



DB E.C.O. North America

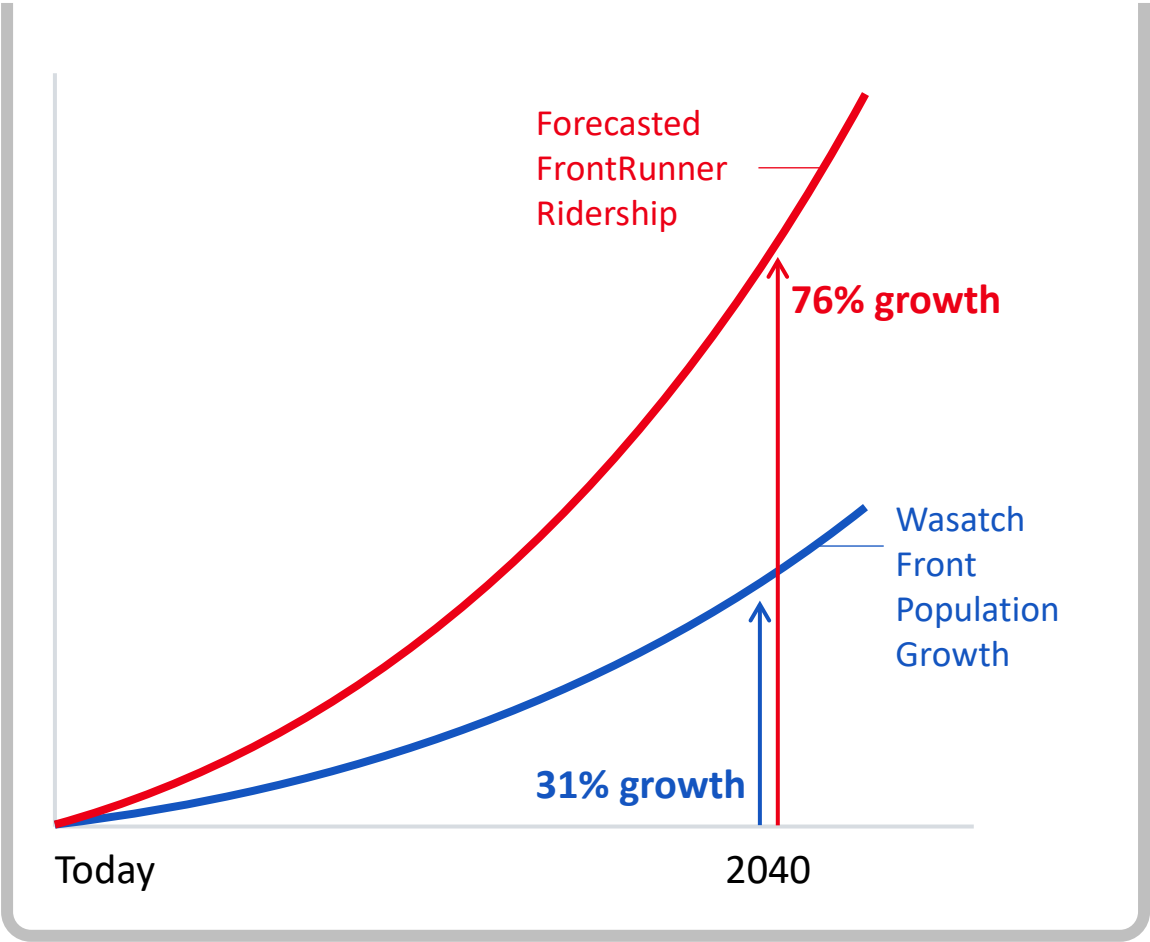
FrontRunner Forward Draft Phasing Plan Update

Prepared in partnership by Kimley-Horn and
Deutsche Bahn E.C.O. North America

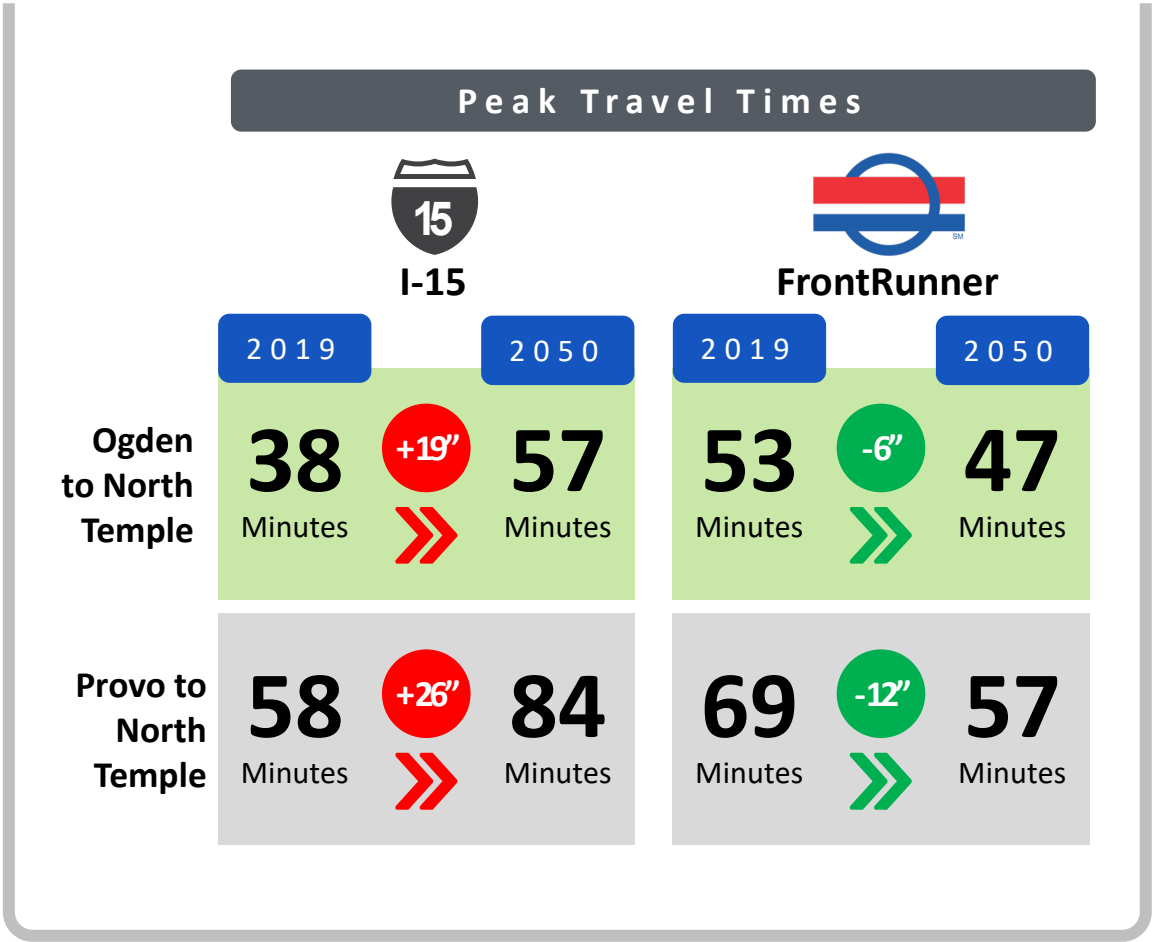
September 18, 2023

Improved service, corridor growth, and worsening I-15 congestion combine for increased demand for FrontRunner

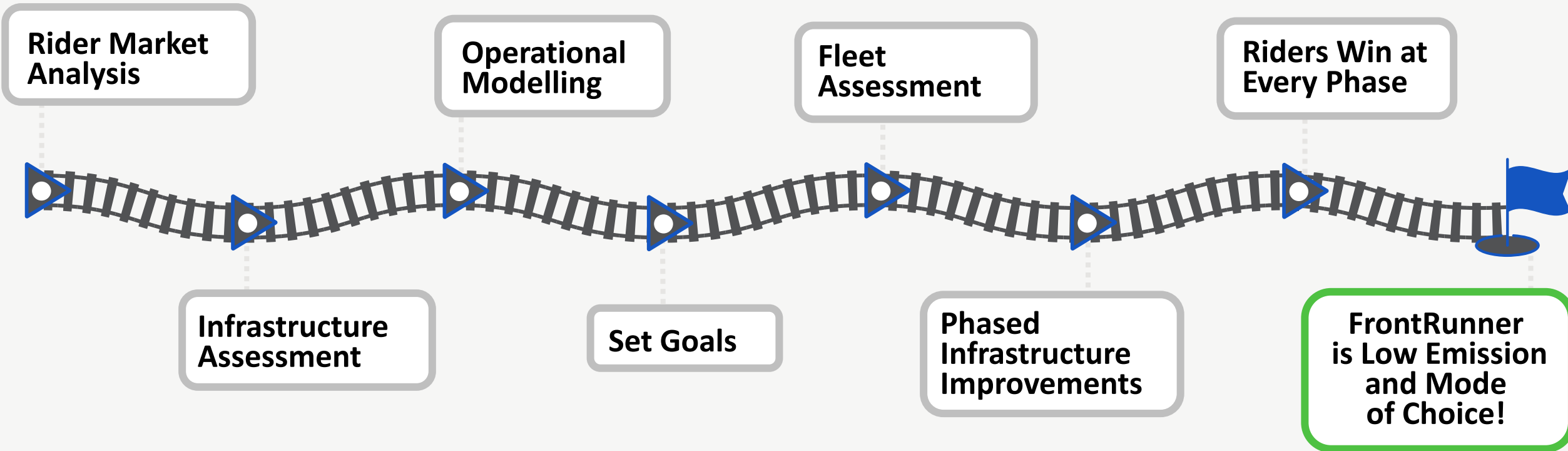
FrontRunner ridership growth is forecasted to outpace regional growth...



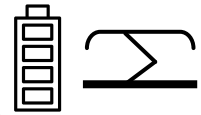
... as FrontRunner travel times decrease and I-15 travel times increase



FrontRunner Forward Phasing Plan Process



Summary of Low Emission Fleet Analysis*



OCS-Battery Hybrid
(Discontinuous
Electrification)



Can operate service plan, can fit
within corridor constraints, less fleet
needed



Battery Only
(Charging at specific stations
only)

Battery-only service cannot
complete a one-way trip without
lengthening dwell times and moving
away from the service plan



Hydrogen

Long refueling needed after every
round trip means significantly larger
fleet to achieve planned frequency

**Results Valid for
All Three Train Set
Configurations Tested**



4-car Single-level MU¹



4-car Bi-level MU¹



6-car Bi-level MU¹

*Analysis based on known proven technology performance that could be available during the expected timeframe of this project's implementation.

(1) MU: Multiple Unit

FrontRunner Forward Draft Phasing Plan

	Phase 0	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	Strategic Double Track Project	Double Track and Extension	Electrify, Double Track and Extension	Double Track and Increase Track Speeds	Increase Track Speeds	Quadruple Track
Increased Service Capability	<div>– 15" Peak Service</div> <div>– 30" All-Day Service</div>	<div>– 15" All-Day Service</div> <div>– Extension to Payson</div> <div>– POM Station</div>	<div>– Increased Frequency</div> <div>– Increased Speed</div> <div>– Extension to Brigham City</div>	<div>– Increased Frequency</div> <div>– Increased Speed</div>	<div>– Increased Speed</div> <div>– Infill Stations</div>	<div>– Express Trains</div> <div>– Increased Speed</div>
Infrastructure Needed						
Rail Extension Miles		<div>↔</div> 13	<div>↔</div> 20			
Double Track Miles	<div>🚊</div> 20	<div>🚊</div> 15	<div>🚊</div> 22	<div>🚊</div> 4		<div>🚊</div> 22 miles of Quad track
Equipment Sets	<div>🚂</div> 10 (lower emission diesel)	<div>🚂</div> 3 (lower emission diesel)	<div>🚂</div> 32 (low emission)	<div>🚂</div> 13 (low emission)		<div>🚂</div> 24 (low emission)
Electrified Miles			<div>⚡</div> 15			
Curve Upgrades			<div>↗</div> 9	<div>↗</div> 29	<div>↗</div> 13	
Signal Upgrades	<div>📶</div>	<div>📶</div>	<div>📶</div>	<div>📶</div>	<div>📶</div>	<div>📶</div>
New Stations		<div>🏠</div> 4	<div>🏠</div> 3		<div>🏠</div> 3	
Miles of Track 90 MPH			<div>🕒</div> 48	<div>🕒</div> 13		
Miles of Track 110+ MPH					<div>🕒</div> 62	
Grade Separations	Reach full grade separation by end of Phase 4					