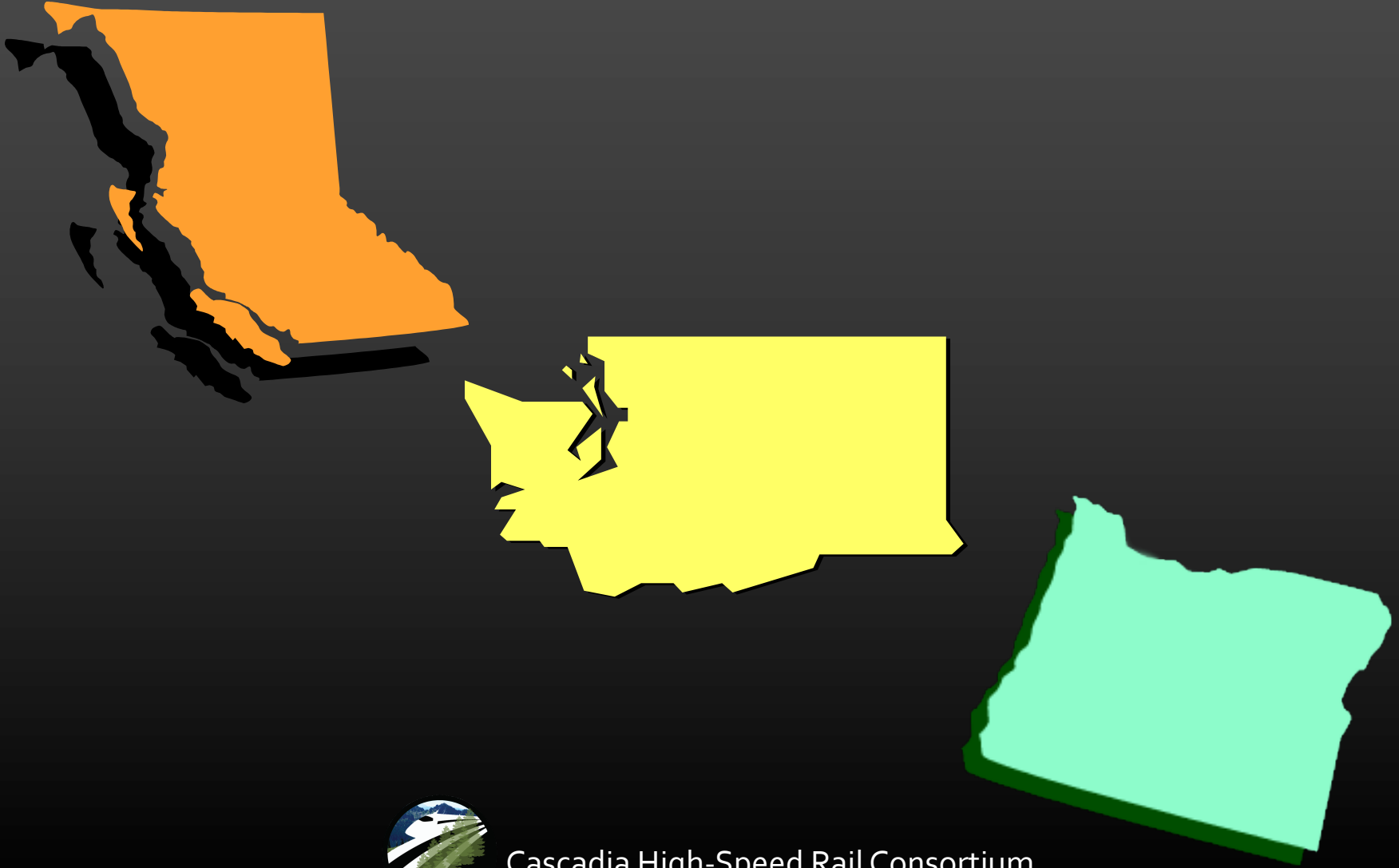




On Track for the Future: Cascadia High-Speed Trains

Aaron Brown
C.J. Smith
Jennifer Homestead
Meredith Matches
Michael Neilson

Cascadia Region



Cascadia High-Speed Rail Consortium

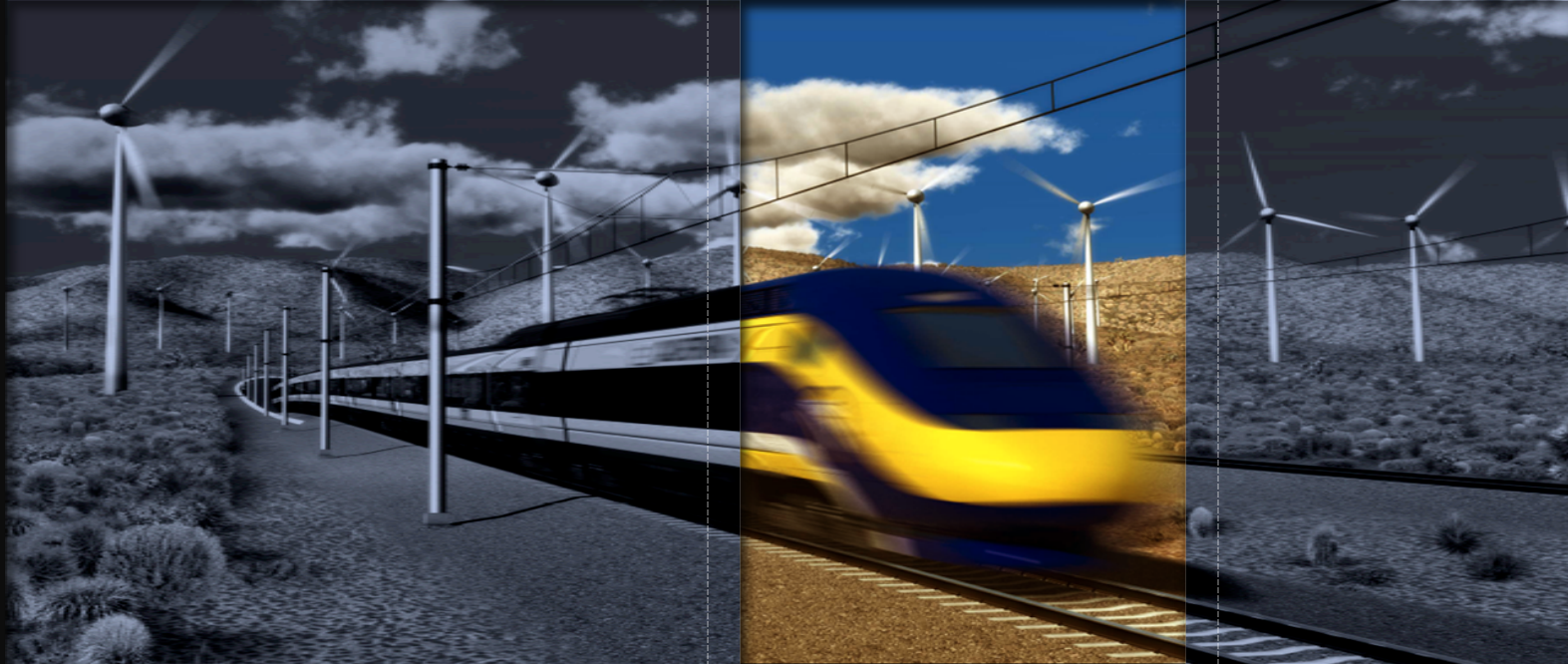


Cascadia High-Speed Rail Consortium



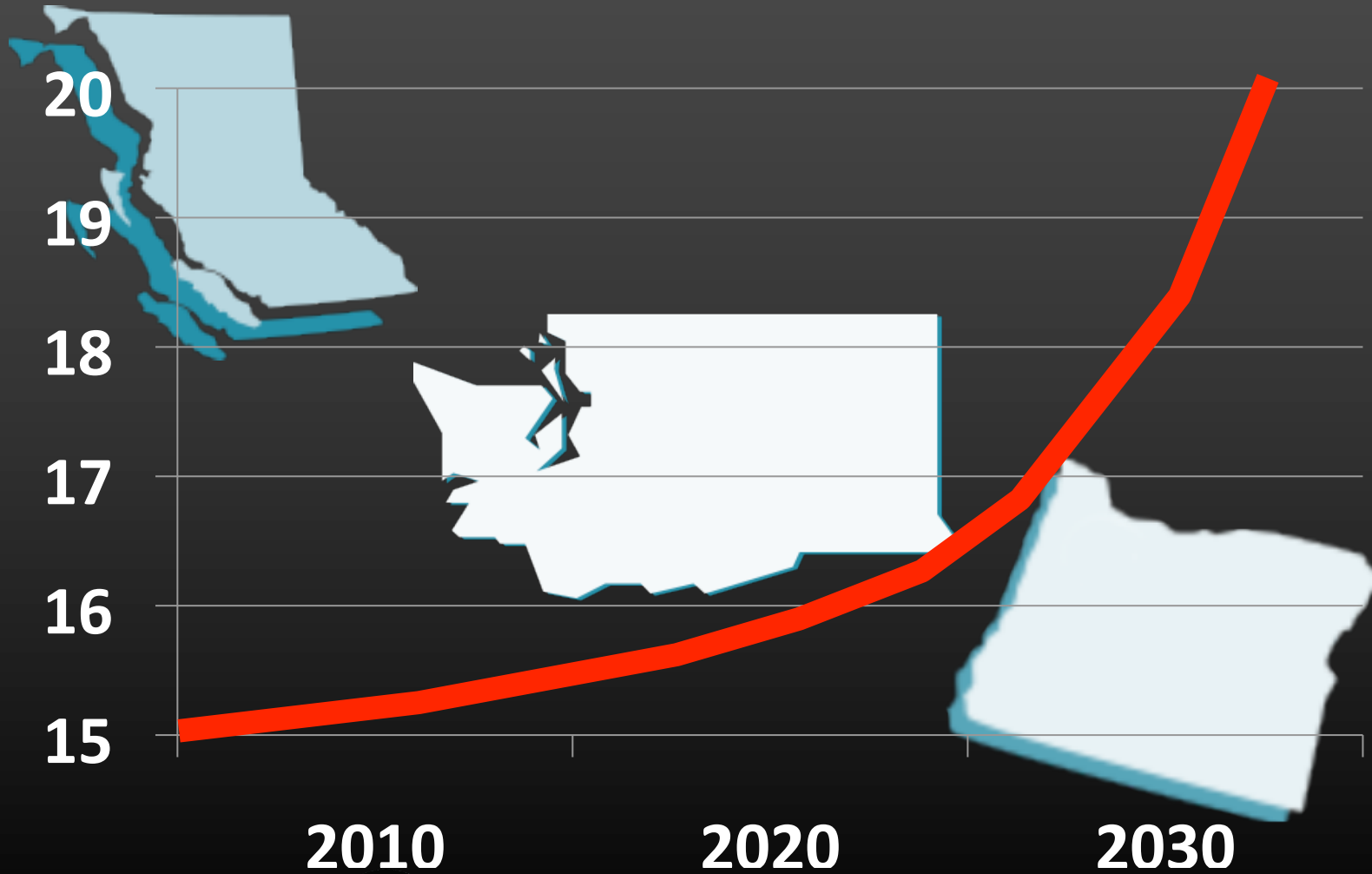
Cascadia High-Speed Rail





High-Speed Problem

Cascadia Population



Cascadia High-Speed Rail Consortium

Traffic Gridlock by 2030



Cascadia High-Speed Rail Consortium

Seattle to Portland

Transportation Method	Average Travel Times	Carbon Dioxide Emissions	Average Cost per Trip
Car	2 ½ to 3 hours	158 tons	\$30 to \$75
Plane	35 to 50 minutes	210 tons	\$150 to \$250
Conventional Train	4 hours	105 tons	\$35 to \$50
Bus	3 ½ to 5 hours	260 tons	\$20 to \$40



Customers



Business
Travelers

10%



Tourists

30%



Commuters

45%

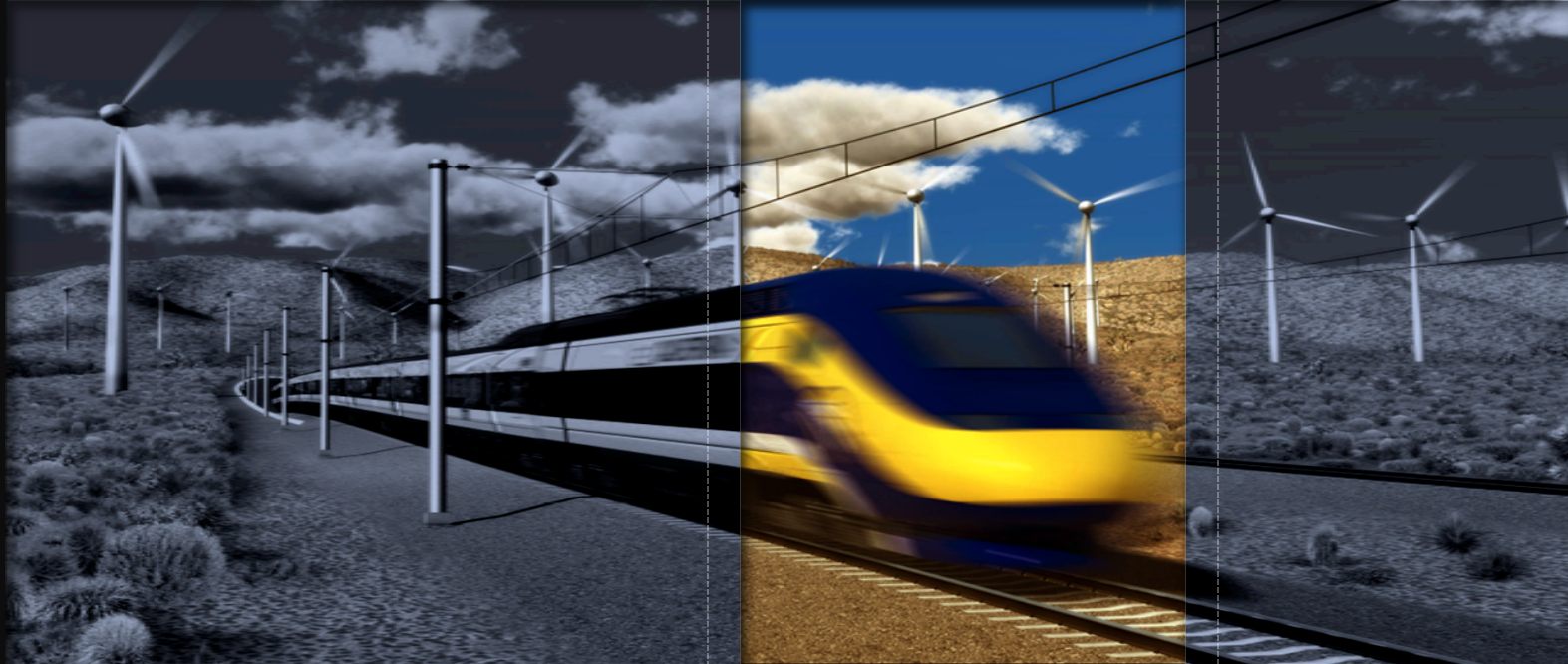


Other

15%



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High-Speed Solution



Japanese Shinkansen Trains



French TGV Trains



Taiwan High-Speed Trains



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Key Benefits of High-Speed Trains



Runs on Clean Electricity



Unaffected by Weather Delays



Centrally Located Stations



Safest Form of Transportation



Frequent Departures

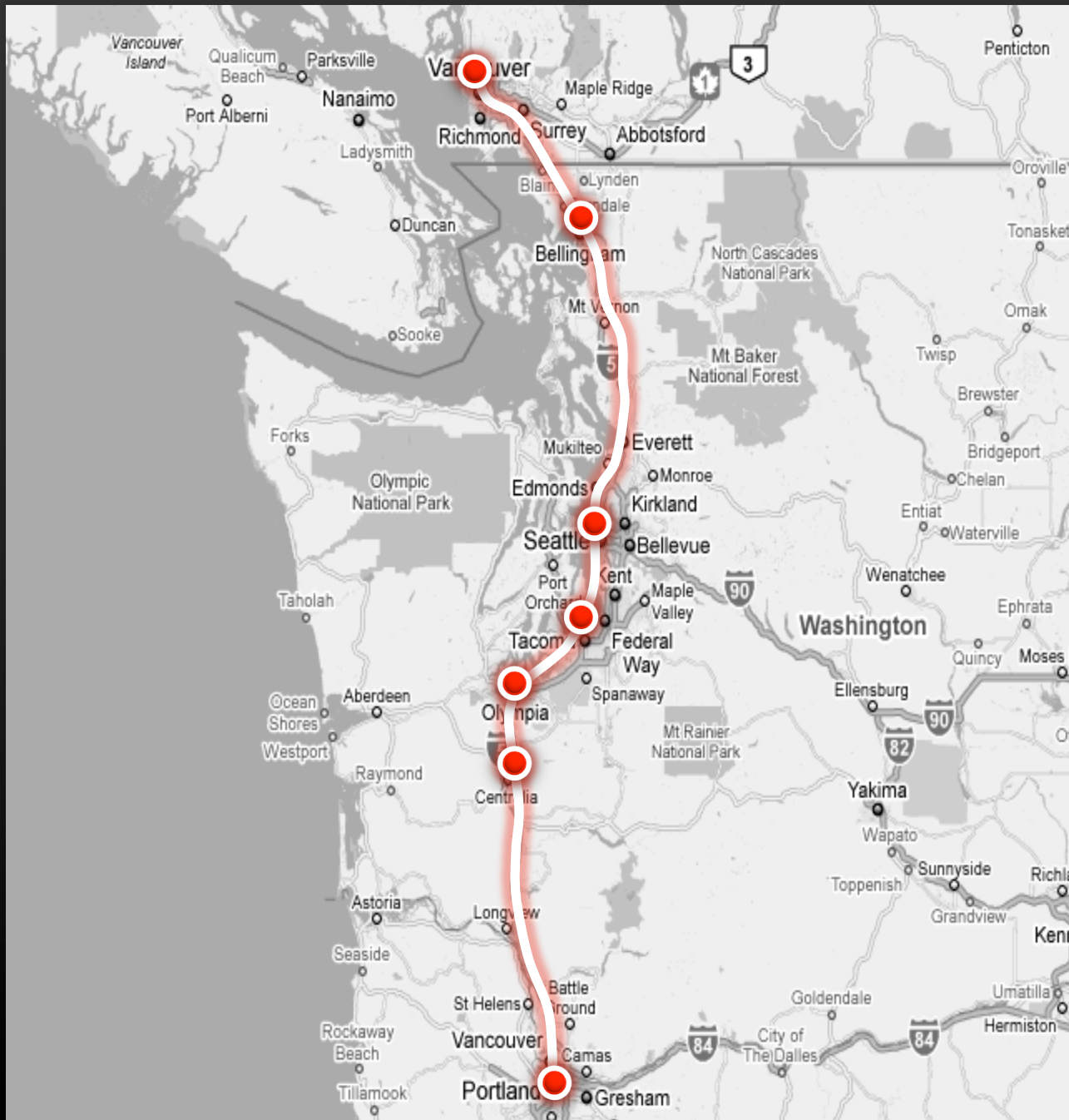


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High-Speed Trains: Superior Solution


Transportation Method	Average Travel Times	Carbon Dioxide Emissions	Average Cost per Trip
Car	2 ½ to 3 hours	158 tons	\$30 to \$75
Plane	35 to 50 minutes	210 tons	\$150 to \$250
Conventional Train	4 hours	105 tons	\$35 to \$50
Bus	3 ½ to 5 hours	260 tons	\$20 to \$40
High-Speed Rail	52 minutes	90 tons	\$50





Train Fares & Stopping Patterns

Type of train service	Number of trains per day	Northern End Cities	Intermediate Stops	Southern End Cities
Express	10	●	●	●
Semi-Express	10	●	●	●
Local	10	●	●	●



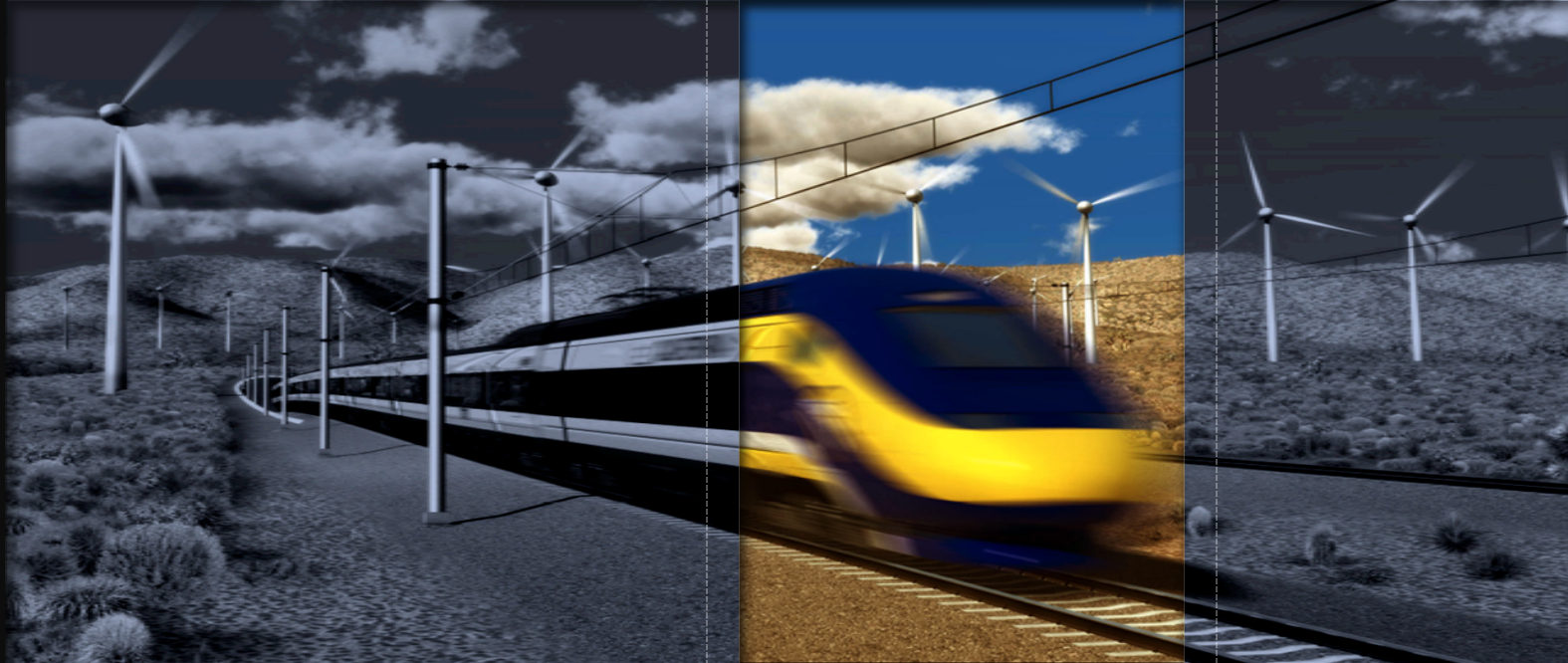
Express/Semi-Express Trip: \$50/one way

Local Trip: Fare varies according to distance travelled.

- Shortest route is Seattle to Tacoma: \$6/one way
- Longest route is Bellingham to Seattle: \$20/one way



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Promotional Plans

Strategic Goals



Awareness



Regional Image



Airplane Travelers



Auto Travelers



College Discounts



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Promotional Strategies



German Siemen Valero Trains



Travel up to 220 mph



Coach and Business Class Compartments



Café Snack Cars on Every Train



Free Wi-Fi at Stations & on Trains



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Promotional Tactics



Newspaper
Articles

College
Campuses

Local
Businesses

Travel
Agencies

Television
Ads



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Promotional Video

**COMING
SUMMER
2022**



Cascadia High-Speed Rail Consortium



Financials



Construction
Costs

Construction
Funding

Operating
Costs



Construction Costs



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Construction Costs

HST Construction Costs

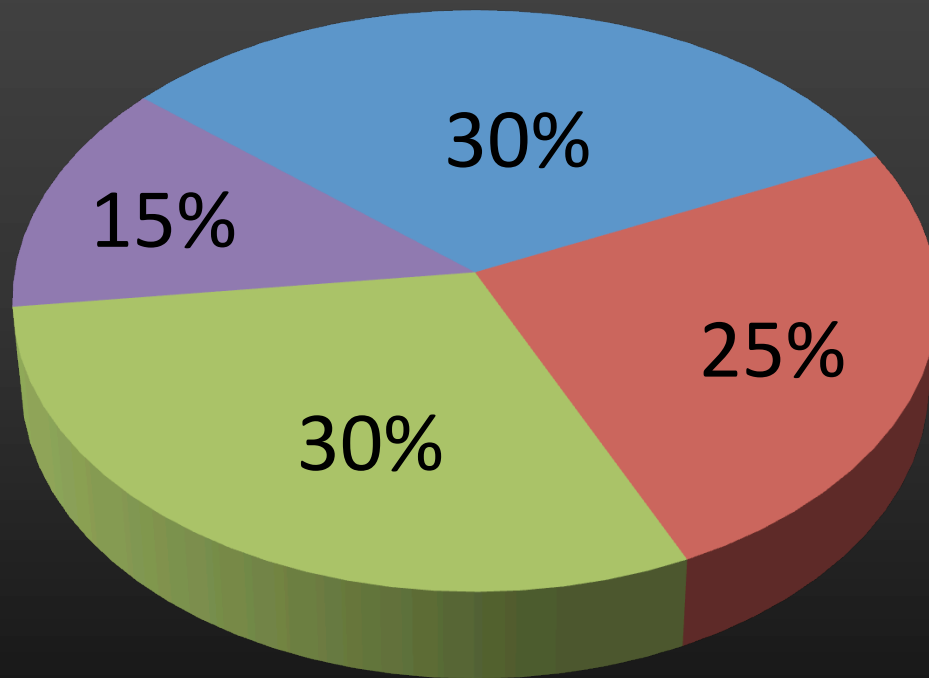
(in millions of 2009 dollars)

Land purchase and preparation	8,153
Facilities & Cement Infrastructure	5,436
Track, Station, & Train	2,373
Labor Costs	3,550
Program Implementation	2,584
Final Design	1,060
Right-of-Way	2,444
TOTAL COST	25,600



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Source of Funding



- State Bonds
- Federal Funds
- Investor Funds
- Canadian Funds



Allocation of Funding

Construction Funding		
Federal Funding	30%	6,400
State Bond Funding	25%	7,680
Canada Funding	15%	3,840
Investor Funding	30%	7,680
Total Funding		25,600



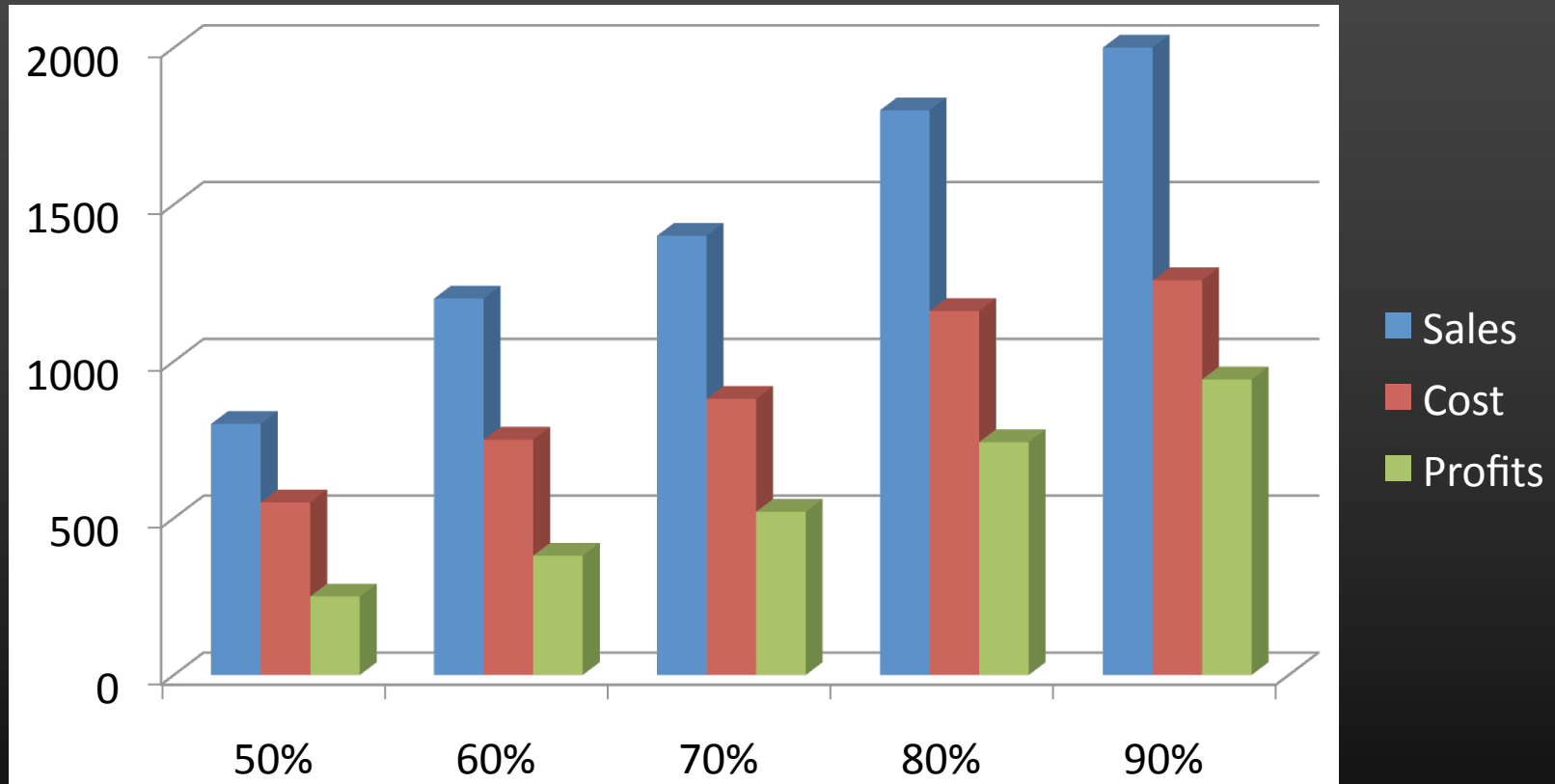
Operating Costs



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Capacity

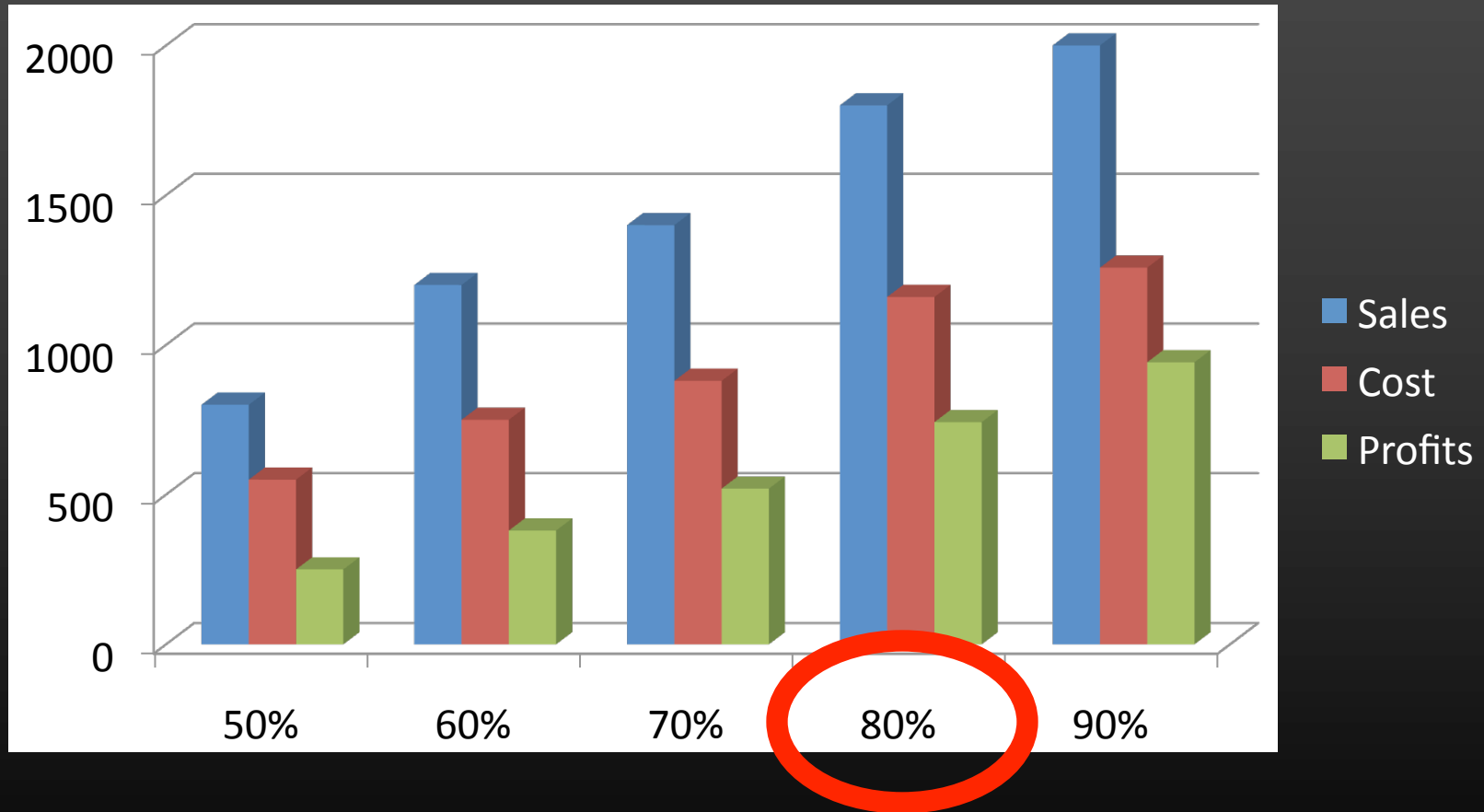
(2009 Dollars verse Percent Ridership)



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Capacity

(2009 Dollars verse Percent Ridership)



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80% Ridership

Annual Riders		
Market Pairs	Riders (millions)	\$\$\$\$\$ (millions of 2009 Dollars)
Vancouver BC to Seattle	4	260
Seattle to Portland	10.2	735
Vancouver BC to Bellingham	.9	40
Bellingham to Seattle	2.4	85
Seattle to Olympia	2.5	105
Olympia to Centralia	1.3	60
Centralia to Portland	.8	38
Olympia to Portland	2.9	112
TOTAL	25	1,400



Operating Costs at 80% Capacity

Operations and Maintenance Costs

(millions of 2009 dollars)

Infrastructure Maintenance	\$118
Rolling Stock Maintenance	\$286
Operations	\$364
Insurance	\$102
TOTAL	\$800



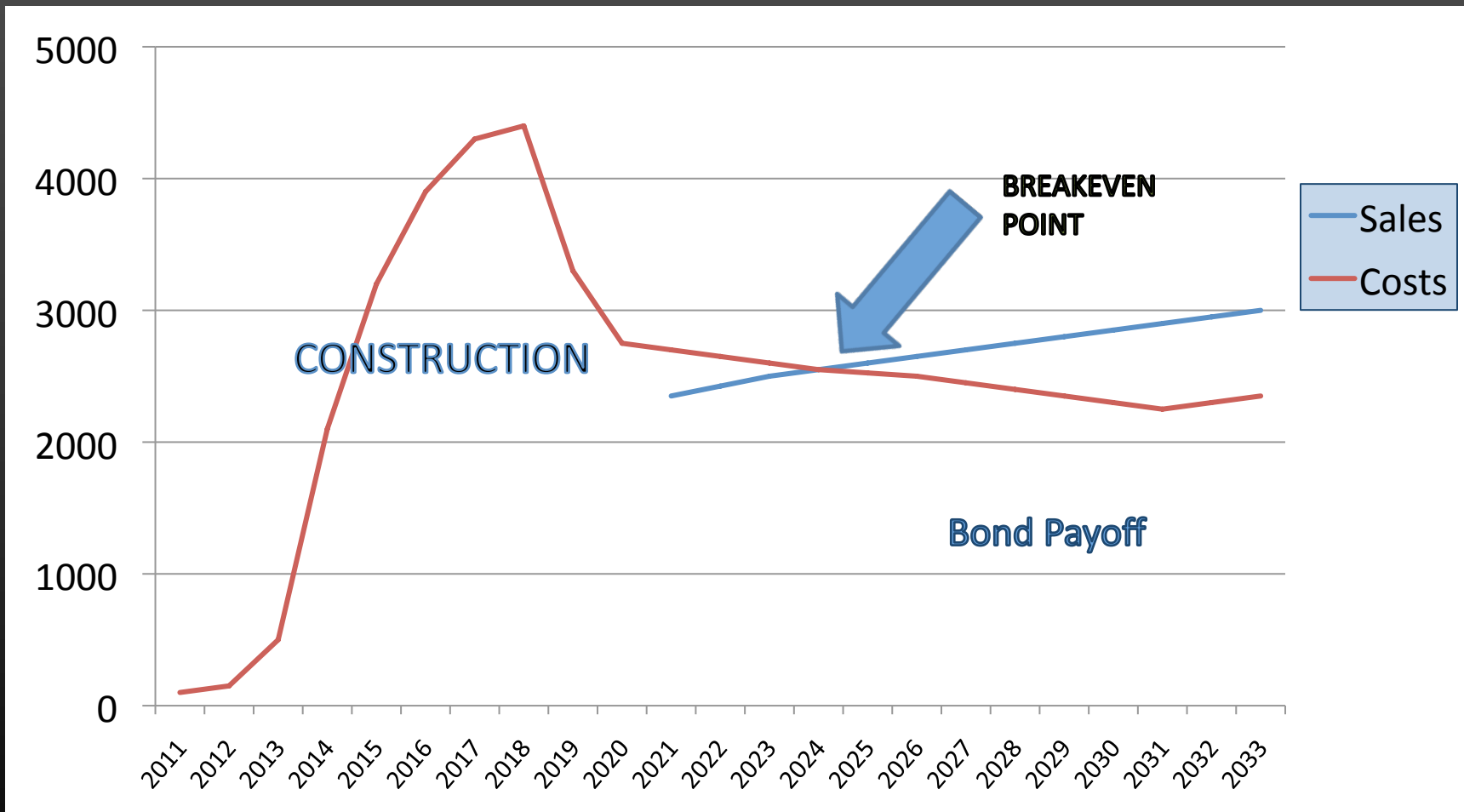
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Operating Profit at 80% Capacity

<u>Annual Profit</u> Sales - Costs (millions of 2009 Dollars)	
Ticket Sales	1,400
Operating Costs	800
Operating Profit	600



Breakeven



Benefits



Cascadia High-Speed Rail Consortium

Capacity Profit and Investor Cut

Estimated Return on Investment

(Based on 2009 dollar values and 80% Capacity)

	%	\$	total
Investor Contribution	30%	\$7,680	
Annual Operating Revenue (estimated)	100%	\$600	
Investor Annual Profit	30%	\$180	
35 Year Pay Back of Initial Investment			\$7,680
35 Year Profit Total			\$6,300
Total Return			82%



Cascadia High-Speed Rail Consortium

Invest with Confidence

- HST do not have a history of overruns

Profitable Investment

- Annual profit of \$600 million

35-Year Ownership

- 30% Ownership

Return on Investment

- 82% Total





Investor Proposal



Require \$7.68 billion Investment (30% of project)



Investors Acquire 30% Stake in CHSR



Investors Receive 30% of Operating Profits



CHSR In Private Operation for 35-Years

Projected Timeline

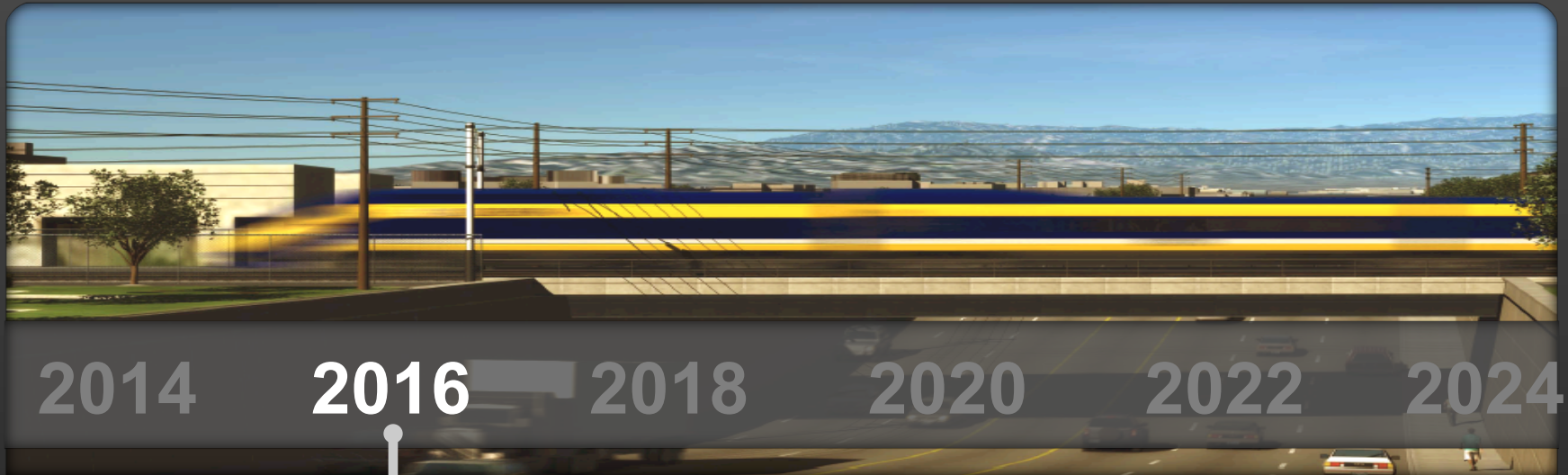


**Segment Planning &
Permits Completed**



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Projected Timeline



Earthworks & Grade Separation Completed



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Projected Timeline



**Station Construction
Completed**



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Projected Timeline



**Track & Signal
Construction Completed**



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Projected Timeline



**Train Delivery &
Testing Completed**

*Open for
Passenger Service*



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Questions