Green Line
Re-Casting Business
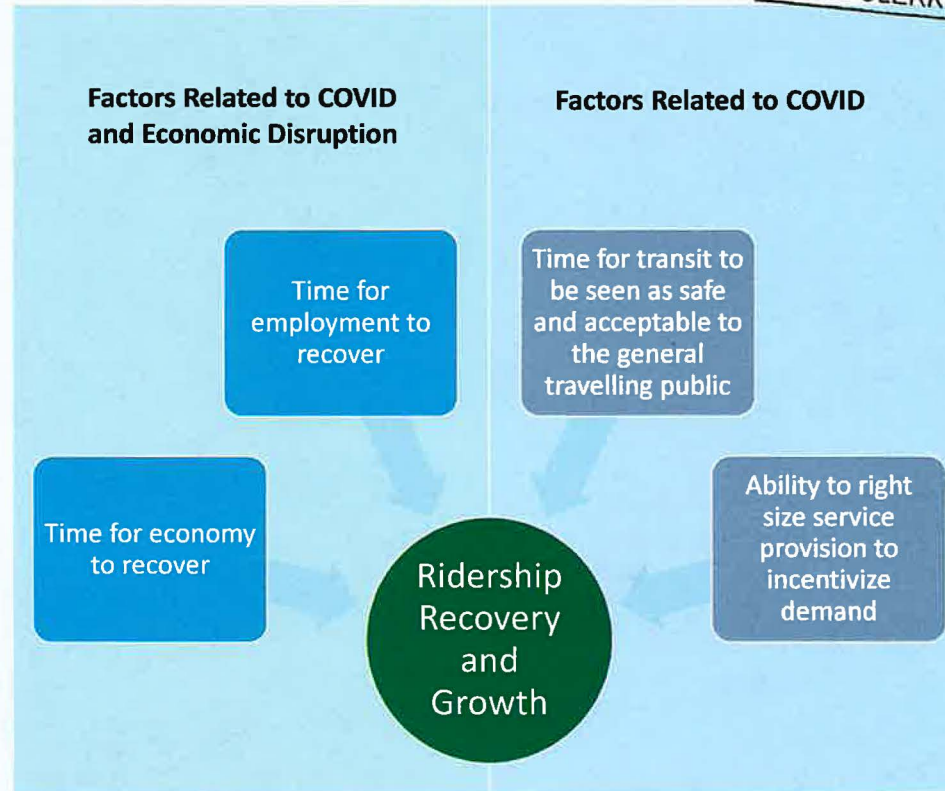# Case for COVID and
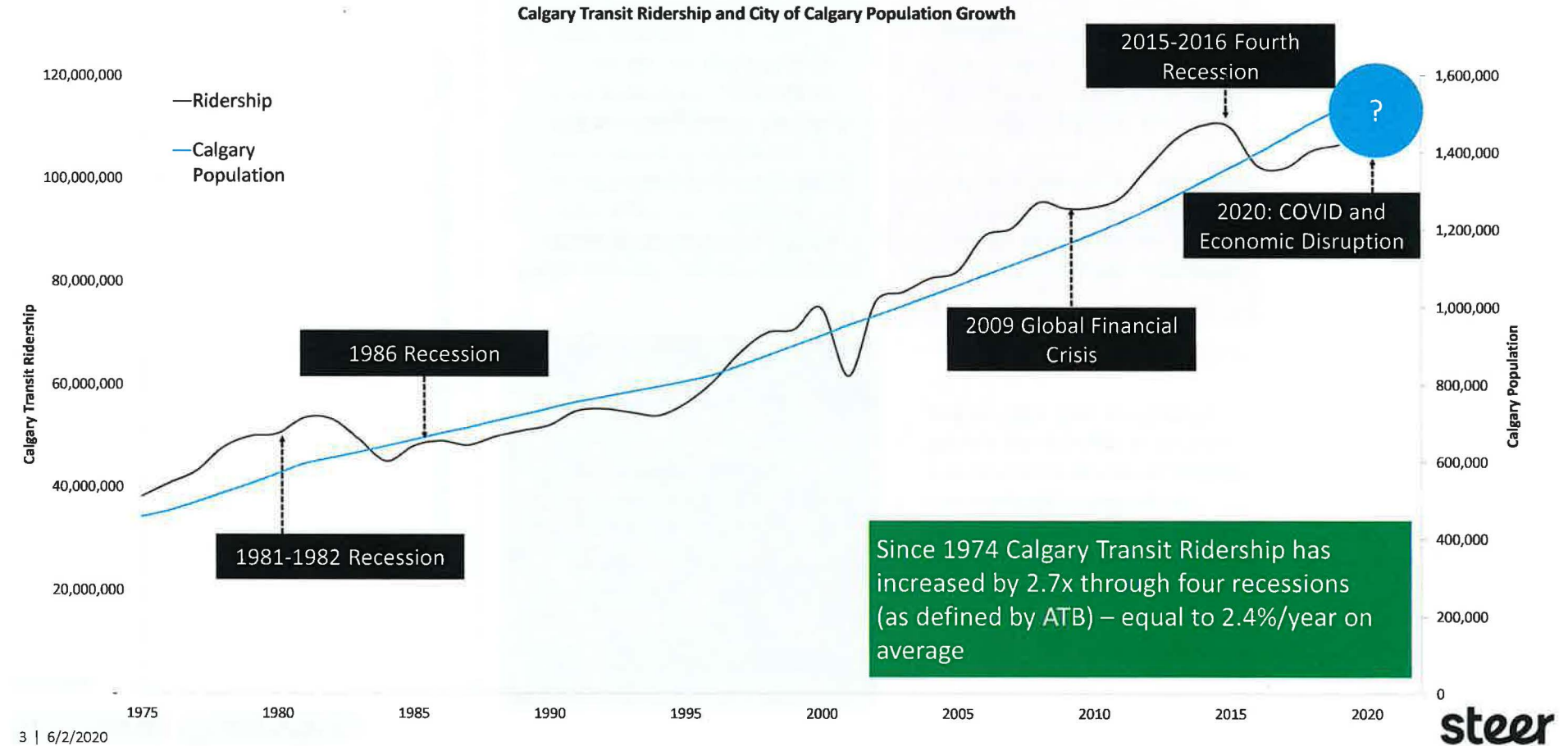# Economic Recovery

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Scenario Framing

Scenarios have been set out to communicate how changes to economic activity and the pandemic could impact the ridership and benefits of the Green Line LRT.

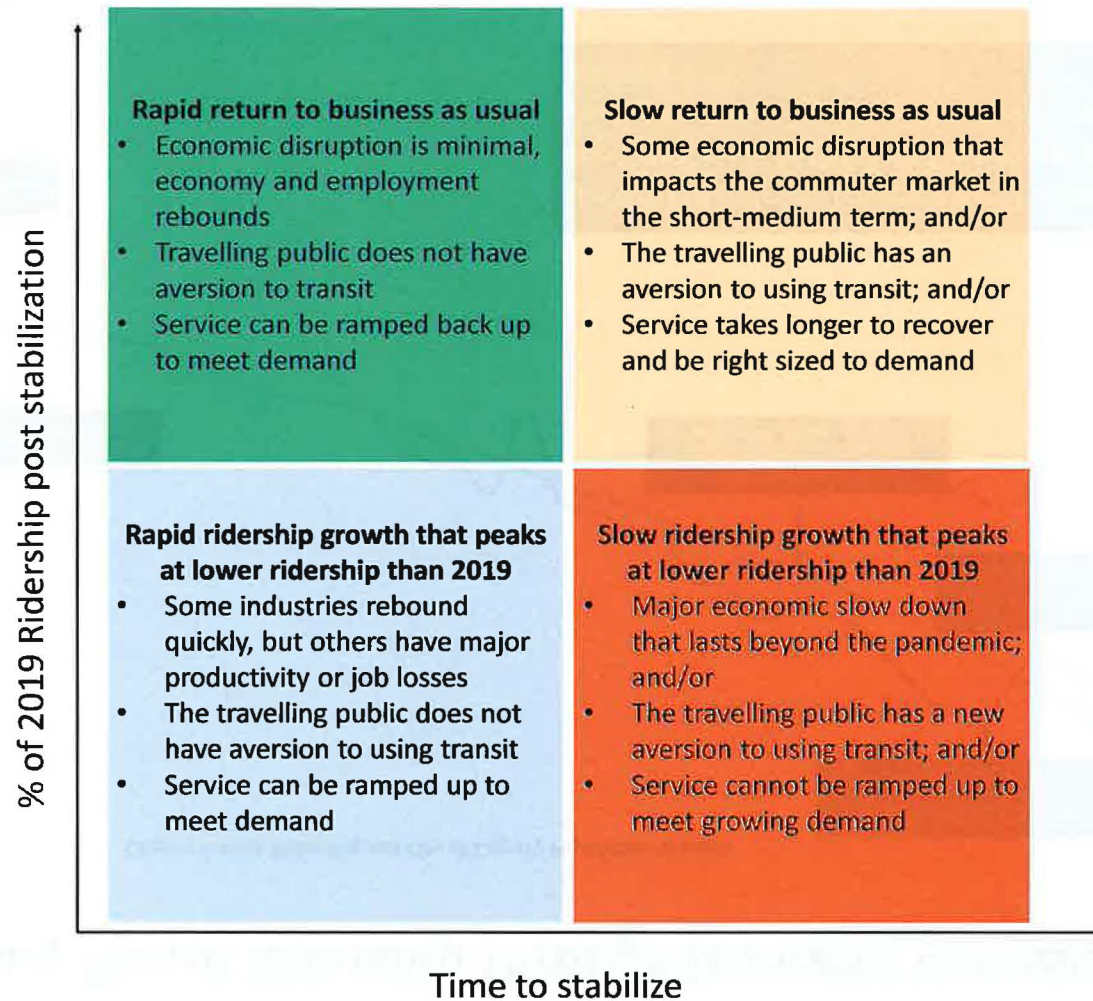Scenario analysis is useful when facing an uncertain future:

- Transport models are based on past travel behaviour and growth

- The future is unknown and cannot be forecasted completely

Factors Related to COVID and Economic Disruption

Factors Related to COVID

Time for employment to recover

Time for transit to be seen as safe and acceptable to the general travelling public

Time for economy to recover

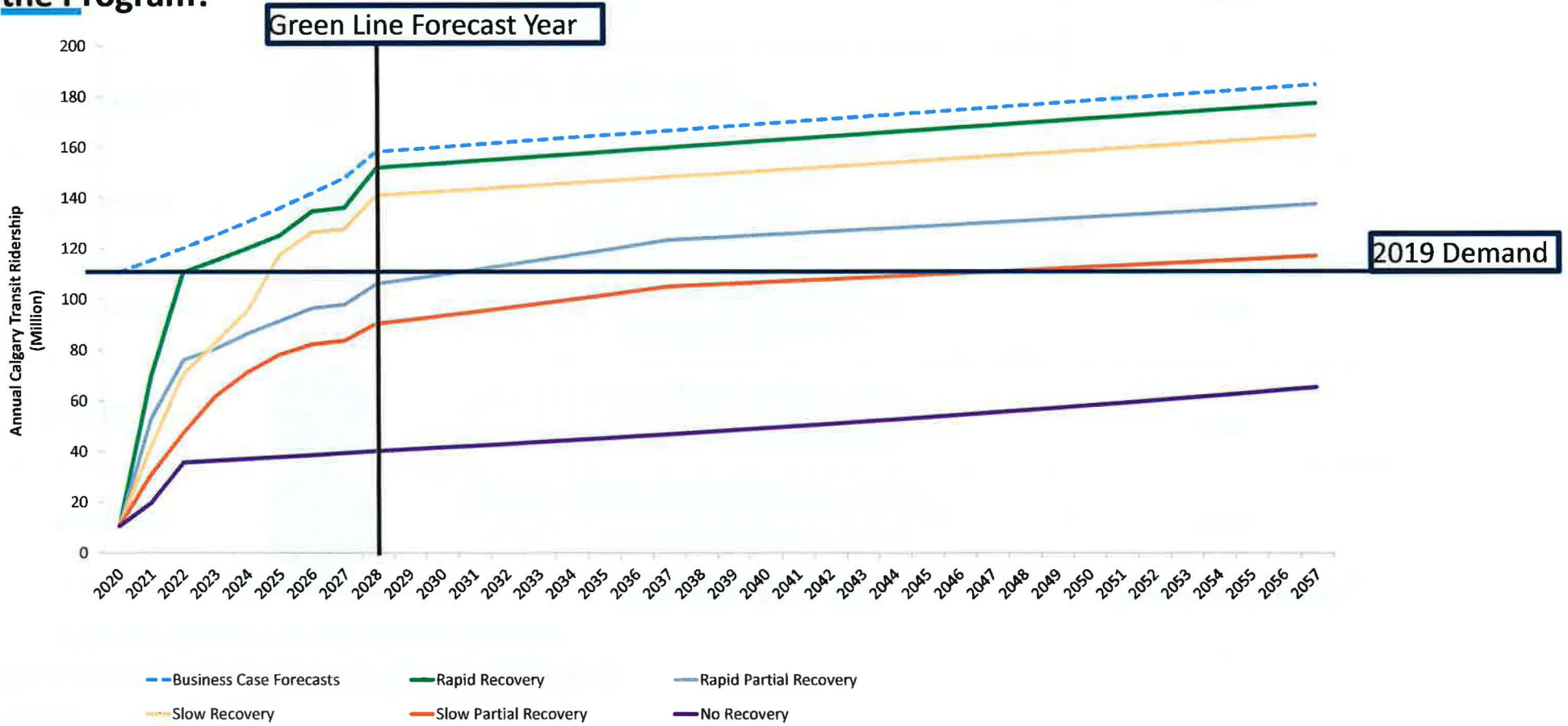Ability to right size service provision to incentivize demand

Ridership Recovery and Growth

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Historic Context: Calgary Transit Ridership Through Economic Recessions

Calgary Transit Ridership and City of Calgary Population Growth

Since 1974 Calgary Transit Ridership has increased by 2.7x through four recessions (as defined by ATB) – equal to 2.4%/year on average

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Scenario Overview

% of 2019 Ridership post stabilization ↑

Rapid return to business as usual
- Economic disruption is minimal, economy and employment rebounds
- Travelling public does not have aversion to transit
- Service can be ramped back up to meet demand

Slow return to business as usual
- Some economic disruption that impacts the commuter market in the short-medium term; and/or
- The travelling public has an aversion to using transit; and/or
- Service takes longer to recover and be right sized to demand

Rapid ridership growth that peaks at lower ridership than 2019
- Some industries rebound quickly, but others have major productivity or job losses
- The travelling public does not have aversion to using transit
- Service can be ramped up to meet demand

Slow ridership growth that peaks at lower ridership than 2019
- Major economic slow down that lasts beyond the pandemic; and/or
- The travelling public has a new aversion to using transit; and/or
- Service cannot be ramped up to meet growing demand

Time to stabilize →

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Stress Testing the Green Line: How Could Economic Change and COVID Disruption Impact the Program?

Green Line Forecast Year

2019 Demand

Annual Calgary Transit Ridership (Million)

Legend:
- - - - Business Case Forecasts
- ——— Rapid Recovery
- ——— Rapid Partial Recovery
- ——— Slow Recovery
- ——— Slow Partial Recovery
- ——— No Recovery

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Impacts on Green Line LRT

The Green Line was tested under the four scenarios to understand impact on ridership and benefits.

	Benefit: Cost Ratio	Daily Ridership in 2028	Peak Point Demand
Business Case	0.56	,000	4,400
Rapid Recovery	0.54	,000	4,200
Rapid Partial Recovery	0.51	,000	3,000
Slow Recovery	0.38	,000	3,900
Slow Partial Recovery	0.32	,000	2,800
No Recovery		16,500	1,500

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Implications for Green Line and Required Level of Service

- High performance bus lines can carry approximately 2,000 passengers per hour per direction.

- Under the slow partial recovery scenario, a downtown bound bus would be required every 2 minutes in the peak to meet opening year demand

- This level service may be challenging to deliver due to the road configuration in the SE and Downtown

Typical road based Bus and Bus Rapid Transit Capacity

■ Required Peak Point Capacity

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