Caltrain Business Plan

OCTOBER 2018

Quarterly Update

PCJPB

How Should Caltrain Grow?

Business Plan Overview

Business Plan Overview

A Vision for Growth

Crafting the Vision

Next Steps

What is the Caltrain Business Plan?

What Addresses the future potential of the railroad over the next 20-30 years. It will assess the benefits, impacts, and costs of different service visions, building the case for investment and a plan for implementation.

Why Allows the community and stakeholders to engage in developing a more certain, achievable, financially feasible future for the railroad based on local, regional, and statewide needs.

What Will the Business Plan Cover?

Technical Tracks

Service

- Number of trains
- Frequency of service
- Number of people riding the trains
- Infrastructure needs to support different service levels

Business Case

- Value from investments (past, present, and future)
- Infrastructure and operating costs
- Potential sources of revenue

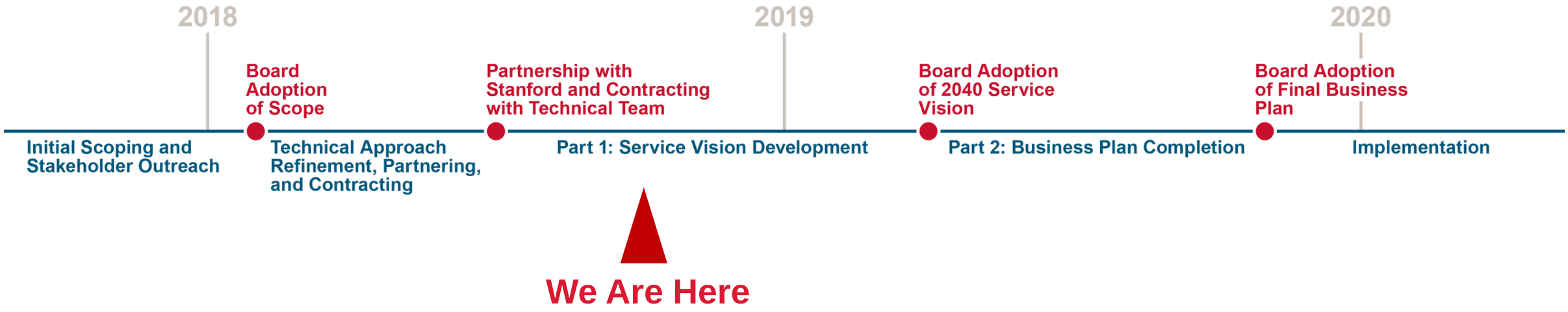
Community Interface

- Benefits and impacts to surrounding communities
- Corridor management strategies and consensus building
- Equity considerations

Organization

- Organizational structure of Caltrain including governance and delivery approaches
- Funding mechanisms to support future service

Where Are We in the Process?



A Vision for Growth

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200 Years on the Caltrain Corridor

Yesterday

1863
Passenger service begins on the corridor

1870
Southern Pacific Railroad purchases the corridor

1940s – 1970s
Passenger and freight traffic boom during WWII then begin steady decline

Today

1977
Caltrain is established

1987
Caltrain takes over Southern Pacific commuter service

2004
Baby Bullet service is introduced

Tomorrow

2020
Corridor is complete

2022
Caltrain and High-Speed Rail operate using Blended System

2027 and Beyond
Caltrain electrification

1860 1870 1880 1890 **1900** 1910 1920 1930 1940 **1950** 1960 1970 1980 1990 **2000** 2010 2020 2030 2040 **2050** 2060

Milestones that Shaped the Railroad's Future

2008 CHSRA specifies its alignment

2011-2013 "Blended System" introduced

CHSRA Business Plan confirms Blended System

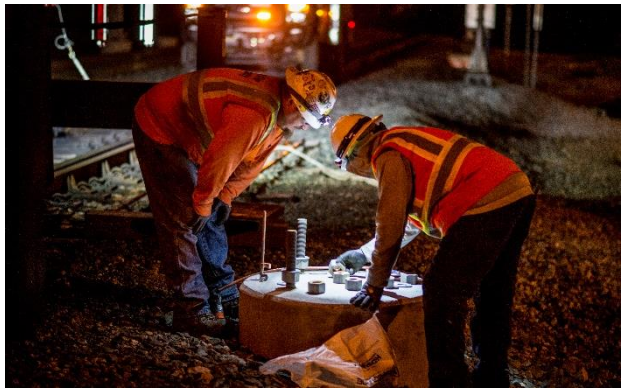
Senate Bills 1029 and 557 provide Prop 1A funds and codify 2-track blended system

2013-2017 Peninsula Corridor Electrification Program environmentally cleared

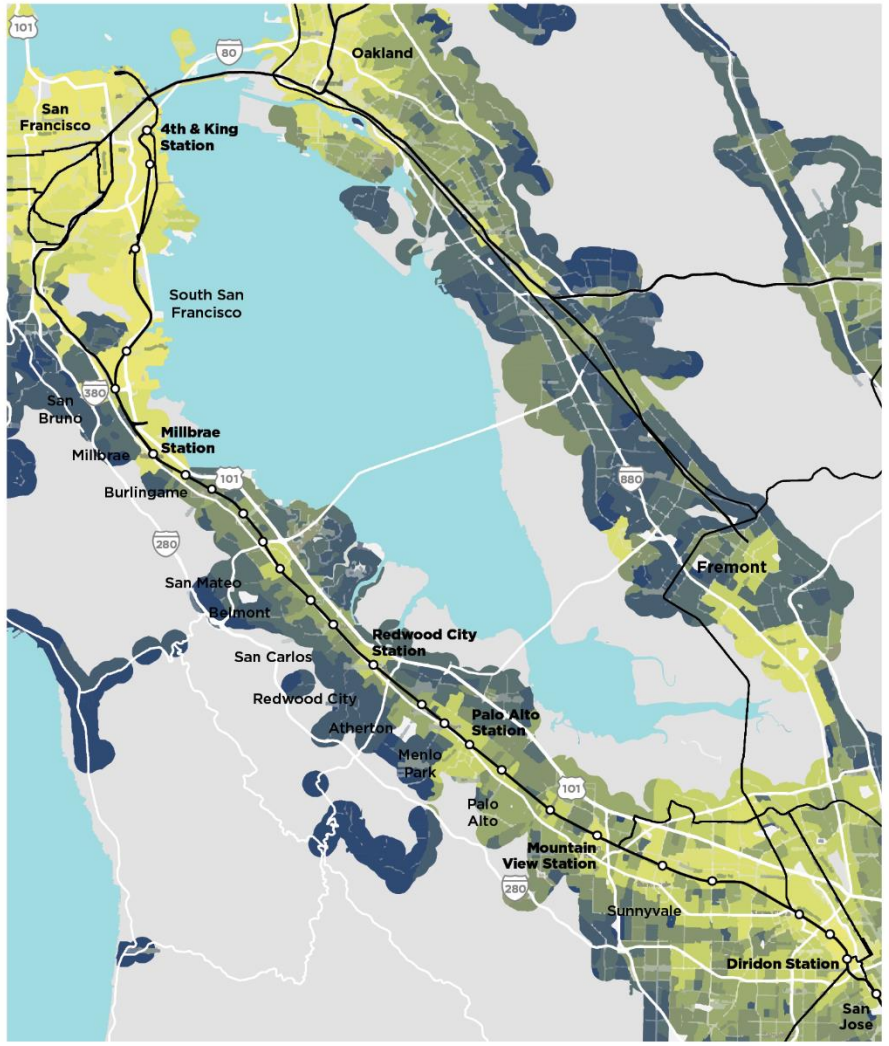
Receipt of Federal Full Funding Grant Agreement

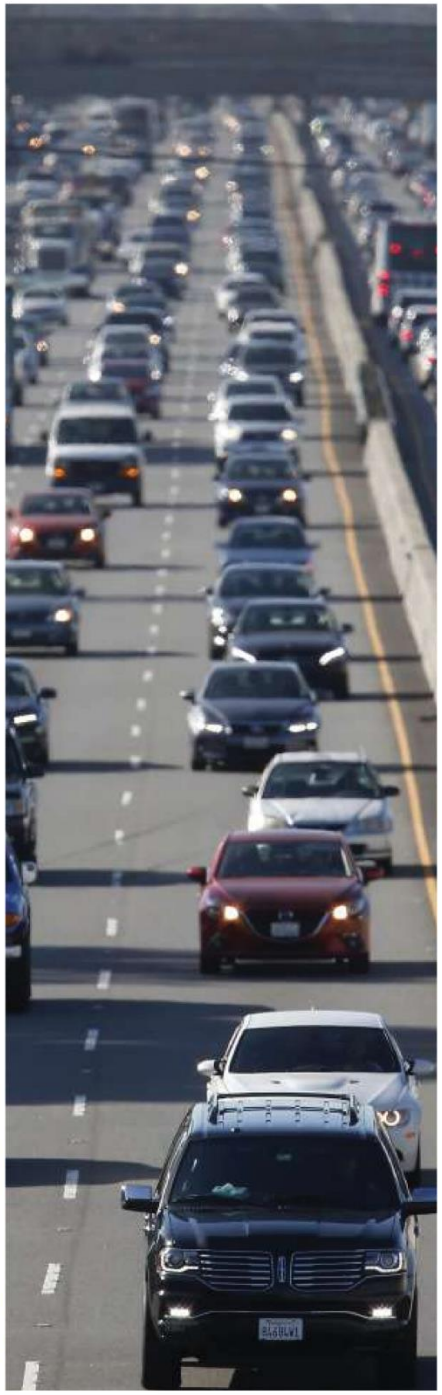
Full Notice to Proceed issued

Electrification is the Foundation for Growth with Plans for More



Improving Caltrain is Vital to the Health of the Region's Economy





Choosing a Vision- How Will the Railroad Grow?

What

In the Spring of 2019 the team will present two growth scenarios to the Board. One will generally reflect past and ongoing Blended System planning efforts while another will explore a higher level of growth. Each scenario will provide a detailed picture of how the railroad could grow over the next 20-30 years. The Board will be asked to choose one of these growth scenarios as the “Service Vision” for the corridor

Why

In selecting a long range Service Vision the Board will answer the question “How should the railroad grow?” This will allow Caltrain to further optimize and refine the Vision while developing a Business Plan that builds towards the future in a consistent and efficient manner

Crafting the Vision

Business Plan Overview

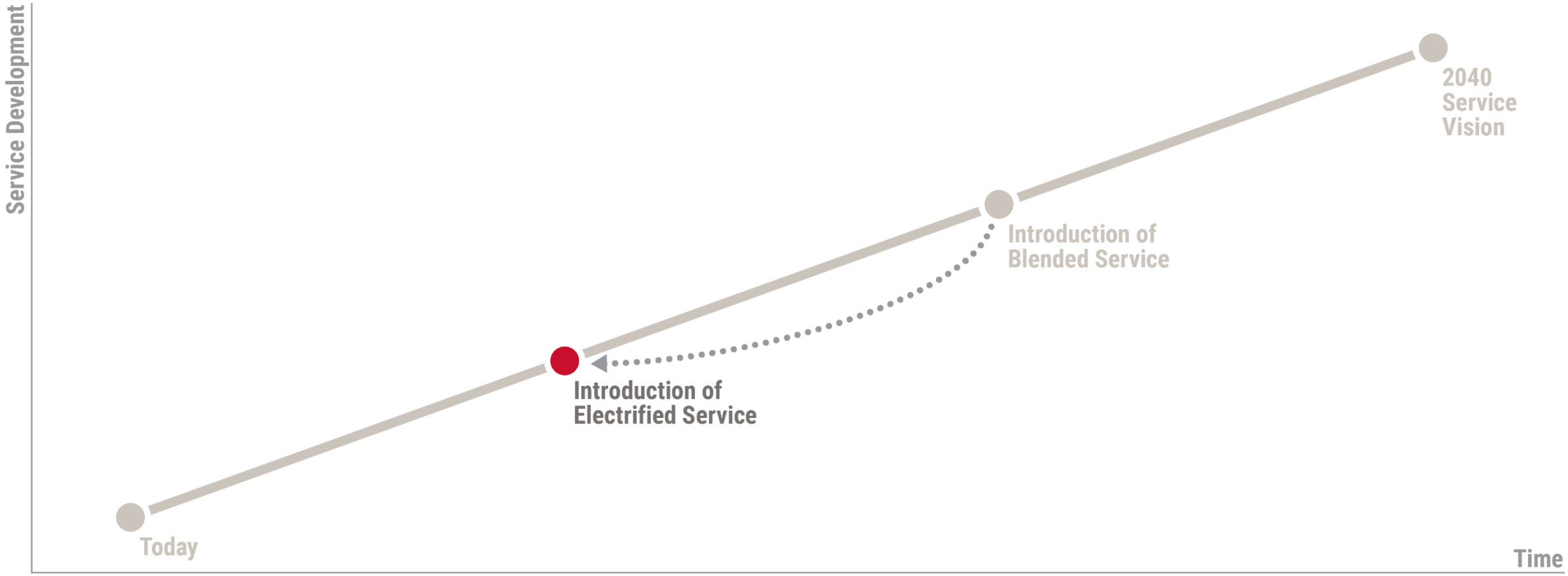
A Vision for Growth

Crafting the Vision

Next Steps

Focus on Service

Working Backwards from 2040



What is the Service Vision?

An Achievable End State for the Corridor in 2040

Train Service
- Frequencies
- Stopping patterns
- Service types
- Number of trains

Infrastructure Needs
- Fleet
- Systems
- Infrastructure
- Support facilities

Costs
- Operating
- Maintenance
- Capital

Outcomes
- Ridership
- Mobility benefits
- Revenues

Where do We Start?

The Service Vision Exists within an Established Framework

Existing Policy Decisions

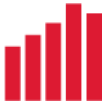
- Commitment to a Blended System
- Primarily a 2-track corridor

Planned Projects

- Stations
- Connecting services
- Grade separations

Community Acceptability

- Tangible benefits
- Mitigated or acceptable impacts



Market Responsiveness

- Origins and destinations
- Capacity
- Travel times
- Coverage

Fiscal Reality

- Realistic scale
- Value for money

Building Blocks for a 2040 Service Vision

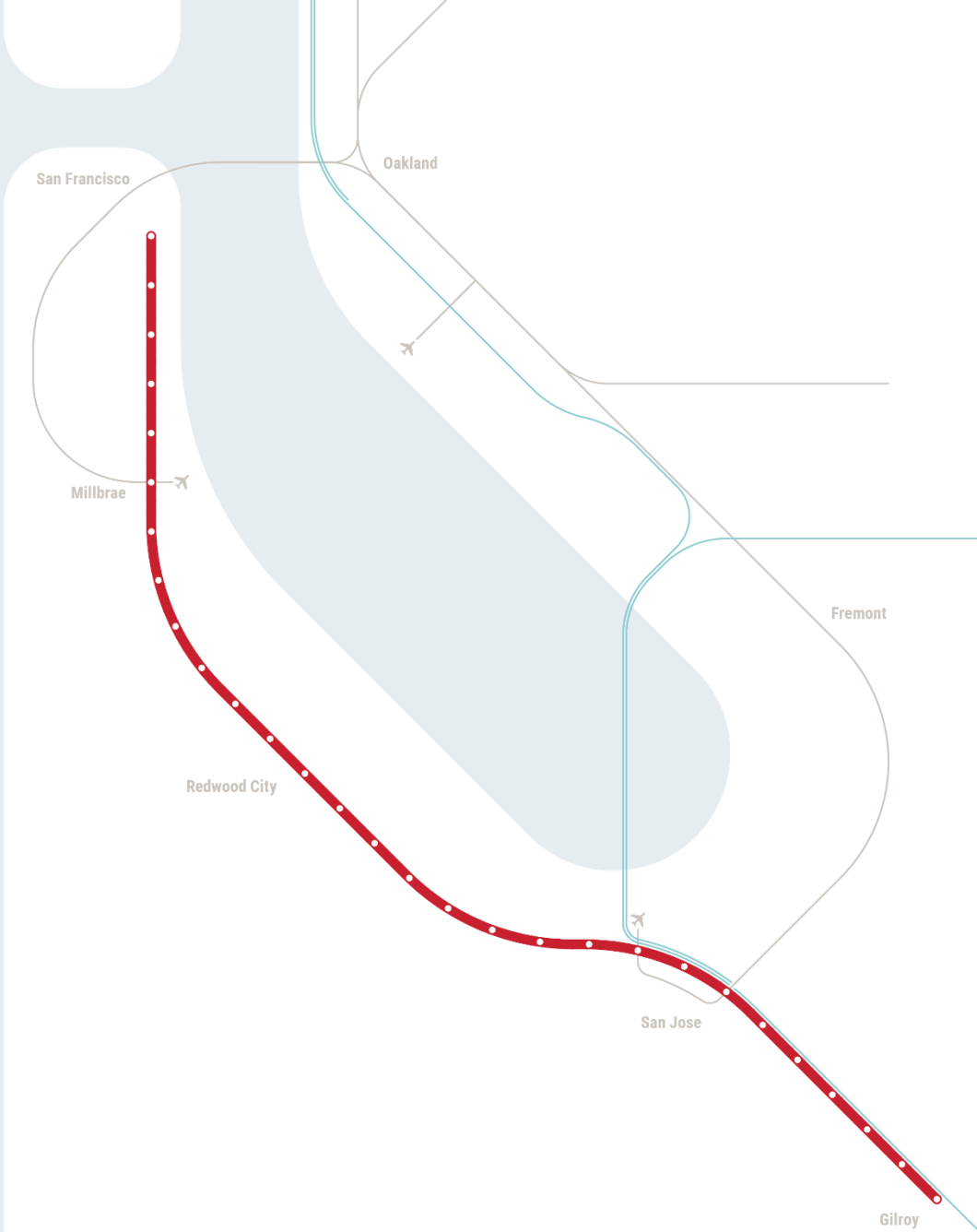
Caltrain

Assumptions

- Fully electrified service between San Francisco and Tamien
- Additional electrified service from San Jose to Gilroy on a 2-track electrified system

Explorations

- Details of service, fleet and infrastructure

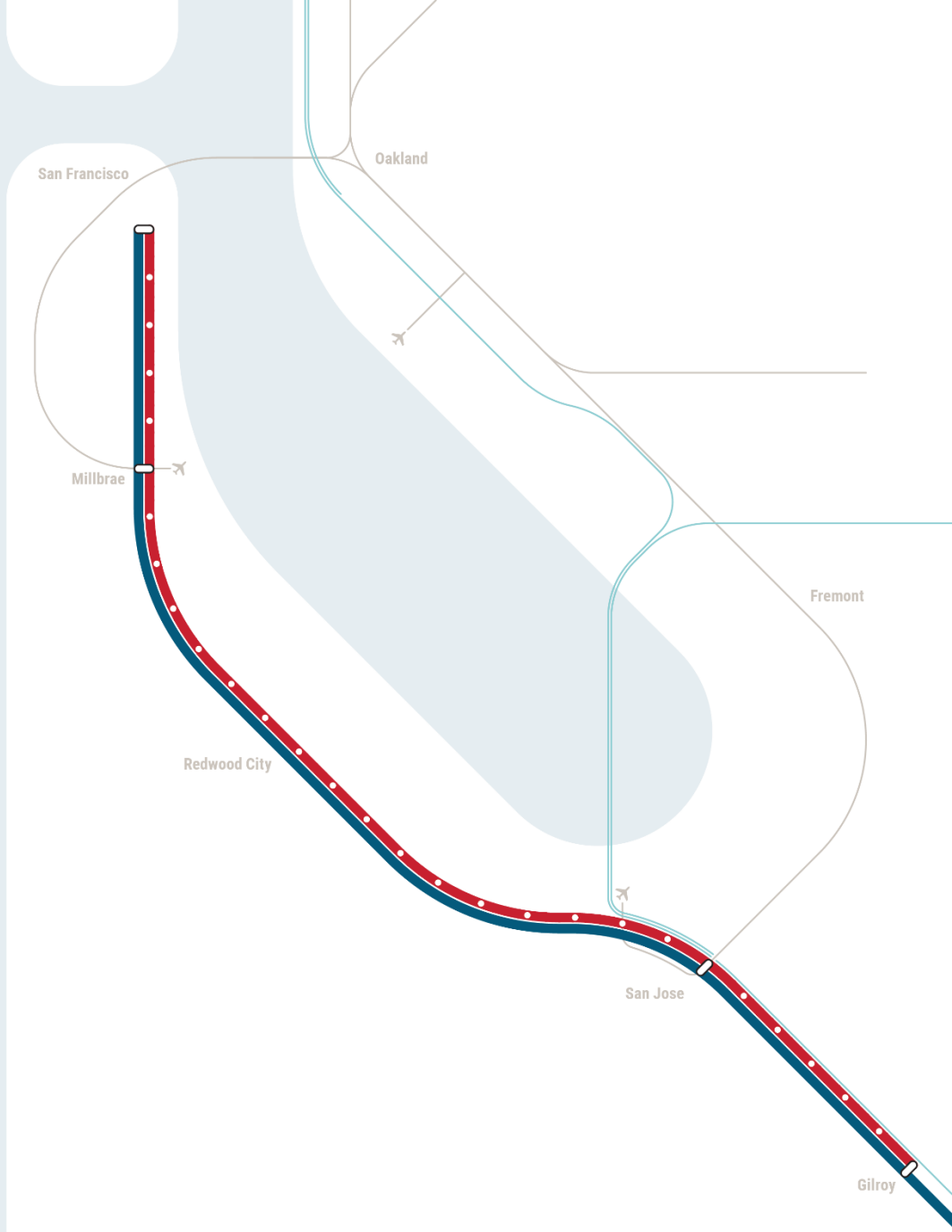


Building Blocks for a 2040 Service Vision

High Speed Rail

Assumptions

- Full HSR Service from Los Angeles to San Francisco (Phase 1)
- Related corridor and station upgrades consistent with a primarily 2-track Blended System (under study through HSR environmental)



Building Blocks for a 2040 Service Vision

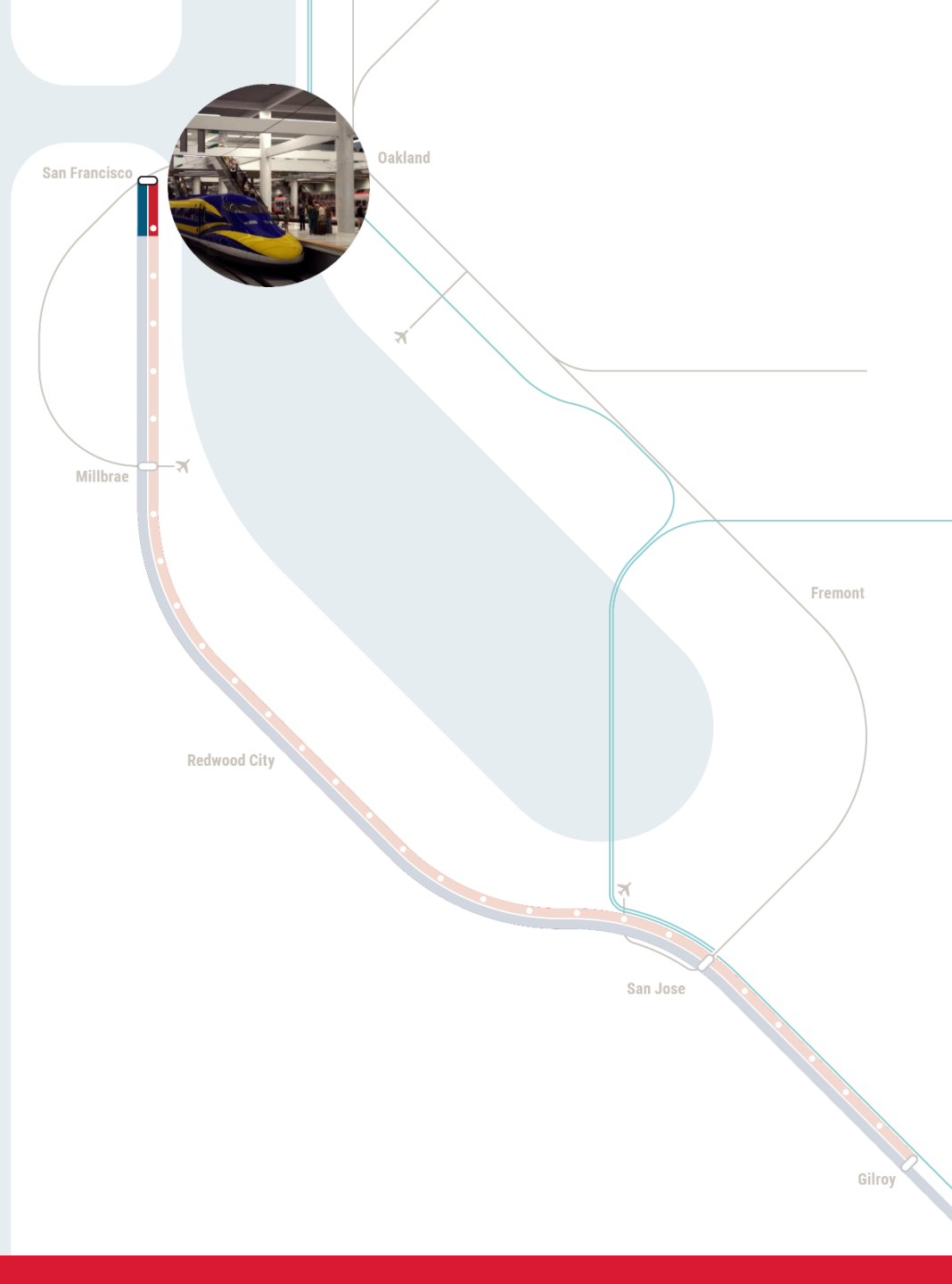
North Terminal

Assumptions

- Caltrain/HSR Downtown Extension to Salesforce Transit Center

Explorations

- 4th/King/Townsend reconfiguration
- Pennsylvania Ave alignment
- Potential reconfiguration or relocation of storage and maintenance facilities
- Potential interface with new transbay crossing

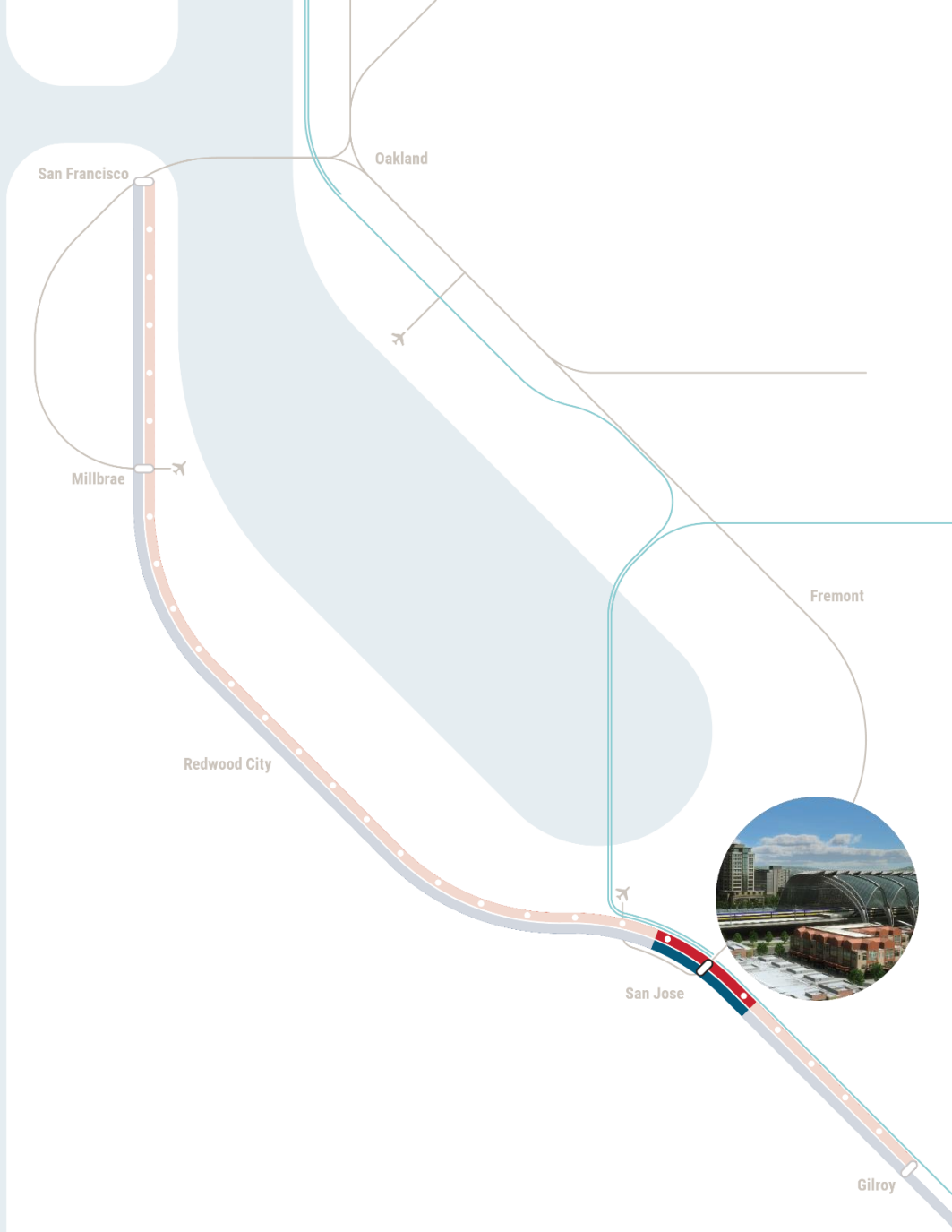


Building Blocks for a 2040 Service Vision

South Terminal

Explorations

- Reconstruction and reconfiguration of Diridon Station
- Additional potential modifications to surrounding rail facilities and potential relocation of CEMOF



Building Blocks for a 2040 Service Vision

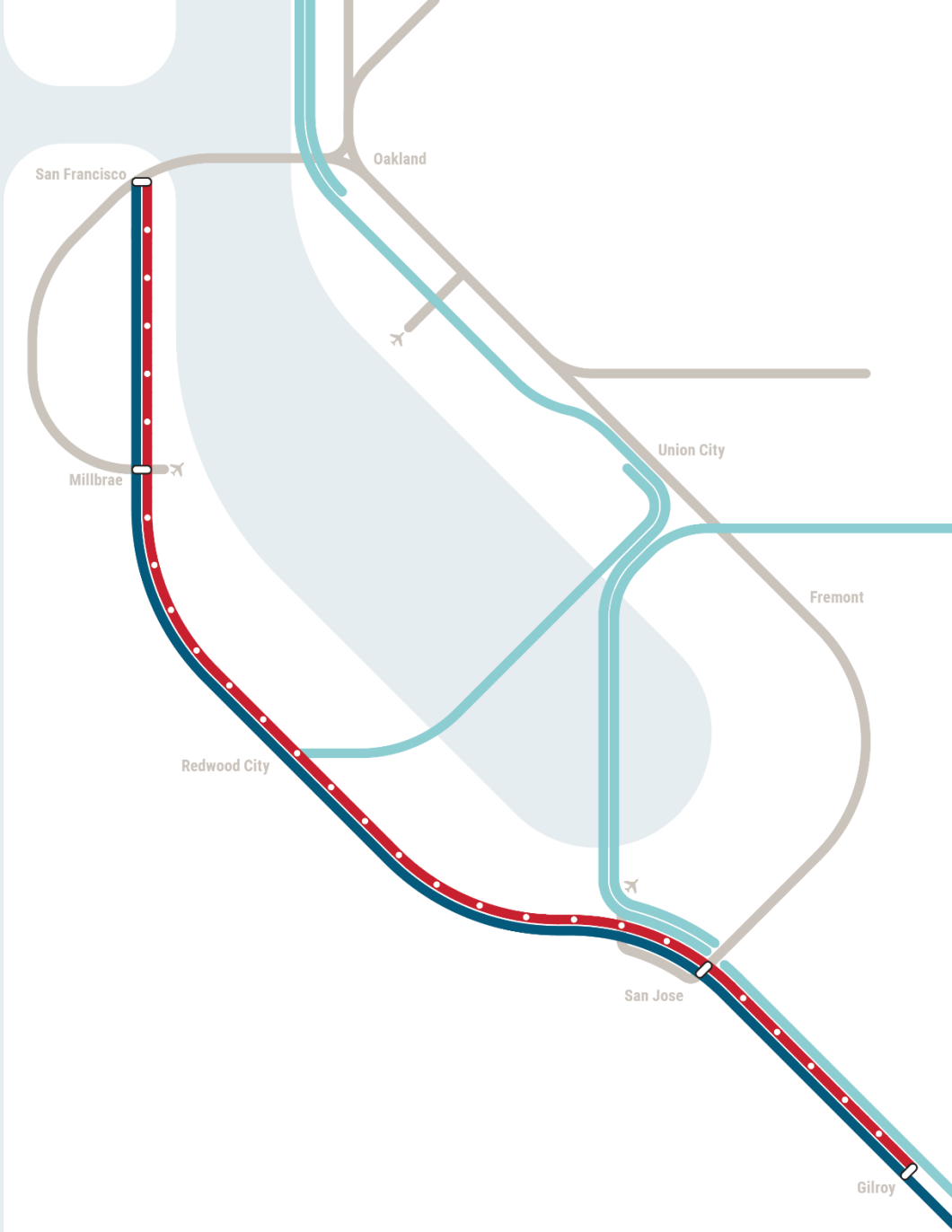
Connecting Services

Assumptions

- BART to Diridon and Santa Clara
- Expansion of ACE and Capitol Corridor service
- Continued use of corridor by freight

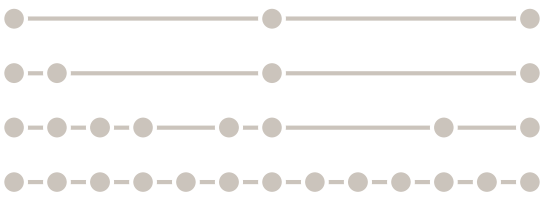
Explorations

- Dumbarton Rail Service
- Monterey County Rail Service



Planning within Constraints

Decisions and commitments that have already been made on the corridor bring three fundamental service planning questions into tension with one another:



1. Service Differentiation

How can local, regional and high speed services be blended and balanced on the corridor to best serve multiple markets?

2. Peak Service Volume

How much growth in peak train traffic volume can the corridor support and what kinds of growth may be required to meet long term demand?

3. Service Investments

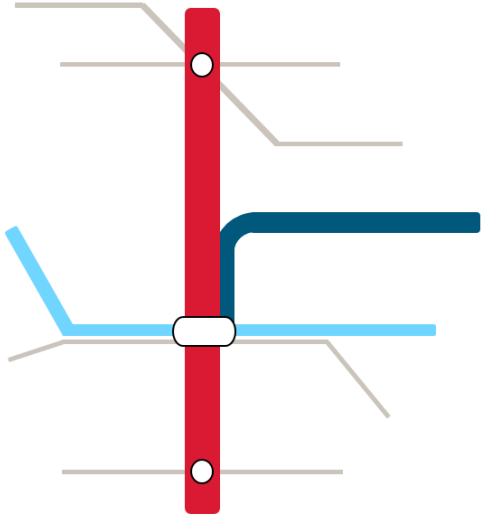
What types of investments into operations, systems and infrastructure will be required to achieve the desired types and volumes of service?

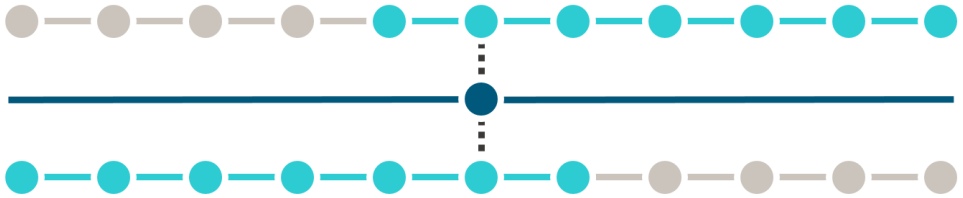
Caltrain

Planning for the Service we Want

Network Integration

Caltrain is part of a local, regional and statewide transportation network. Planning for enhanced connectivity and a seamless customer experience is a priority.





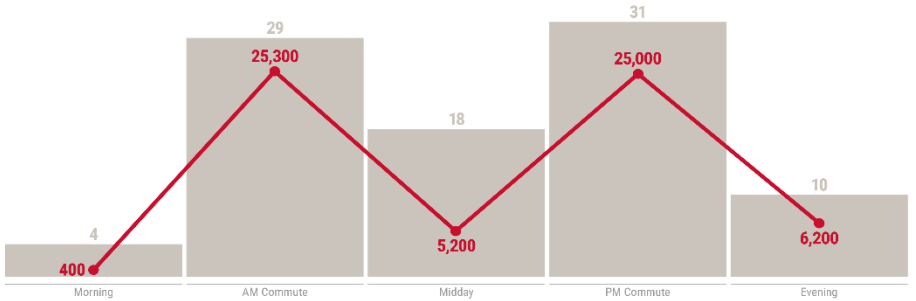
Coordinated Transfers

Timed, well-coordinated transfers increase the useability of the rail system and help provide high quality service to a larger range of travel markets.

Planning for the Service we Want

Clock-Face Scheduling

With clock-face scheduling, trains arrive and depart at consistent intervals, like every 10 minutes. This simplicity makes it easy for customers to remember train schedules, which cuts down on travel planning complexity.

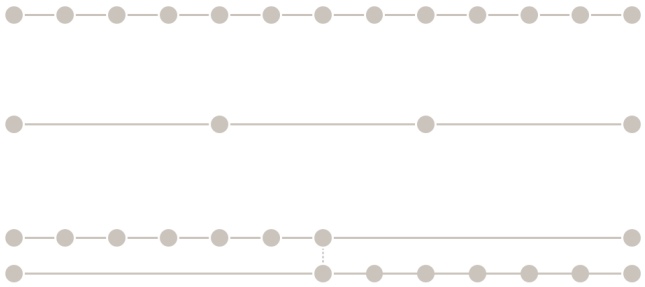


All-Day Service

Expanded all-day service makes the system more useful to a range of different customers and helps build new markets

Balancing Priorities

Caltrain must also consider how to balance competing priorities as it plans its future service

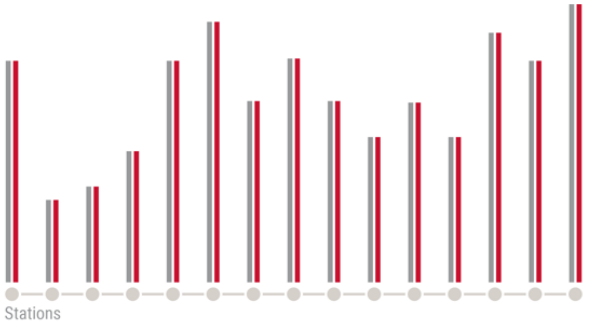


Frequent Service to Many Stations
with slower travel time due to many stops

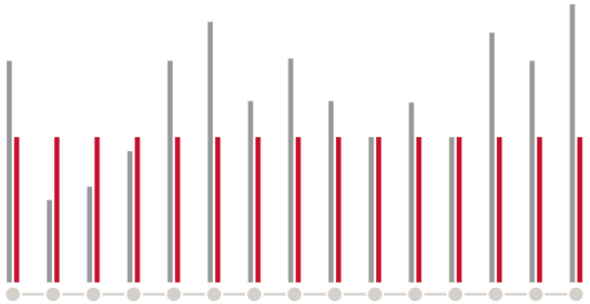
Fast Travel Time to Fewer Stations
with longer wait times at skipped stations

A Balance of Travel Time and Frequency
with transfers required

Market-Focused Service



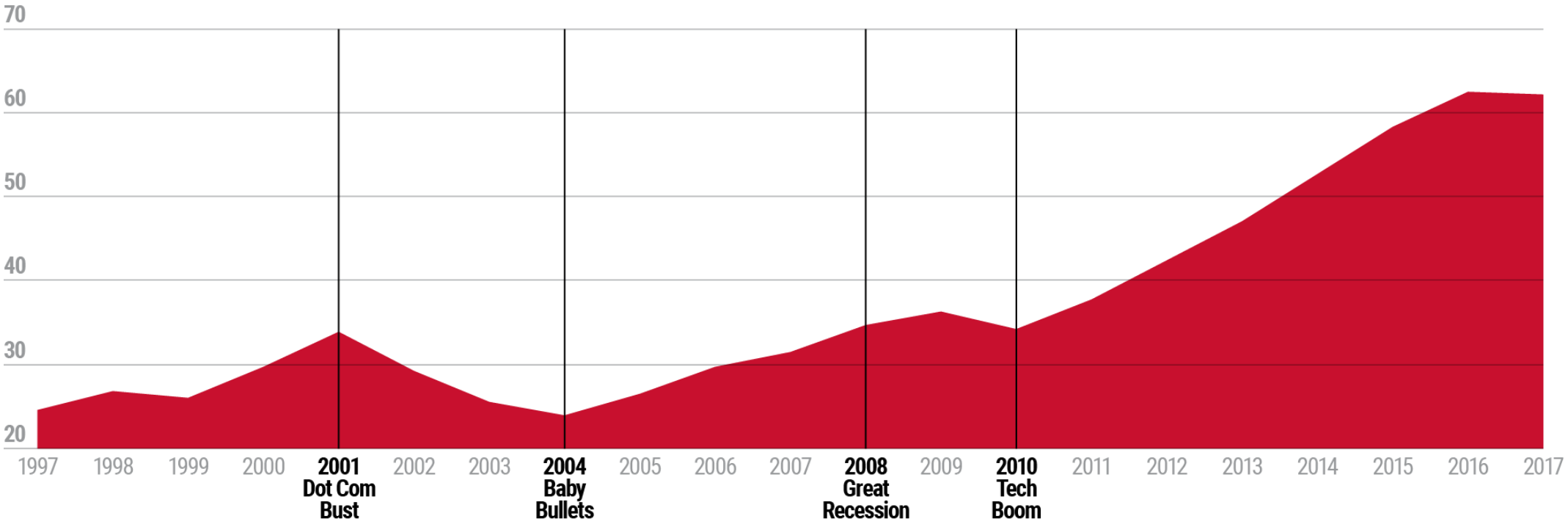
Coverage-Focused Service



Understanding the Market for Caltrain Today

Existing Ridership

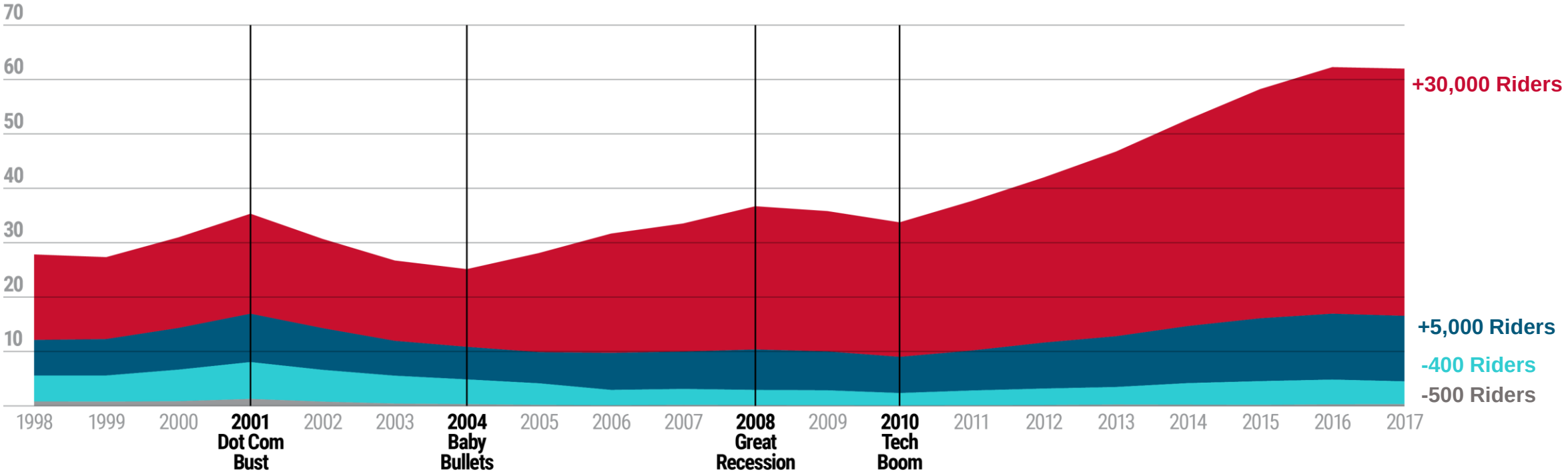
Caltrain Average Weekday Ridership (Thousands)
1997 – 2017



Today, Ridership is Highly Concentrated at a Few Stations

Change in Ridership (Thousands)

1998 – 2017



Top 8 Stations
4th & King, Millbrae, Hillsdale, Redwood City, Palo Alto, Mountain View, Sunnyvale, San Jose Diridon

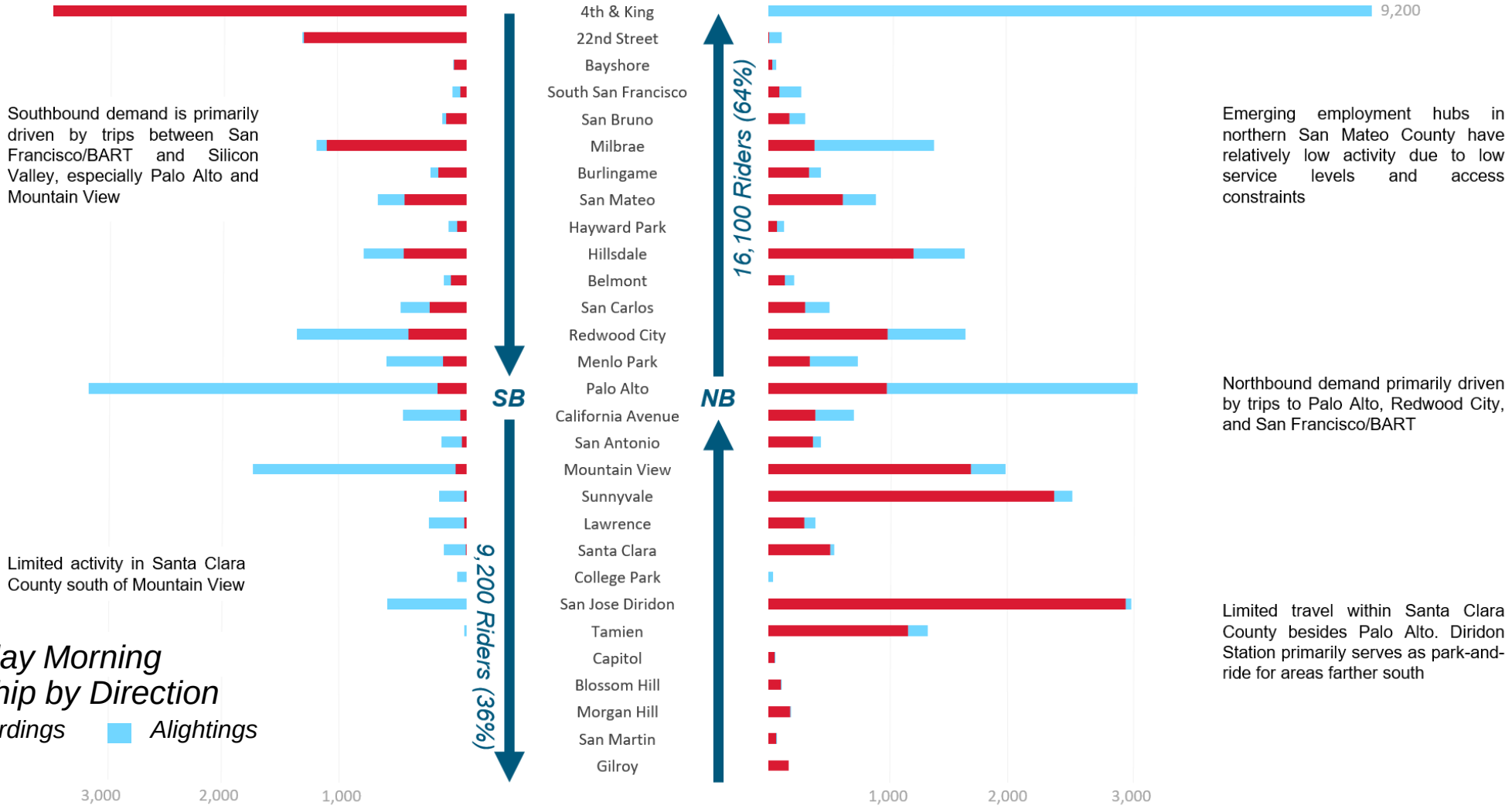
Middle 8 Stations
22nd Street, Burlingame, San Mateo, San Carlos, Menlo Park, California Ave, Santa Clara, Tamien

Bottom 8 Stations
Bayshore, South San Francisco, San Bruno, Hayward Park, Belmont, San Antonio, Lawrence, College Park

Gilroy Service
Capitol, Blossom Hill, Morgan Hill, San Martin, Gilroy

Source: 1998-2017 Passenger Counts

Today, Caltrain Serves Multiple Markets in Both Directions



Southbound demand is primarily driven by trips between San Francisco/BART and Silicon Valley, especially Palo Alto and Mountain View

Limited activity in Santa Clara County south of Mountain View

Emerging employment hubs in northern San Mateo County have relatively low activity due to low service levels and access constraints

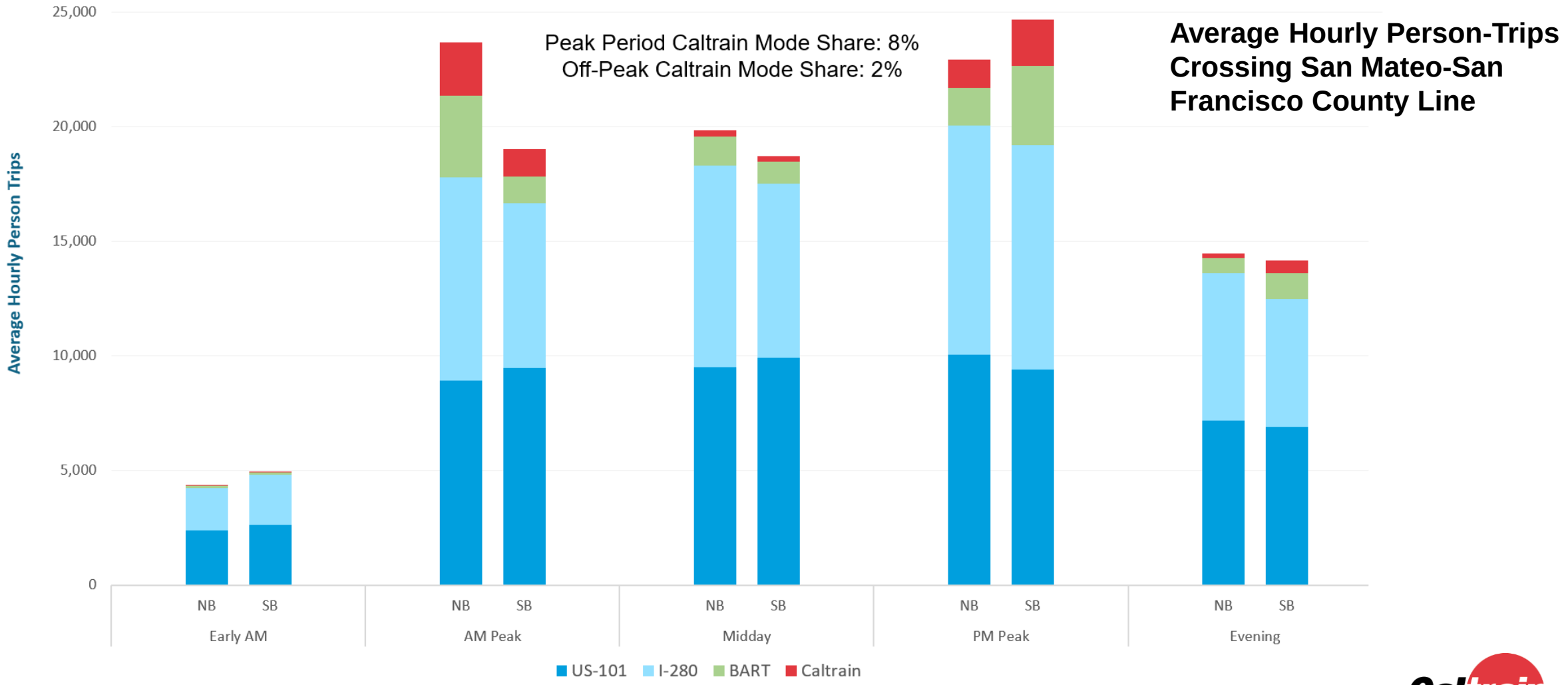
Northbound demand primarily driven by trips to Palo Alto, Redwood City, and San Francisco/BART

Limited travel within Santa Clara County besides Palo Alto. Diridon Station primarily serves as park-and-ride for areas farther south

Weekday Morning Ridership by Direction

Boardings *Alightings*

Today, Caltrain Captures a Modest Percentage of the Regional Travel Market



What is the Potential, Long-Term Demand for Caltrain Service?

Purpose

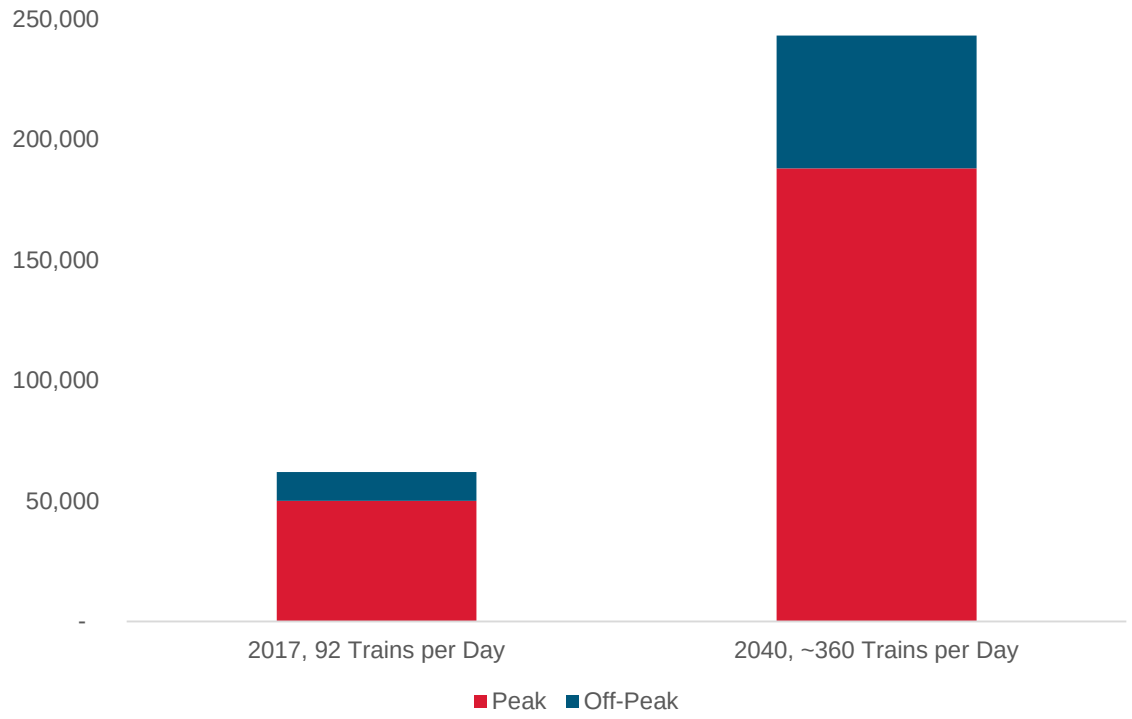
- Understand the underlying long range, order-of-magnitude demand for rail service in the Caltrain corridor.
- Establishes a rough, quantified benchmark that informs how a long range service vision can be calibrated and scaled

Methodology

- Use VTA – C/CAG Model updated with latest Plan Bay Area land use forecasts
- Develop a sensitivity test using an imaginary, high frequency, unconstrained service plan that includes;
  - Realistic train times (60-80 minutes SF-SJ)
  - High level of sustained all-day service (8 to16 trains per hour per direction. These frequencies are comparable to many sections of the BART system)

Exploring the Potential Long Term Demand for Caltrain Service

This sensitivity test suggests that providing BART-like frequencies on the Caltrain Corridor has the potential to yield BART-like ridership. Today, Caltrain serves approximately 1,300 daily passengers per mile between San Francisco and Tamien Stations, while BART serves approximately 5,200 passengers per mile along its Richmond-Daly City and Fremont-Daly City trunk lines. The sensitivity test suggests Caltrain has a long term (2040) unconstrained demand of about 4,600 passengers per mile, comparable to BART's core service in San Francisco and the inner East Bay. However, demand per mile south of Tamien is approximately 1/10th demand north of Tamien.



Description	2017, 92 Trains/Day	2040, ~360 Trains/Day
Daily	62,000	243,000
Peak	*50,000*	*188,000*
Off-Peak	*12,000*	*55,000*
Mainline (SF-SJ)	*61,500*	*231,000*
South of Tamien	*500*	*12,000*

Focus on the Business Case

Why Do We Need A Business Case?

A Business Case for The Service Vision

The project team will develop two “growth scenarios” or versions of a long range “Service Vision.” Each version of the potential service vision will have a business case that lays out the cumulative costs and benefits associated with it.

A Framework for Decision-making

The business case helps the JPB Board select a 2040 Service Vision with a fully informed understanding of what their choice means for the long-term costs and benefits of the system. Once the Board has selected a long range Service Vision the business case can then be further optimized and detailed.

Building an Integrated Business Model (IBM)

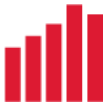
The IBM evaluates changes to the Caltrain System by integrating a broad range of data inputs and analysis. It is a tool that supports the active and informed management of Caltrain's business.

Major Inputs to the IBM Include

Railroad Network

Fleet

Current and Future Operations



Ridership and Travel Demand

Finances

Policy Assumptions

Infrastructure Investments

Wider Economic Benefits of Caltrain for Communities

Outside of the IBM, User Benefits and Regional Economic Benefits will be Calculated for the Following Major Categories:

Direct & Indirect Jobs

Economic impact model captures effects on regional employment

User Benefits

Benefits from travel time/cost savings as well as safety improvements

Societal Benefits

Societal benefits including public health and environmental benefits

Land Value

Influence of increased rail service on the value of land arounds stations

Focus on the Corridor – Community Interface

Caltrain's Corridor is Complex and Constrained

Mostly 2 Tracks
Some 4-Track Sections

Width Varies

Multiple Tenants

At-Grade Crossings

Bridges & Tunnels

Ownership Varies
Especially at Stations

The Interface Between the Corridor and the Community is Rooted in Physical Reality…

At Grade

Crossings

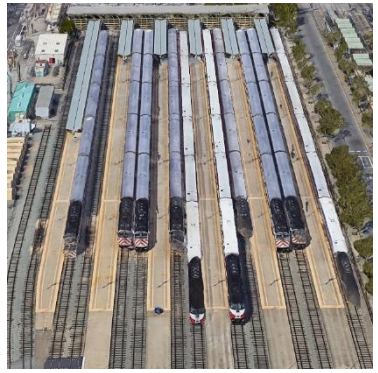
Bridges & Berms

Tunnels

Stations

Connections

Support Facilities



Construction

…and Creates Both Opportunities and Challenges

Local/Regional Mobility

Place-Making

Noise/Vibration

Physical Structures

Land Use Opportunities

Economic Development

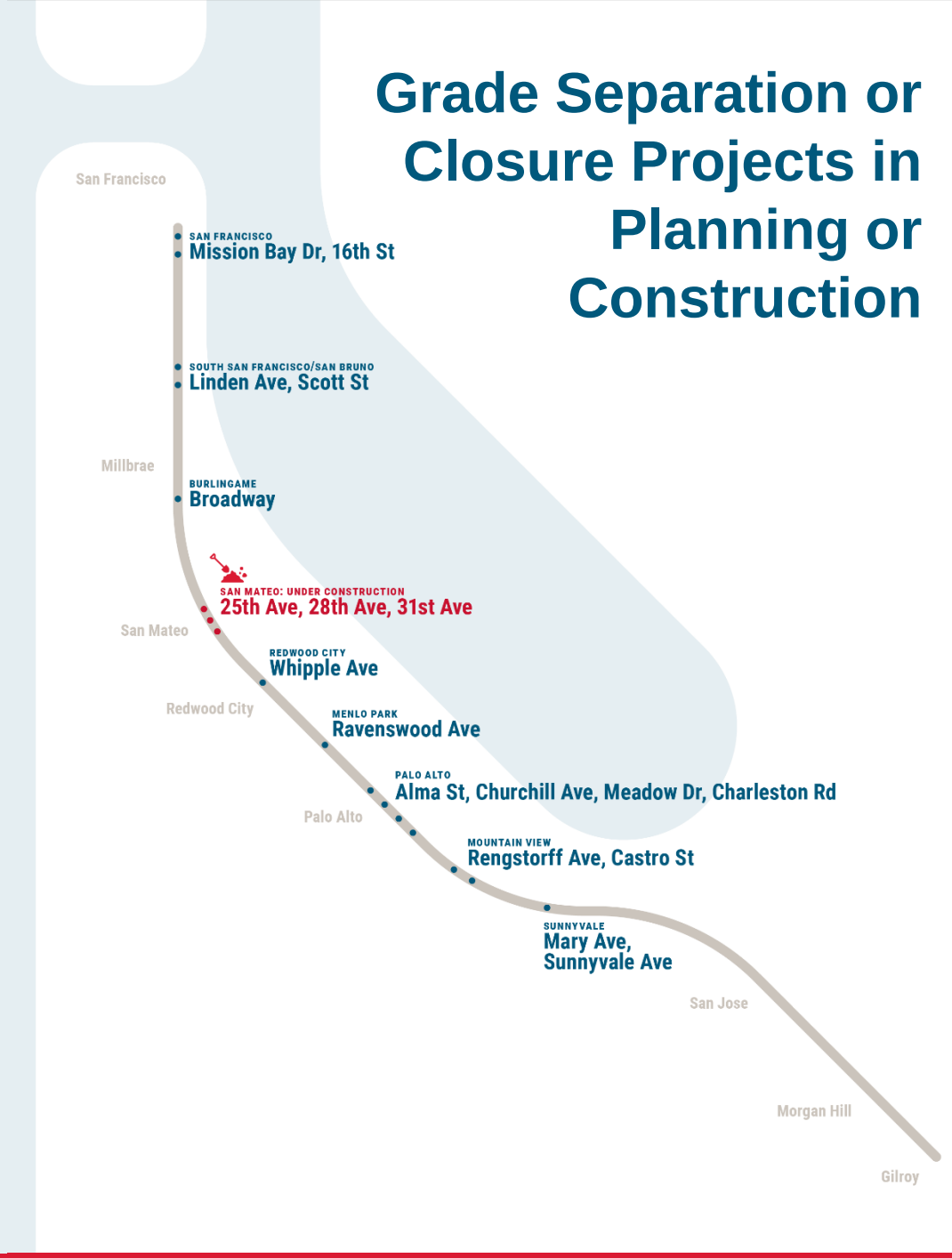
Visual Impact

Traffic/Safety

Caltrain

At Grade Crossings are a Particularly Pressing and Difficult Issue within the Corridor – Community Interface

Grade Separation or Closure Projects in Planning or Construction



What will the Community Interface Include?

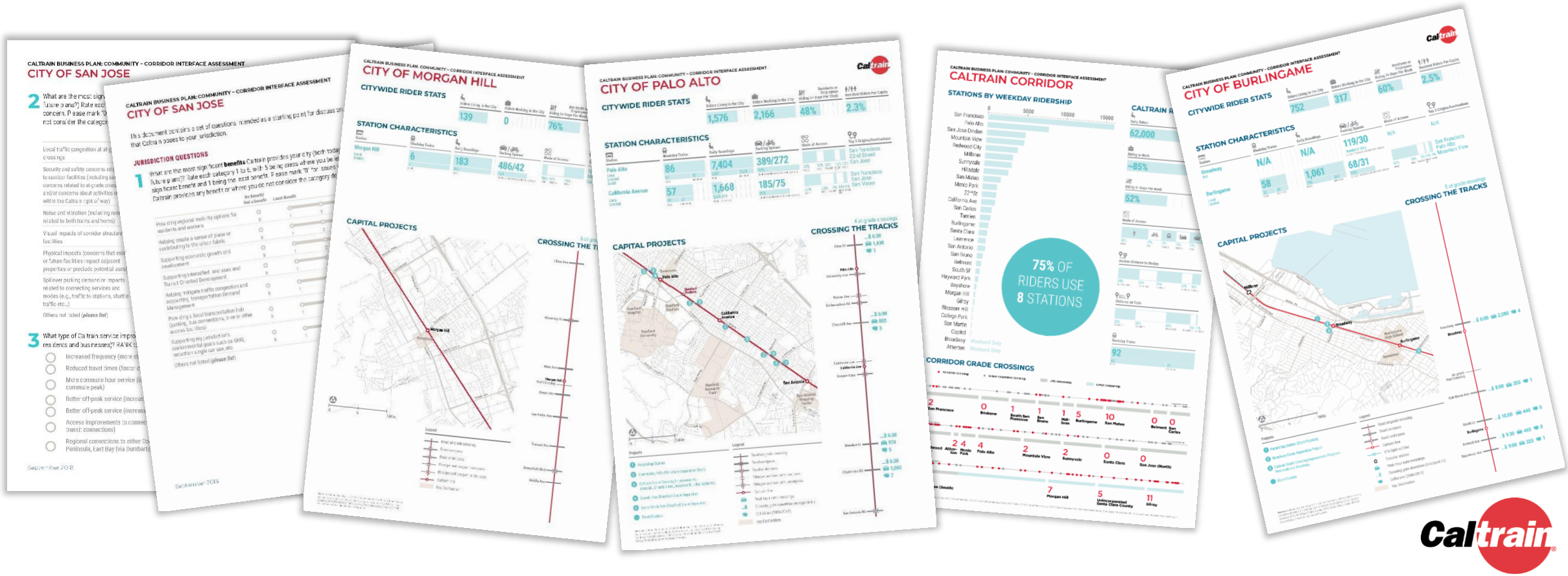
Analysis

- Document the interface between the railroad and its surroundings
- Understand how the interface could change as the railroad and its surrounding communities grow
- Describe how the corridor-community interface is “managed” today
  - Decision-making
  - Delivery of projects
  - Funding
- Compare with approaches used by national and international peer rail corridors

Outcomes

- Work with the communities to identify opportunities for how the corridor, not just individual projects, could be better managed to achieve both community and railroad goals. This includes considering both the appetite and need for a corridor-wide approach to address at-grade crossings.

Direct Engagement with Local Jurisdictions is Central to this Effort



Focus on Organization

Organizational Assessment

How will the Caltrain Organization Support the Service Vision?

Key Concepts

Service Delivery

- How Caltrain operates and manages service (both on and off the corridor)
- Includes activities like train operations, maintenance, capital project delivery, joint development, planning, and budgeting

Governance

- The manner in which Caltrain is overseen by the Board
- Focus on the agency's decision making process and the Board's oversight of the Caltrain organization

Organizational Assessment

How will the Caltrain Organization Support the Service Vision?

Analysis

- Initial organizational assessment and interviews with stakeholders
- Organizational “mapping” and analysis of current Caltrain structure
- Analysis of national and international peer railroads

Outcomes

- Understand the range of potential organizational structures for both service delivery and governance and evaluate at a high level
- Work with JPB and JPA members to determine strategy and next steps
- Identify near term priorities related to Business Plan implementation

Next Steps

Business Plan Overview

A Vision for Growth

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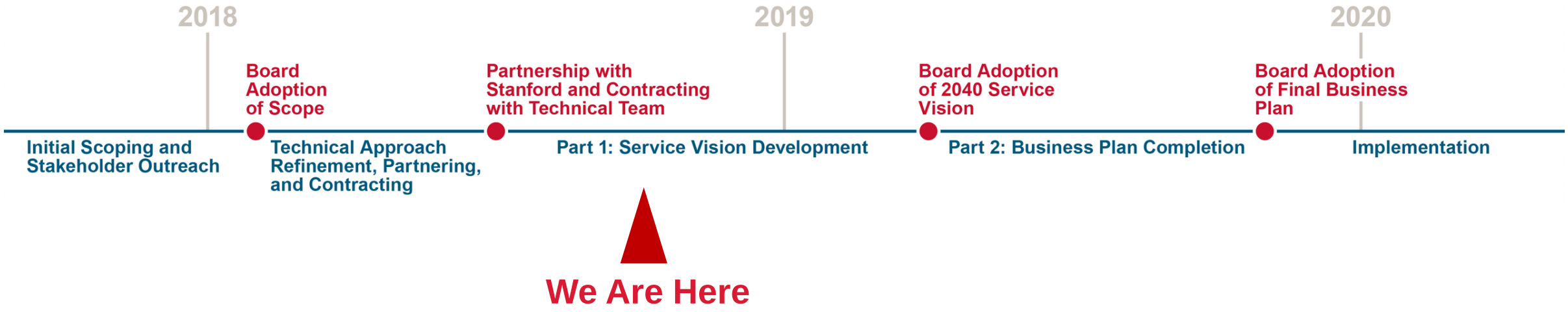
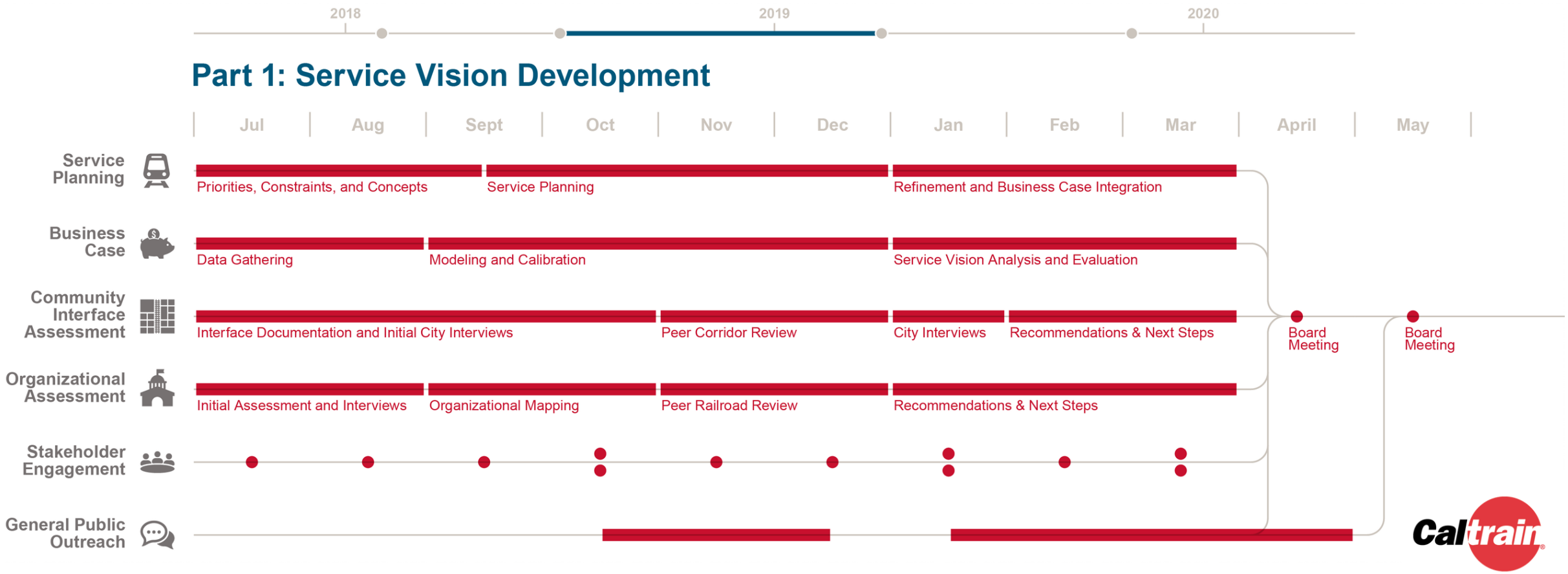
Next Steps

Project Schedule - Overview



Project Schedule - Detail



Communication is a Key Success Factor

Stakeholder Meeting Schedule

Monthly: Board

- JPB Ad Hoc Committee
- Peninsula Corridor Joint Powers Board (JPB) (monthly memos, quarterly presentations)

Monthly: Stakeholder

- Project Partner Committee (PPC)
- Local Policymaker Group (LPMG)
- City/County Staff Coordinating Group (CSCG)

Quarterly: Stakeholder

- Partner General Managers (PGM)
- Citizen Advisory Committee (CAC)
- Stakeholder Advisory Group (SAG)
- State and Federal Elected Officials (SFO)
- Caltrain Commuter Coalition (C3)

FOR MORE INFORMATION

WWW.CALTRAIN.COM