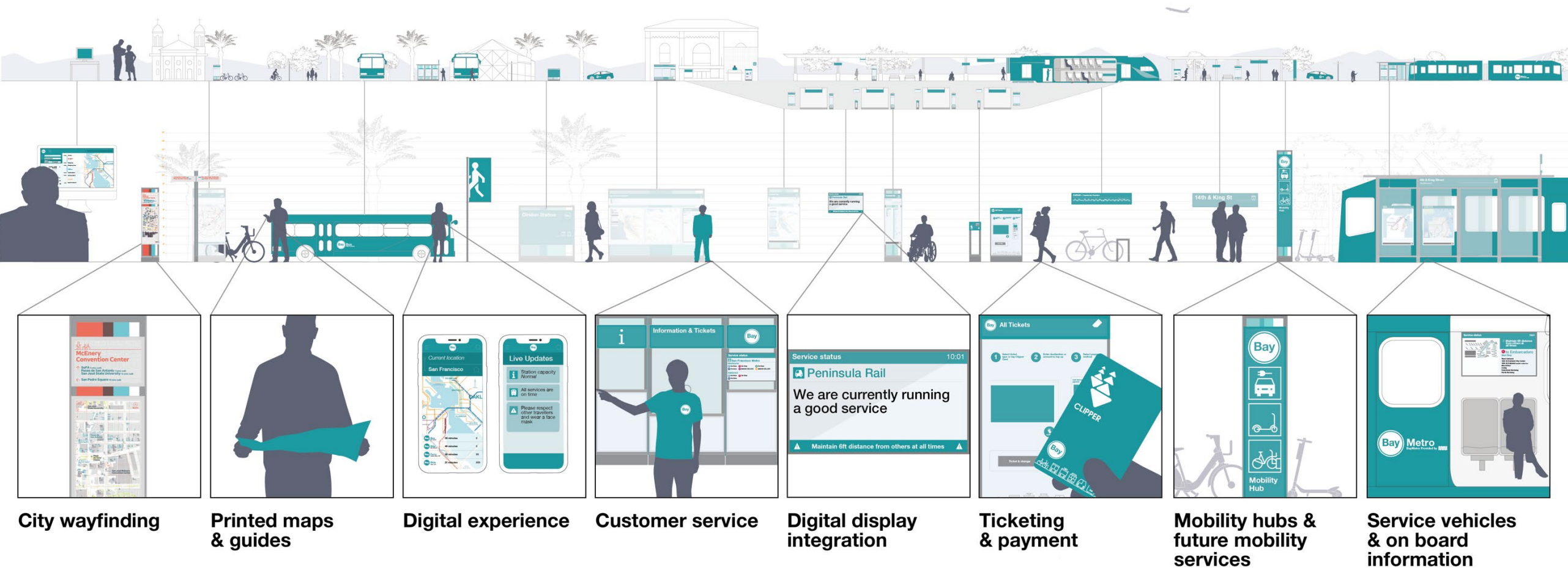


Mapping database

- **All Tiers** include a **Mapping database**
- The database will be managed by a Regional Coordinator, with **access for partners**
- Product locations and map 'frames' saved to aid management
- Platform utilizes multiple data sources



Related opportunity areas



Cost estimation approach

1. Establish System Principles



- Information types
- Product types
- Application principles

2. Estimate baseline implementation (within 5 years)



- Unit costs informed by fabricators and suppliers
- Approach for utilizing **existing infrastructure**
- Integration of technology – not part of evaluation

3. Calculate outline costs



- **Enabling** costs
- **Implementation** costs
- **Operational** costs
- Updated as designs progress

Quantifying the impact

Business Case purpose

Set out the **costs** and **benefits** of the regional mapping and wayfinding project to **inform the decision** on how to proceed.

The dimensions of the business case



Strategic case

Determines the **strategic value** to the region of addressing the problem



Economic case

Establishes the **overall benefit to society** in monetary terms



Financial case

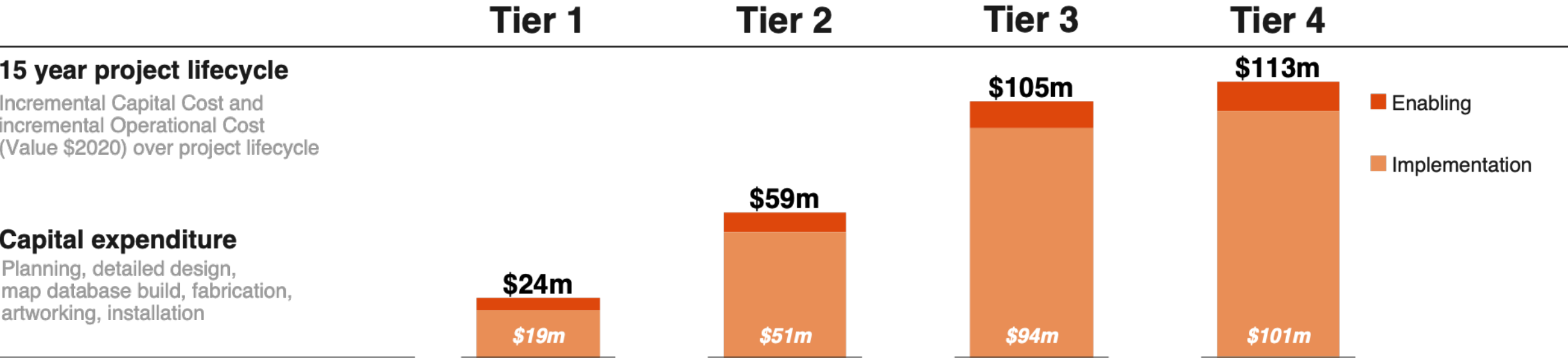
Outlines what is required to **fund & finance** the investment over its full lifetime



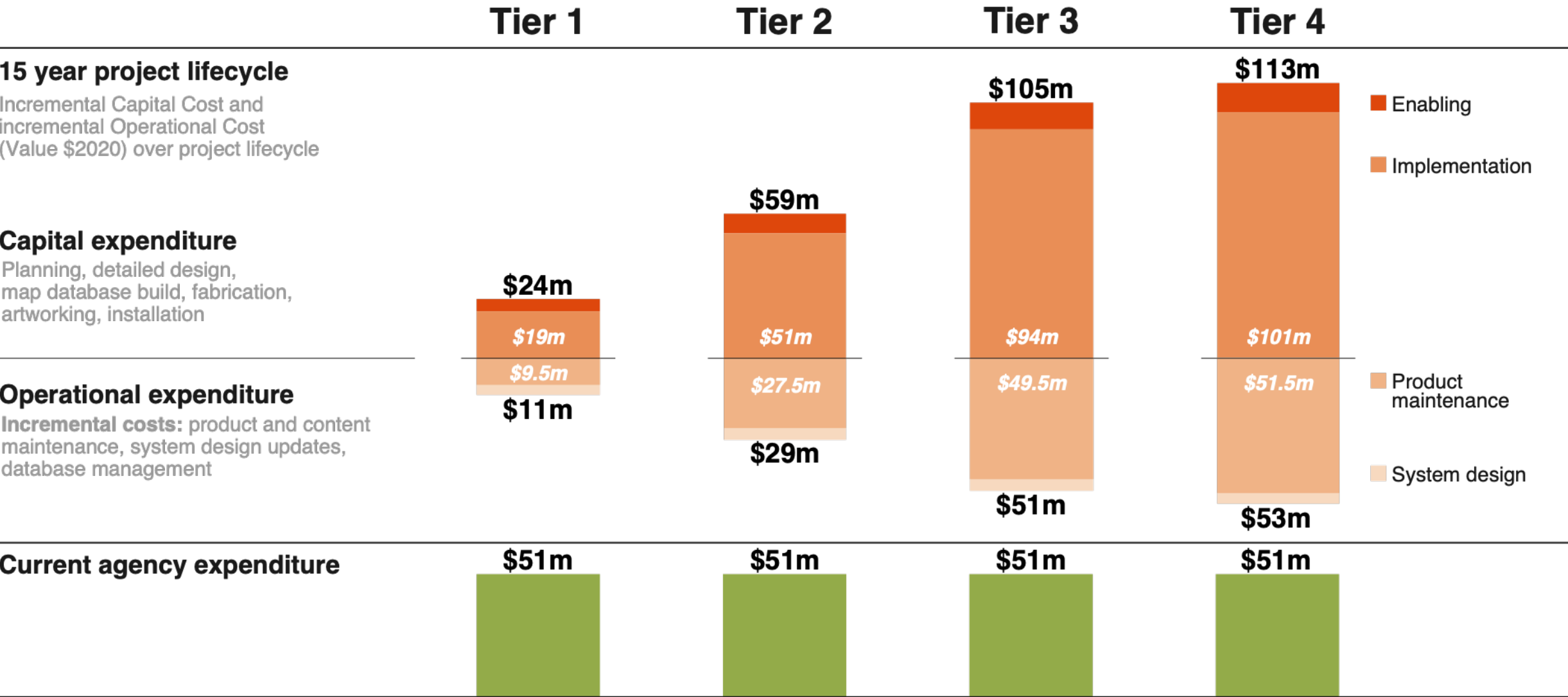
Deliverability & operations case

Establishes **what is required to deliver and operate** the project

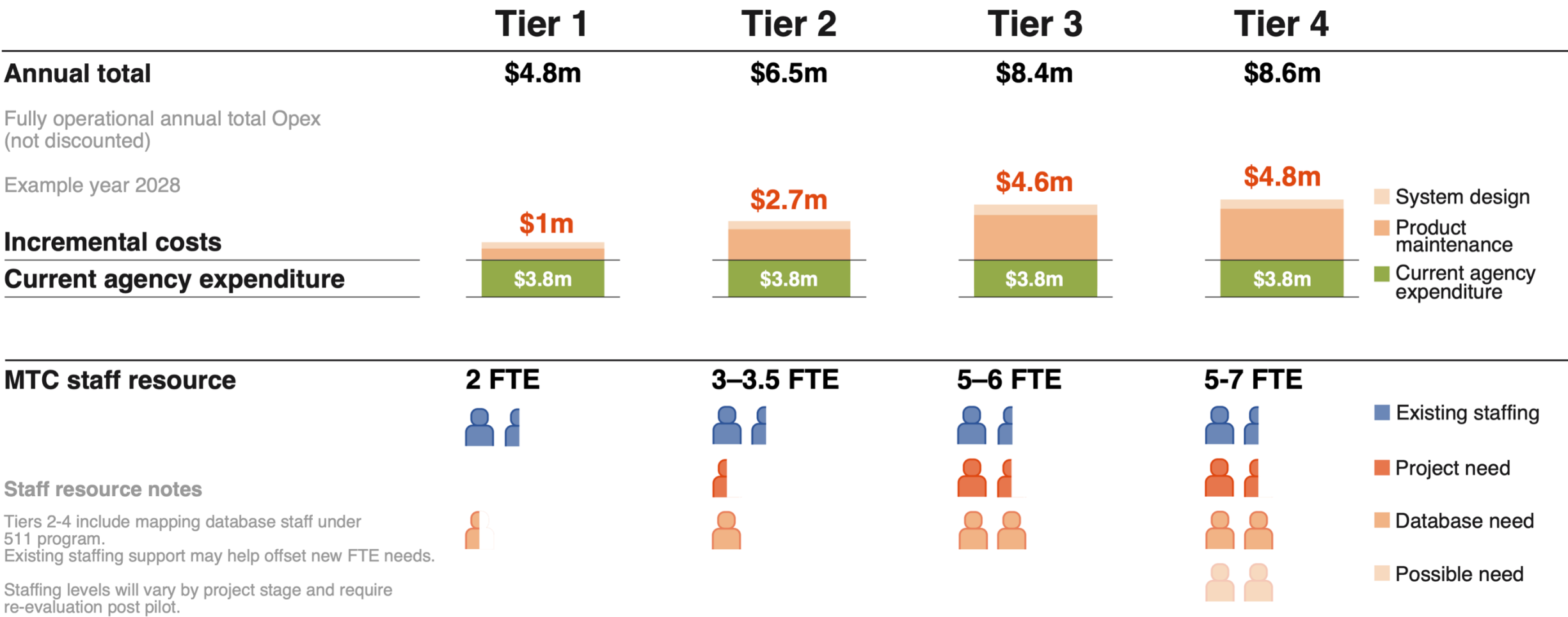
Costs






Program costs



Annual operating costs



Assessing the benefits

Program goal	Policy theme	Monetized impact	Evaluation measure	Impact
 Better information for travelers  Better ways of working for providers	Transportation system effectiveness	Perceived travel time saving (transfers and network awareness)	Time saving x number of users	✓ ✓ ✓
		Ridership growth	New riders & additional trips	✓
		More efficient delivery of wayfinding and mapping	Change in annual O&M spend	✓ ✓
 Better outcomes for the region	Equitable access	Stenghtened transit accessibility	System coverage in Equity Priority Communities	✓ ✓
	Healthy and safe communities	A healthier and more active region	Growth in active travel	✓
	Climate protection	Reduced VMT	Reduced GHG	✓
	Economic vitality	Productivity	Reduced congestion	✓

Quantifying the impact

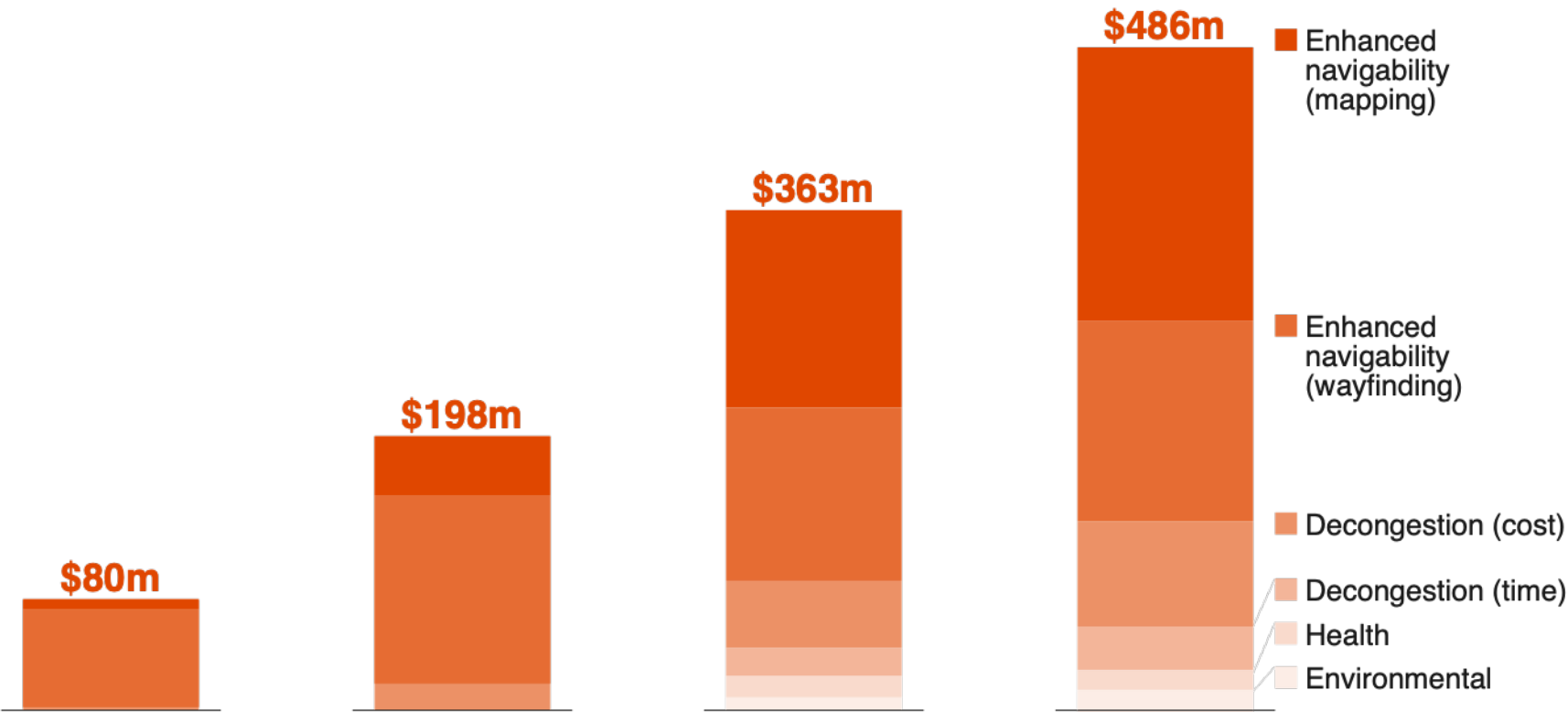
Tier 1

Tier 2

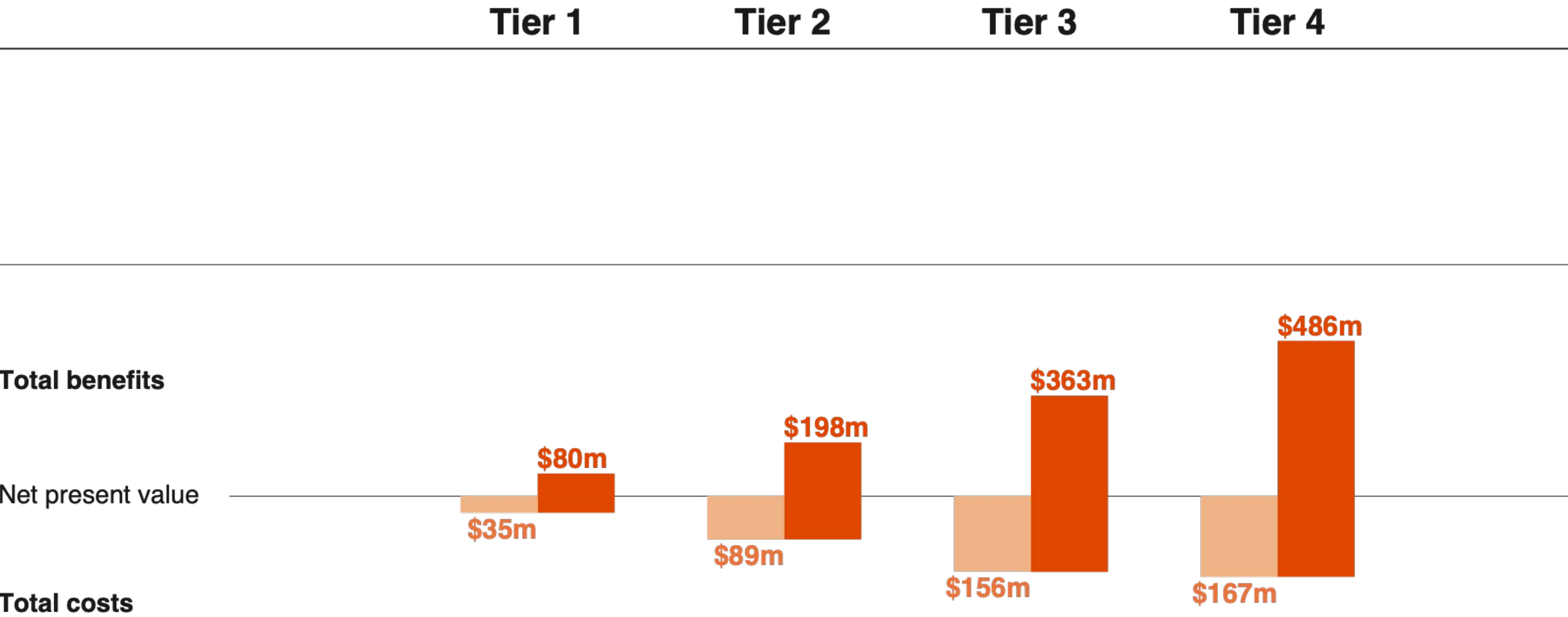
Tier 3

Tier 4

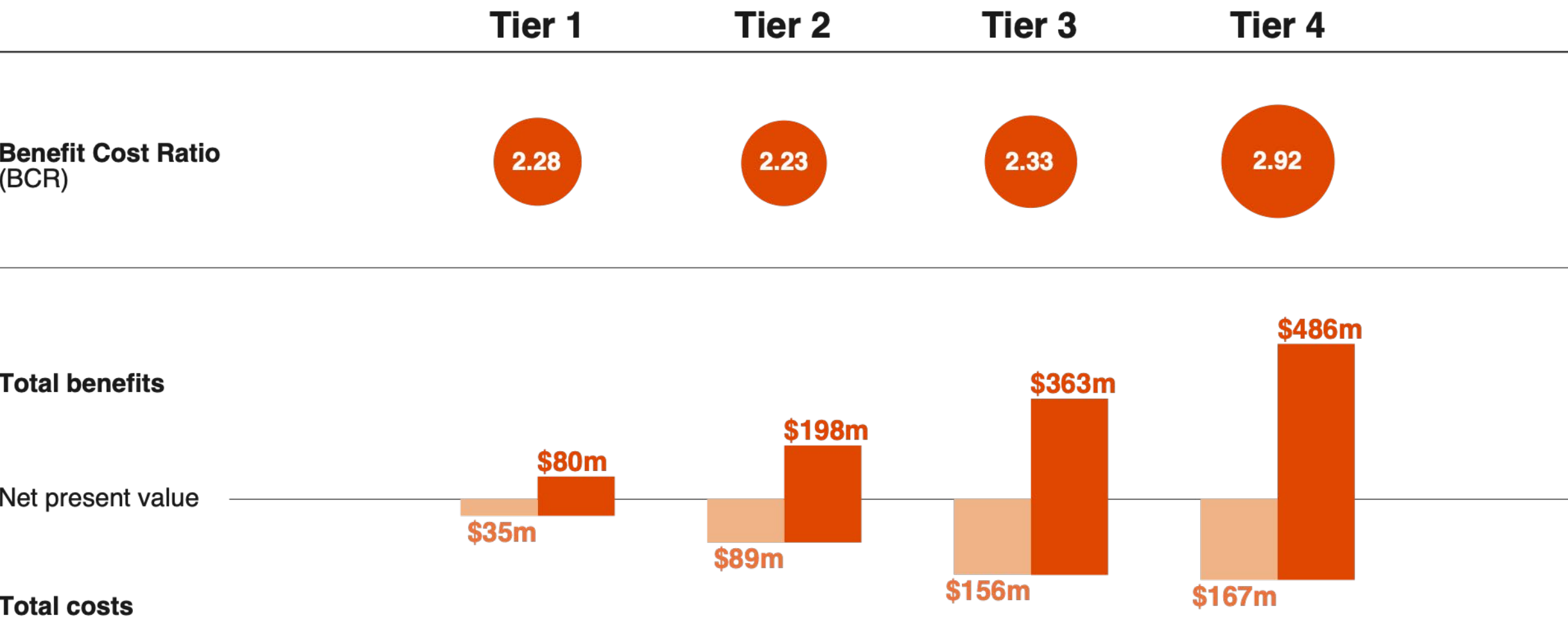
The most significant economic benefits are generated through perceived travel time savings at key trip stages and improved network awareness.



Benefit Cost Ratio



Benefit Cost Ratio



Benefit Cost Ratio

For every dollar invested, the region can expect between \$2.28 and \$2.92 of transportation benefits in return.

Monetized benefits include: environmental, health, congestion reduction and enhanced navigability (perceived time savings) due to improved mapping and wayfinding.

Other strategic benefits include: equitable access and cost effectiveness (included in cost calculations)

Toward a recommendation

Tier 3 is achievable with current conditions and allows for a **migration to Tier 4** if and when conditions allow.

If support for **Tier 4** and related changes can be obtained, this would become the favored recommendation.

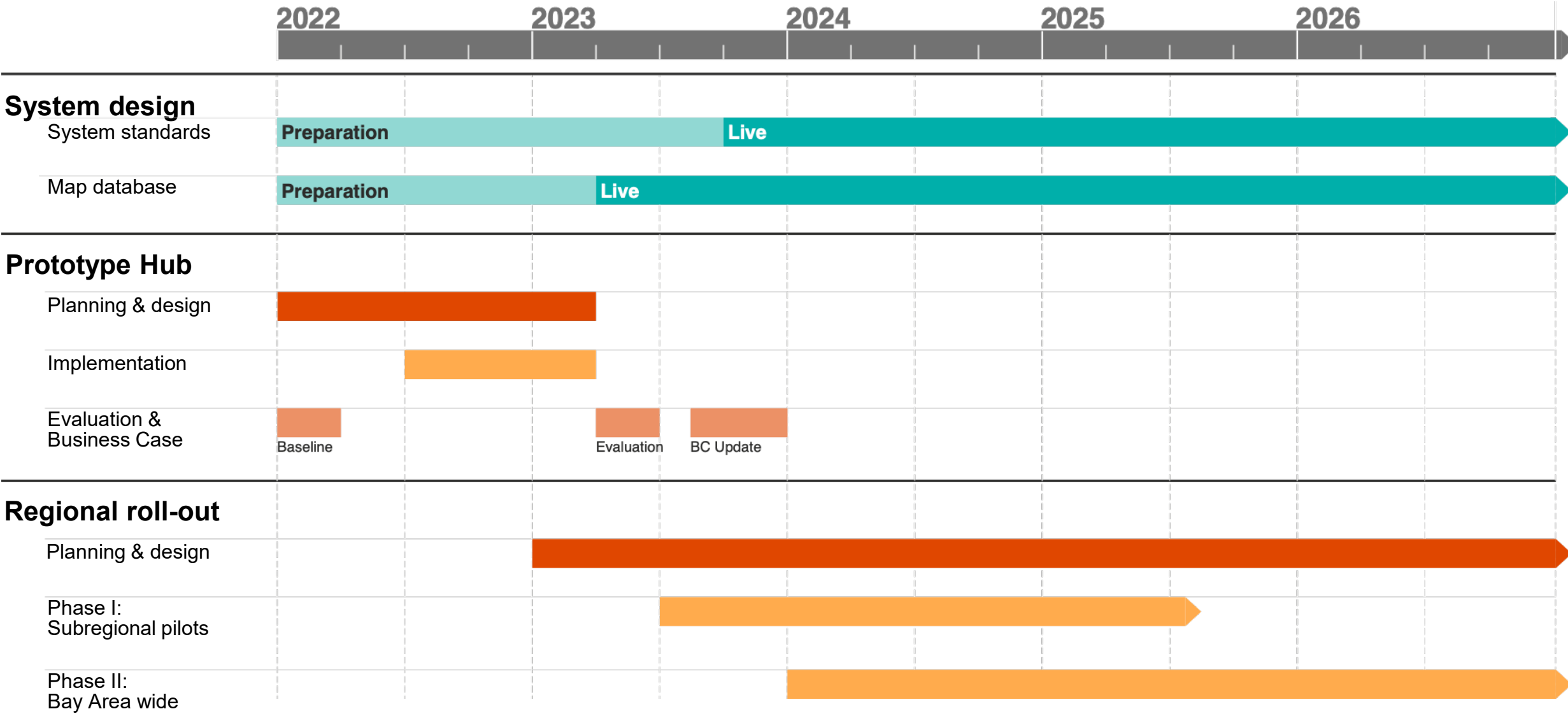
Otherwise, **Tier 3** is considered the optimal recommendation given the strategic case and potential to migrate to Tier 4 in the future.

Next steps

Next steps

- Final Phase 2 findings presentations
 - ✓ Blue Ribbon Transit Recovery Task Force – May 24
 - ✓ Policy Advisory Committee – June 9
- Operations Committee – Summer

Proposed future phases



Q&A

Thank you