

Integrating High Speed Rail, Regional Rail, and Transit Services in California

CHSRA TLU Committee Briefing

October 19, 2017



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California Rail Services: Both Regional and High Speed



Overview: Rail Plan Scope

- Establishes strategic vision for statewide rail network
- **PRIIA** (Passenger Rail Investment and Improvement Act)
 - Short and long-term Rail Investment Plan
 - Analysis of “Program Effects”
- **AB 528**: state-specific requirements
 - 10-year intercity rail capital plan
 - Passenger rail network integration



Mission Statement

The mission of the 2018 State Rail Plan is to provide a path to achieve a safe, sustainable, integrated, and efficient California rail network that successfully moves people and goods while enhancing the State's economy and livability.

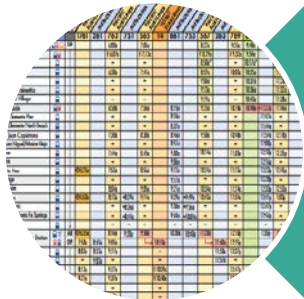


Attributes of an Integrated Network



Network

- Integrated multimodal transportation network.
- All services are connected (Local->HSR).
- Common transfer point locations.



Schedule

- Network-wide coordination through pulsed schedules.
- Designed connectivity at transfer points.



Fare System

- Integrated ticketing system.
- Journeys can be made on a single ticket.

Example of an Integrated Network - Wetzikon



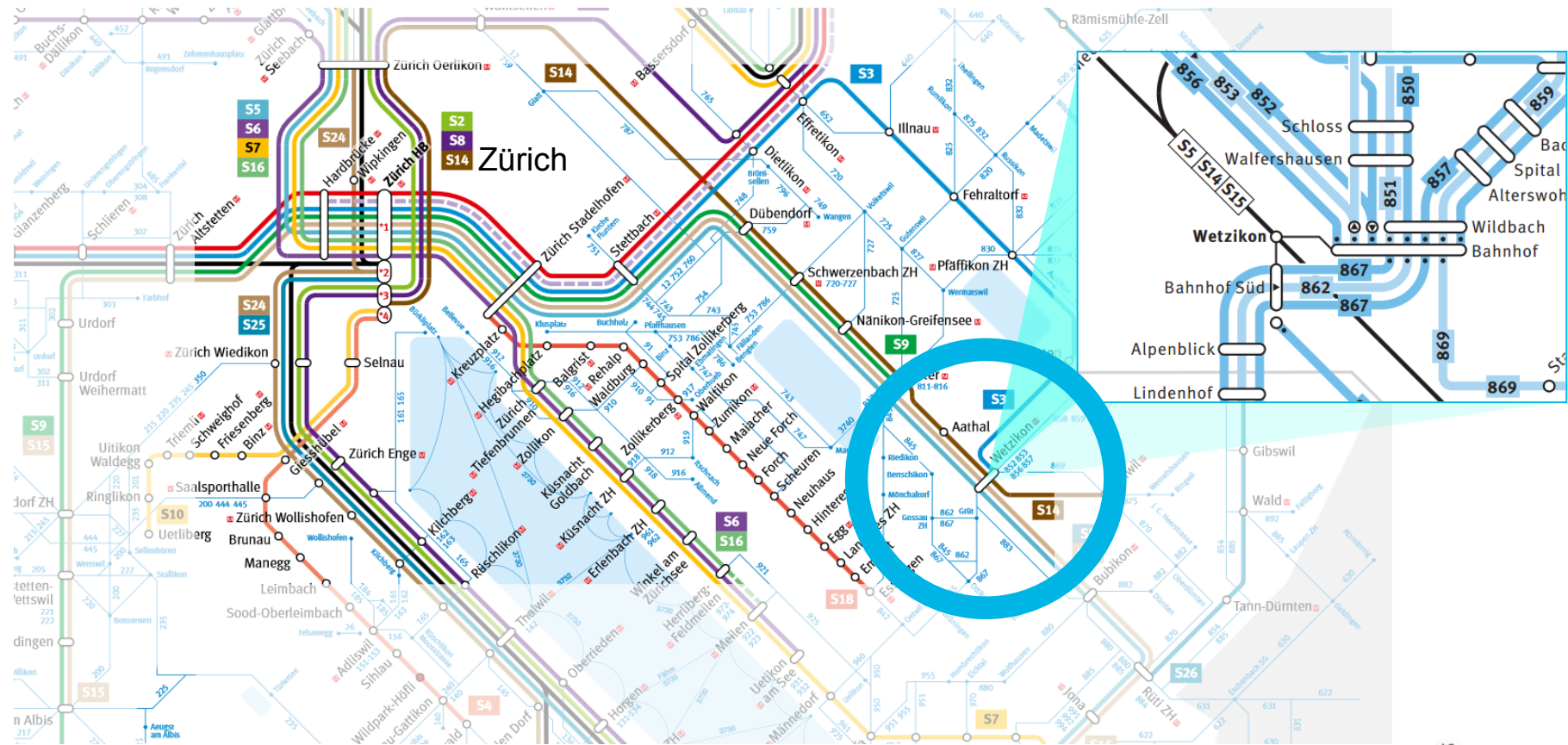
Example of an Integrated Network - Wetzikon



- Multimodal Connectivity:
 - Facilitates Bus-Rail connections
- Transfers occur half-hourly at minutes 15 and 45
- Connections between 3 regional rail lines and 12 bus lines

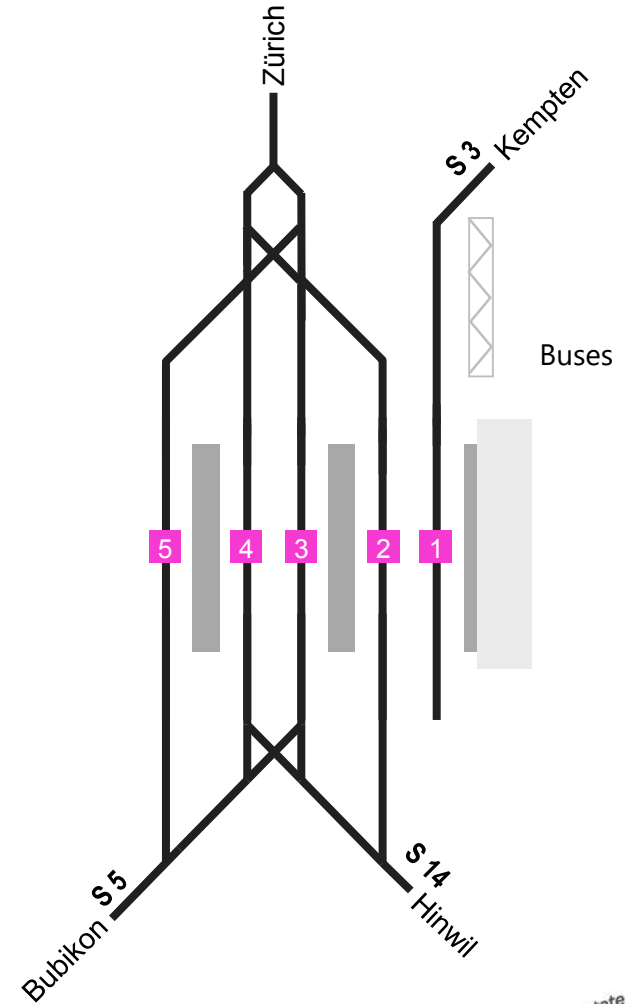
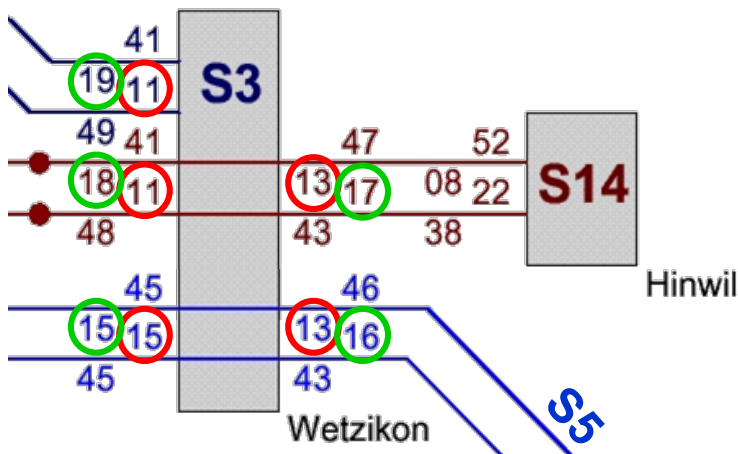
Example of an Integrated Network - Wetzikon

– Network Map



Example of an Integrated Network - Wetzikon

1. Buses arrive in advance of the trains
2. Trains arrive in the station
3. All services are in the station
4. Trains depart from the station
5. Buses depart from the station



2040 Vision for Passenger Rail

Statewide System

Tie together urban, suburban, and rural areas

Integrated Services

Easy connections between rail, express bus and transit services

Coordinated Schedules

Reduce wait times and allow direct transfers

Frequent Service

Make rail a timely option, connecting communities every 30-60 minutes

Customer Focus

One-stop ticketing, scheduling, and passenger information



Rail Plan Vision: Outcomes



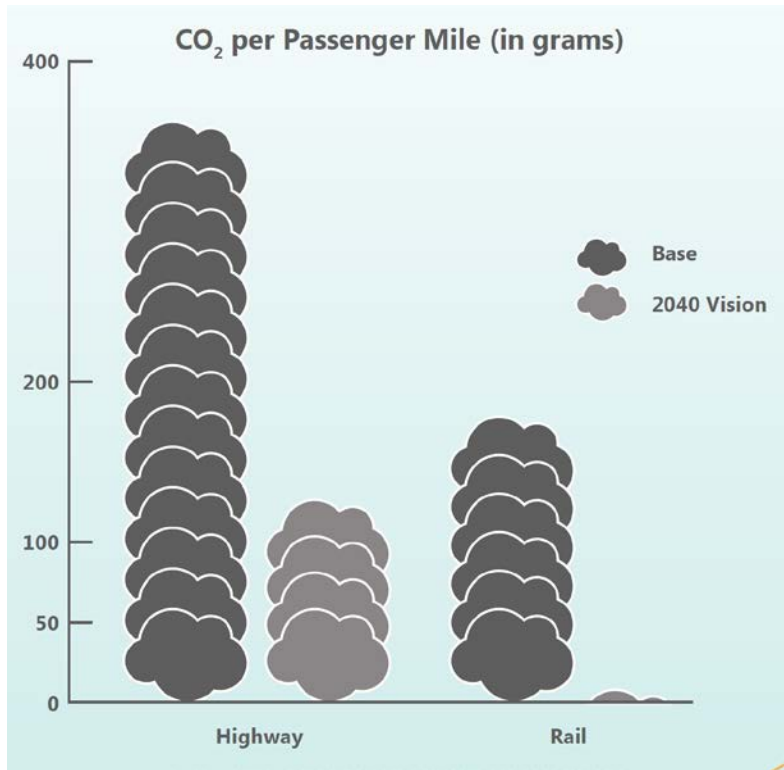
Reduce greenhouse gas emissions




Mitigate roadway congestion




Reduce vehicle emissions







Current Ridership
110,000 Daily Trips




Business as Usual (2040)
161,000 Daily Trips




2040 Vision
1,313,000 Daily Trips



Offer a convenient and reliable alternative to private vehicle travel




Increase electric and zero emission trains




Provide alternative to truck transport of containerized cargo

Rail Mode Share


Current: 0.34%



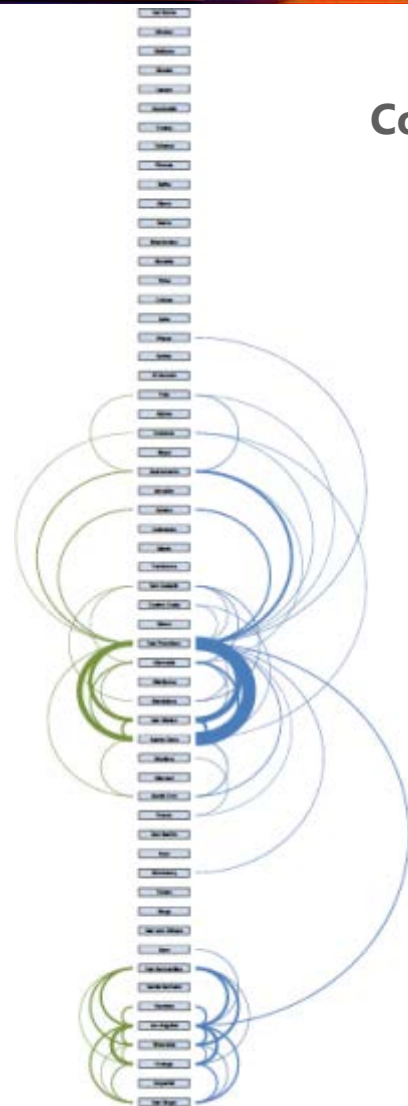
2040 No Build: 0.52%



2040 Vision: 6.8%



Rail Plan Performance: Baseline 2040 Ridership



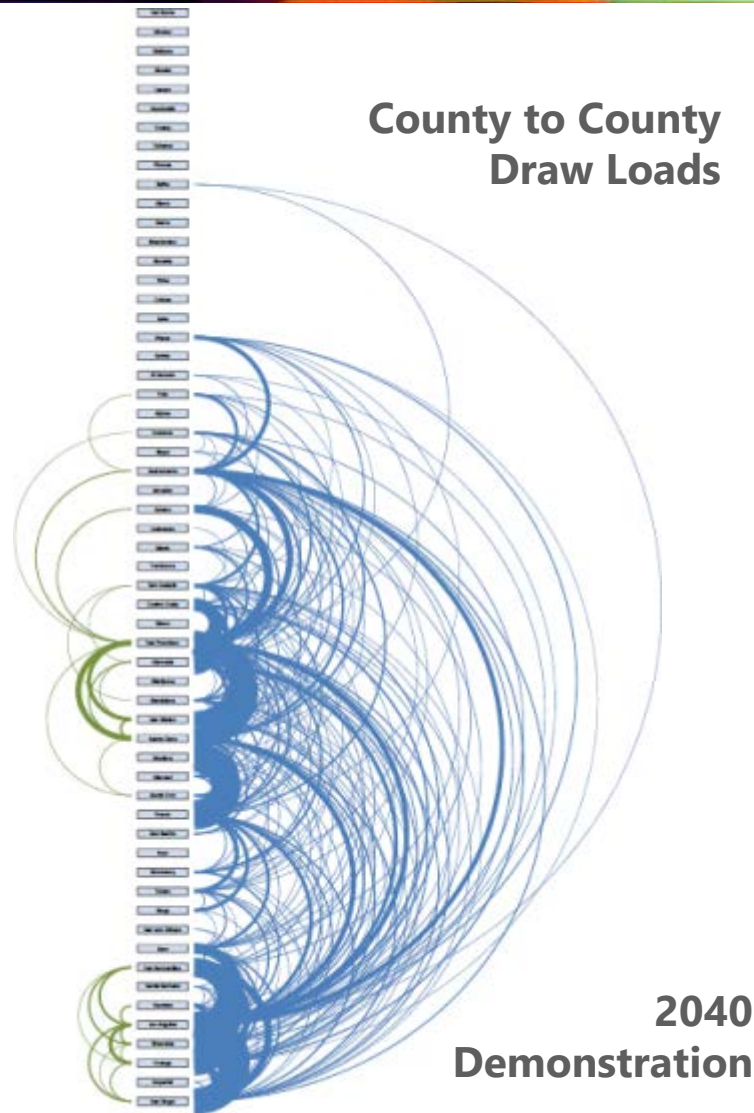
County to County
Draw Loads

- Results show moderate increase in rail ridership demand due to **population growth**
- However, market potential for networked services is **unrealized**

Base Year

2040
Baseline

Rail Plan Performance: Integrated Network 2040 Scenario



- Result of integration and HSR shows **huge increase** in rail ridership demand
- Satisfies a **large market** potential for **networked services**

Rail Plan Vision: Freight System Opportunities

Trade Corridor
Improvements

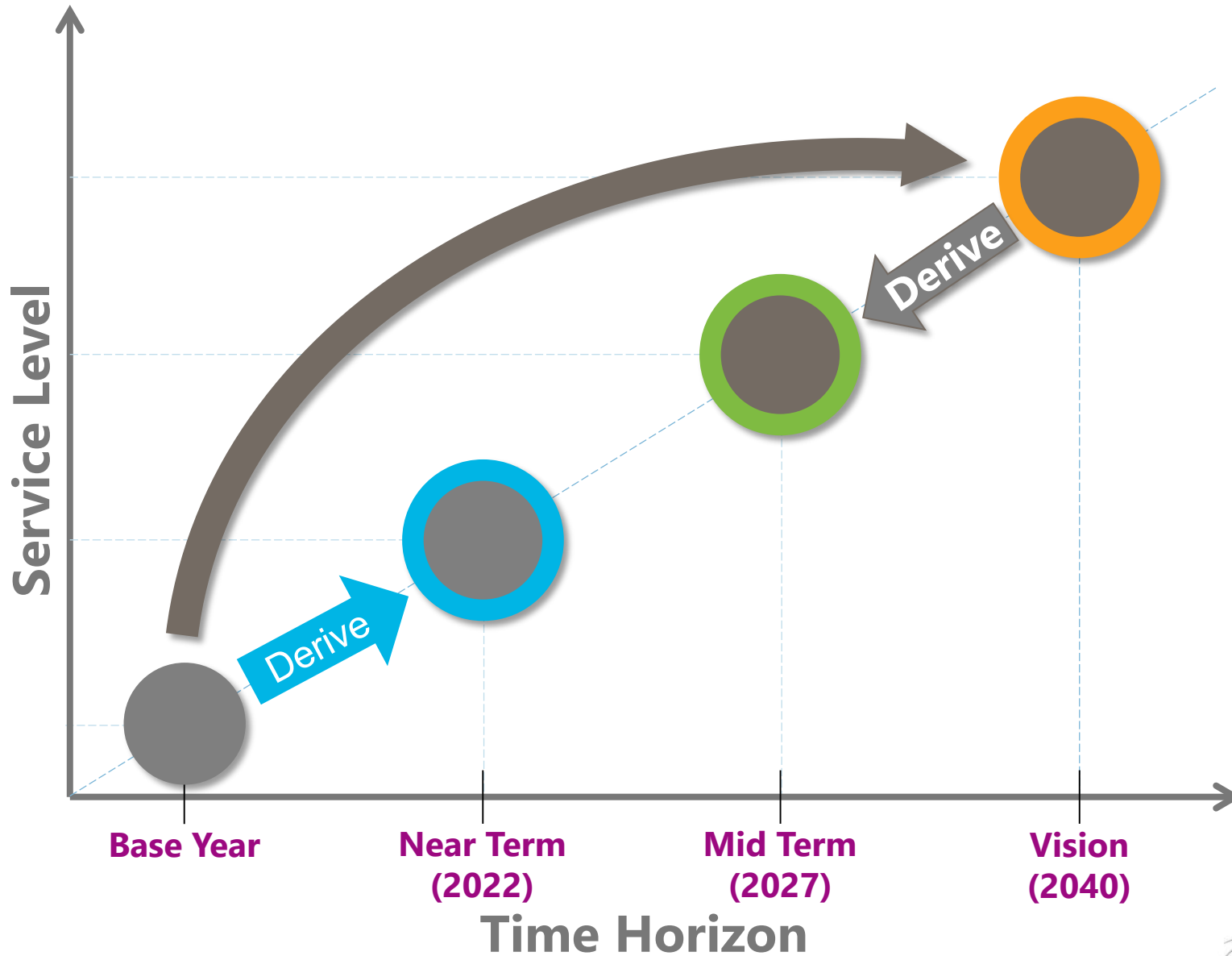
Economic
Development
and Short Lines

Grade Crossing
Improvements

Terminal and
Yard Capacity

Short Haul
Services

Investment Strategy: Phasing of the Vision Plan



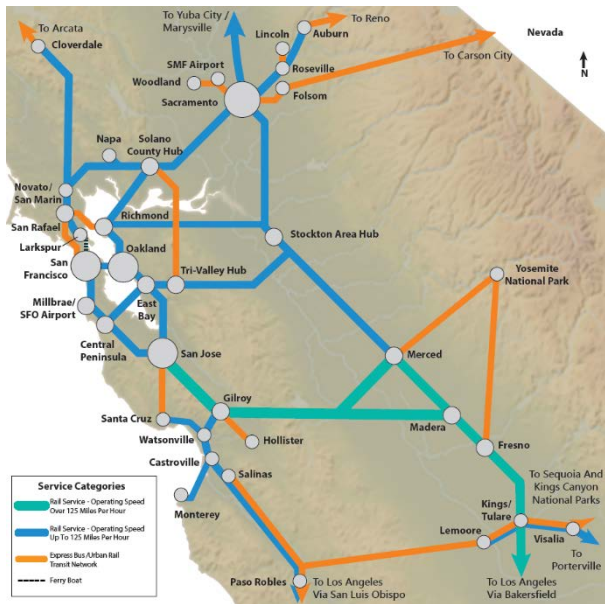
2040 Vision System Map (Draft)



Key Features:

- Integrated Statewide Network
- Integrated HSR, Blended Rail, Express, and Local Services with Urban Mass Transit and Express Bus
- Multimodal connection points at key hubs with regular pulsed service
- Auto and air competitive service throughout the State

Capital Plan Phasing (Draft Results)



2022 (or earlier)

- Planned and committed projects with funding identified and available
- Capacity expansions through grade separations, double tracking, etc.
- Vision Planning
- Integrated ticketing investments

2027 (or earlier)

- Initial HSR Service
- Line extensions
- Full utilization of existing and programmed slots
- Connecting regional networks to HSR
- Implementation planning
- Full development of integrated ticketing
- Key hub investments
- Palmdale to Las Vegas Corridor

2040 (or earlier)

- Expanded HSR Service
- New Transbay Tube and service implications of through running rail service in SF
- Development of regional networks in North Bay, Central Coast and Central Valley
- Full Blended Rail Service in the Central Valley
- Completion of hub investments and additional electrification

Investment Strategy: Freight Rail Investment

2022 Short Term Plan:

- Existing rail bottlenecks
- Safety
- Established funding sources

2027 Mid-Term Plan:

- Expansion of freight capacity
- Investment in shared rail corridors

2040 Long-Term Vision

- Full realization of trade corridor improvements
- Shared corridor expansion
- Interregional transportation corridors



Driving Operating and Maintenance Costs Down



Changes in rolling stock



Changes in speed



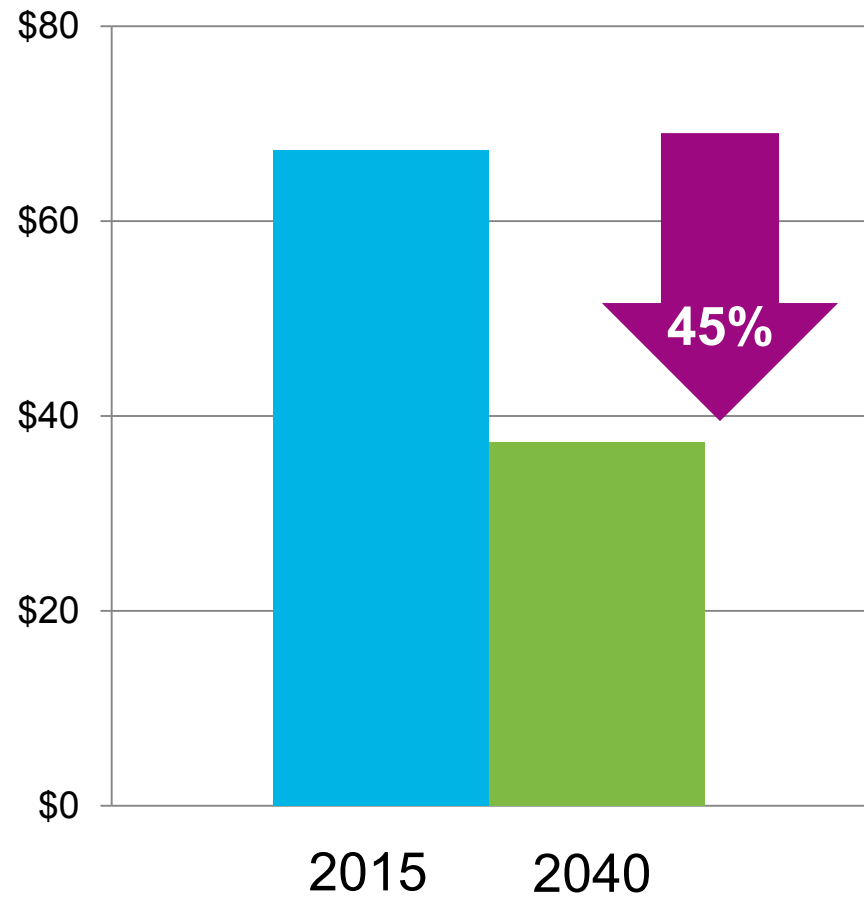
Changes in turnaround time



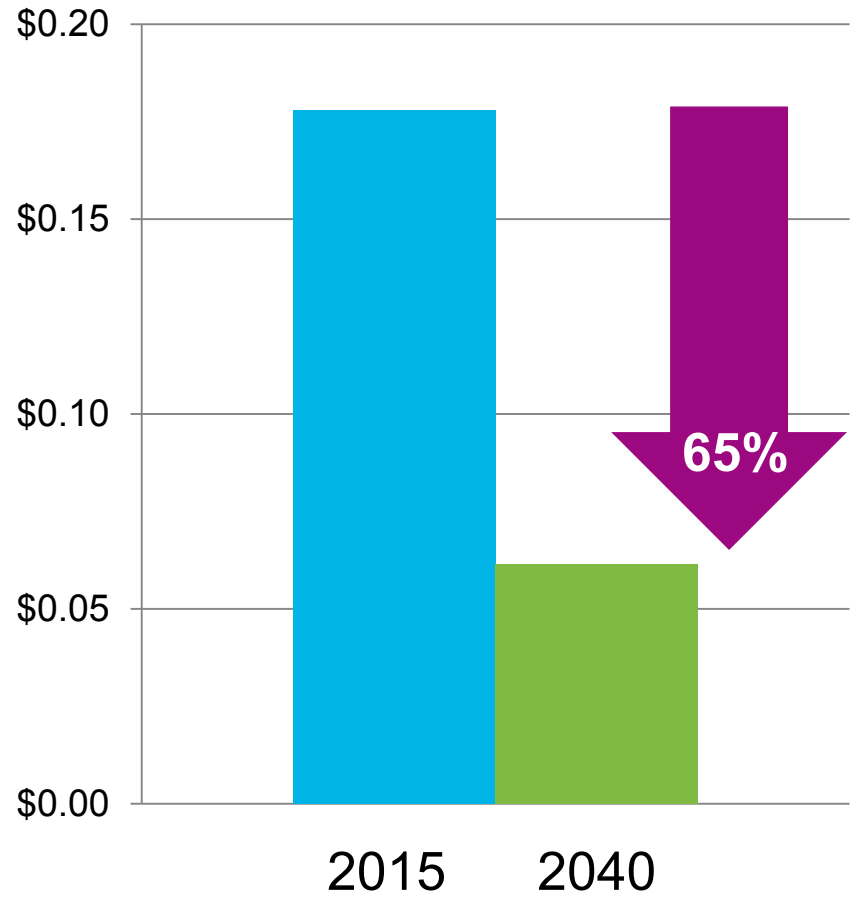
Changes in travel distances

Comparing Metrics – Existing versus 2040 (Draft Results)

Cost per Train Mile



Cost per Seat Mile



All costs are in 2015\$

Near-Term Tools Supporting Rail Plan Vision

1. State Funding Priority on Transit-Rail Integration

- Focus of cap and trade funding for transit and rail
- Guiding future interregional project selection

2. Improved Existing Services

- Improved network planning & operations
- Significantly increased capital investment

3. Improved Customer Experience

- Next generation smart cards and mobile ticketing
- More extensive ticketing and service integration

4. Long Range Planning with Vision in Mind

- Not-to-preclude framework for planning and investment
- Regional strategic planning focused on future service goals

Historical Funding

▶ **State Public Transportation Account**

- ▶ Intercity Rail Operating, Equipment and Administration (from 2.375% diesel sales and use tax)
- ▶ State Transit Assistance (STA) (4.125% diesel sales and use tax)

▶ **Local Transportation Fund for Transit** (0.25% general sales tax)

▶ **State Transportation Improvement Program**

- ▶ Interregional (rail minimum 15% of state 25% share)
- ▶ Regional (75%, sometimes partnered with interregional)

▶ **Transit and Intercity Rail Capital Program**

- ▶ 10% Cap and Trade Auction Proceeds (continuous; amount varies)
- ▶ One-Time Budget Appropriations (\$144 million in 2016)

▶ **High Speed Rail Funding** (see 2016 Business Plan for details)

▶ **Local Measure Funding** (most between 0.25% and 2% general sales tax, with a portion to transit)

▶ **Federal Grants and FTA Formula Funds**

New Funding in 2017

▶ SB 1 of 2017

- ▶ Augments STA, STIP and TIRCP, Commuter/Intercity
 - ▶ 3.5% diesel sales and use tax for transit (\$3.1B over 10 yrs.)
 - ▶ 0.25% diesel sales and use tax for commuter rail (\$220M over 10 yrs.)
 - ▶ 0.25% diesel sales and use tax for intercity rail (\$220M over 10 yrs.)
 - ▶ About \$1.1 billion in new STIP capacity over 10 years
 - ▶ \$25-175 per year Transportation Improvement Fee (per vehicle; indexed)
 - ▶ \$105 million (indexed) to Transit SGR (\$1.2B over 10 yrs.)
 - ▶ \$245 million (indexed) to TIRCP (\$2.7B over 10 yrs.)
 - ▶ \$236 million one-time funding to TIRCP from debt repayment
- ▶ Solutions for Congested Corridors Program (\$250 million/yr)
- ▶ Trade Corridor Enhancement Account (10 cents per diesel fuel gallon (CPI-indexed); about \$3 billion over first 10 years)

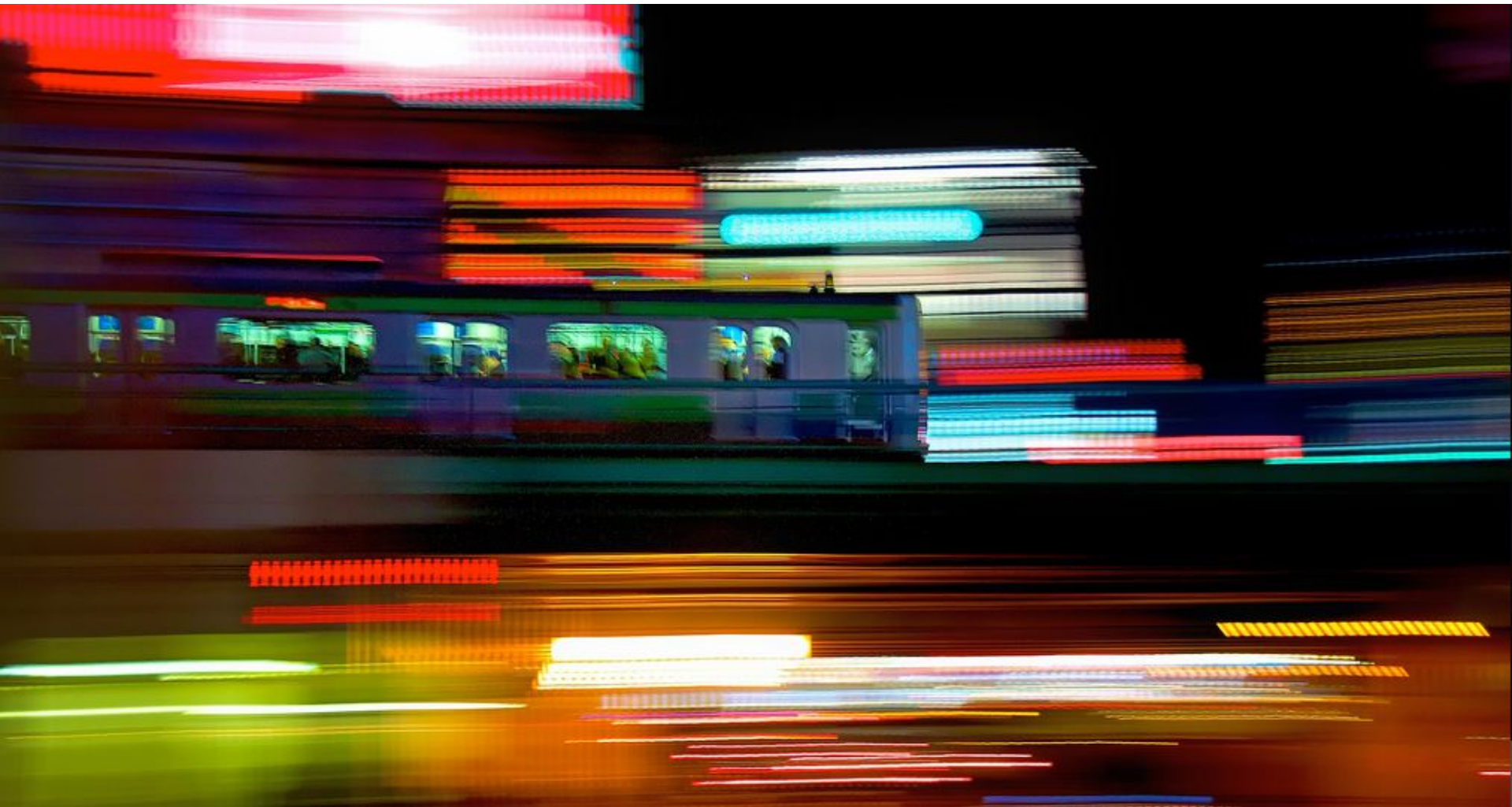
Project Schedule

Project Milestones	Timeframe
Public Comment Period Online: www.californiastaterailplan.com Public Workshops on Draft CSRP Fresno: October 30 Oakland: November 1 Sacramento: November 7 San Diego: November 13 San Bernardino: November 14 Los Angeles: November 15 Webinar: December 6 CTC Comments: December 7	October 11- December 11
Revision of Draft	Winter 2017
CalSTA Approval, FRA Review Submittal to Legislature	Winter 2017/ Spring 2018



Next Steps

- ▶ **Release Final State Rail Plan (by Spring 2018 or earlier)**
- ▶ **Program New Funding:**
 - ▶ 3-year State Rail Assistance (January 2018)
 - ▶ 5-year STIP (March 2018)
 - ▶ 5-year Transit and Intercity Rail Capital Program (April 2018)
- ▶ **Detailed Planning:**
 - ▶ Northern CA Megaregion “Deeper Dive”
 - ▶ Project Development for Statewide Rail Corridor Improvement
 - ▶ Integrated Ticketing and Trip-Planning
 - ▶ Updated Fleet Strategy and Fleet Plan



Questions?

