

# AUCKLAND PORT - MOVE IT OR NOT? The Choice

CILT NZ Northern Region  
Webinar

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# AUCKLAND PORT - MOVE IT OR NO?

Why?

Where?

How?

Main data source: *Analysis of the Upper North Island Supply Chain Strategy Working Group Options for moving freight from the Ports of Auckland*, Sapere Research Group for Ministry of Transport, Moore D, Blick G, Davies P, 11 June 2020 (reissued 24 August 2020)

# Why

Two Reasons:

- Capacity constraint
- or
- It's beneficial to change

# Capacity Constraint

Capacity Constraint, caused by:

- Expansion limitations
- Access limitations, both to hinterland and to sea

# Forecast Container Throughput

## Throughput drivers:

Import TEU growth is a function of population growth & NZ GDP growth

Export TEU growth is a function of GDP growth at export destination

## Import TEU growth outstrips GDP growth:

As NZ GDP/capita increases, our capability to consume increases

But, domestic supply (ability to manufacture) can't keep up

So, we import more – increased TEU/capita

## Sapere's forecast growth:

Base Case,           2.26% pa,

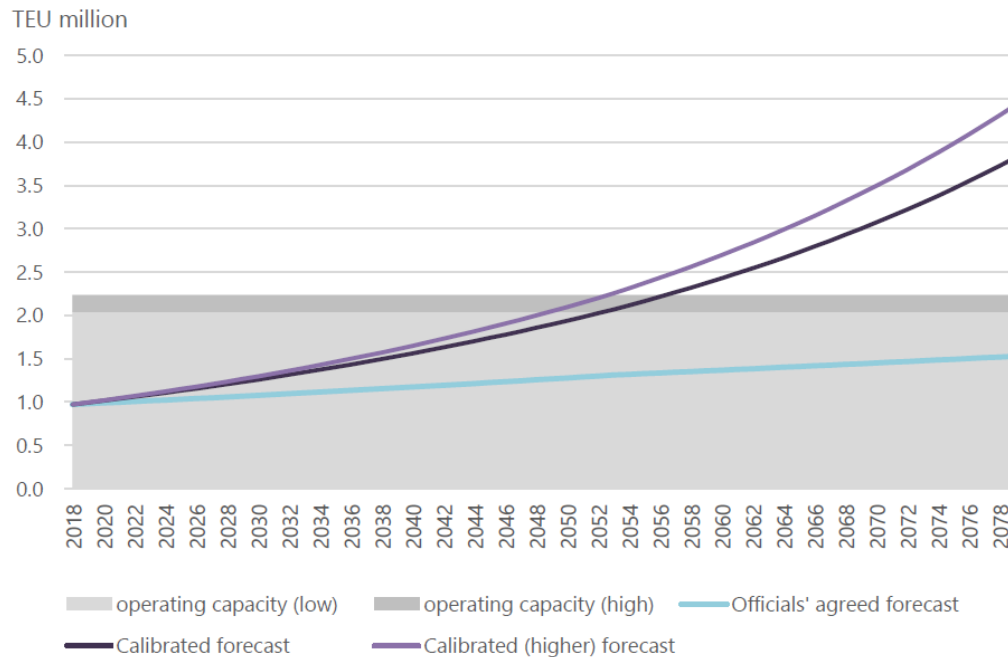
Higher Growth,    2.51% pa

Officials:           0.75% pa

# POAL Operating Capacity

Operating capacity reached in about 30 years

Figure 5 Freight forecasts with estimates of Ports of Auckland operating capacity



Note: Operating capacity shown represents future capacity under current plans; capacity in 2020 is approximately 1m TEU

# Beneficial to Change

Could be because of:

- Economics
- Social/ Cultural reasons
- Environment

Sapere's Cost- Benefit Analysis addresses these

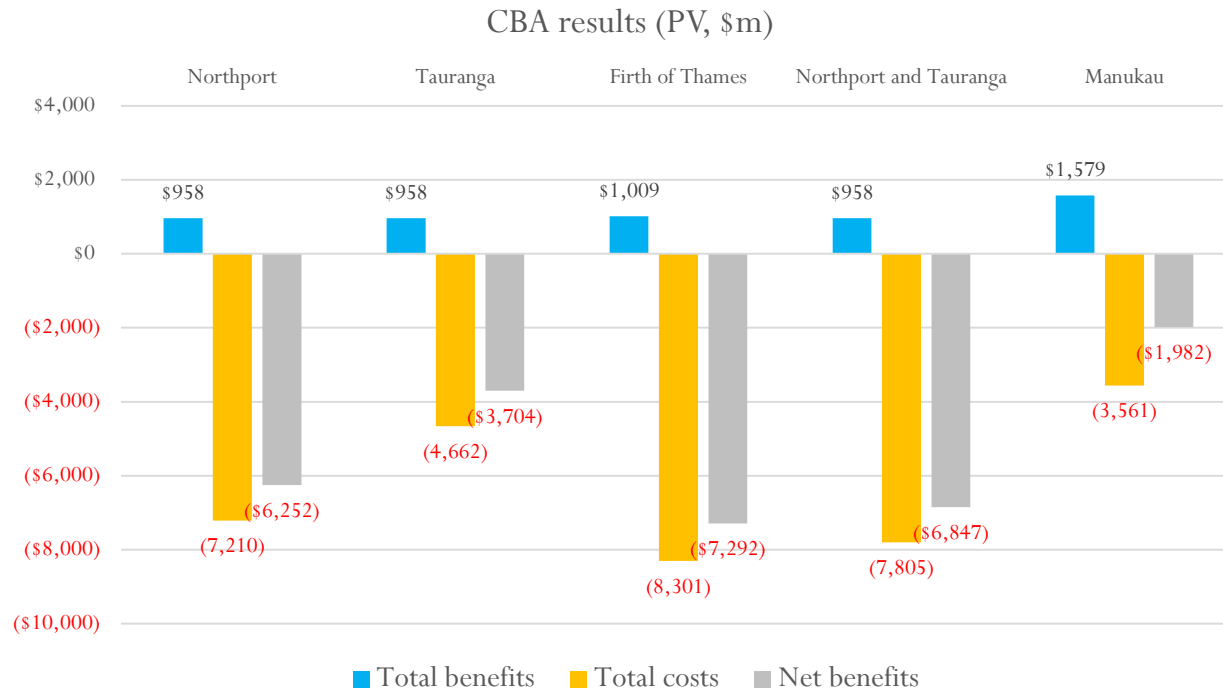
# Economics of the Five Choices

Components are:

- Capex:
  - Port, Links to hinterland (road & rail), Links to sea (channels)
- Opex:
  - Terminal operations, inland transport costs, sea voyage costs (omitted by Sapere, UNISCS, Port Future Study (PFS))
- Environmental and Social benefits & costs:
  - Sapere included estimates for: congestion, emissions, safety, agglomeration, amenity, consumer & producer welfare, taxation deadweight costs

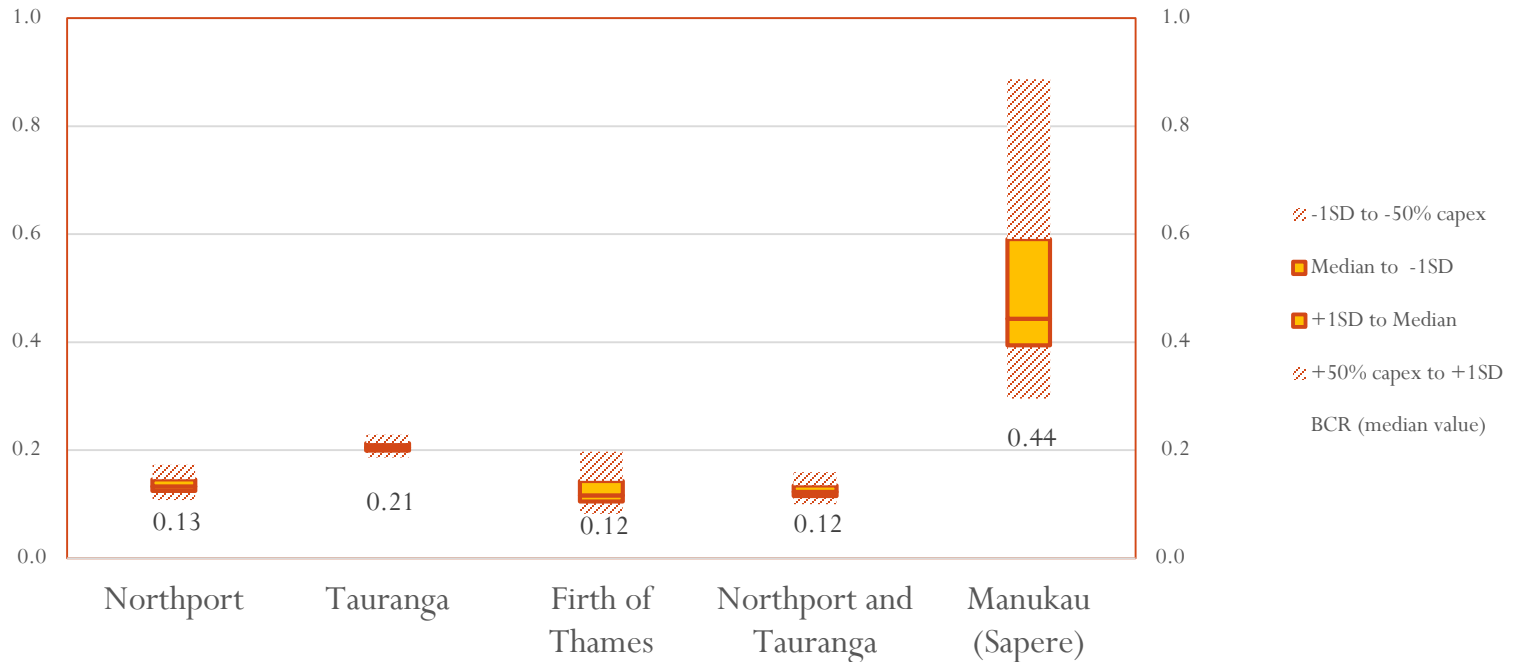


# Results of Sapere Analysis



# Benefit Cost Ratio: Sapere Analysis

Benefit : Cost Ratio (BCR) - Sapere Analysis



Overwhelmingly in favour of Manukau

# Adjustment Required

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## Missed Benefits:

- Shorter Sea Distances
- Change of port for cargoes

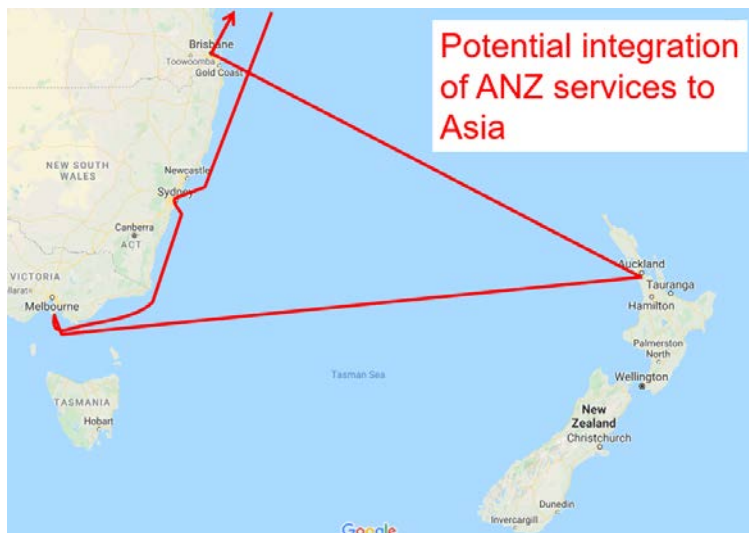
## Overstated Costs

- Dredging costs

## Timing of change – Sapere timing sensitivity shows:

- Improved Net Benefit if Manukau is earlier

# Shorter Shipping Routes



- Shorter round voyages: 200 nm saved  
→ lower required speed: 1.5%
- Fuel saving across fleet: NZ\$53 m pa

- Shorter round voyages: 450 nm saved  
→ lower required speed: 25%
- Fuel saving across fleet: NZ\$88 m pa

**Overall saving: NZ\$142m pa → PV NZ\$666m (starting 2040)**

# Change of Port for Cargoes

A Manukau port allows:

## NZ Steel

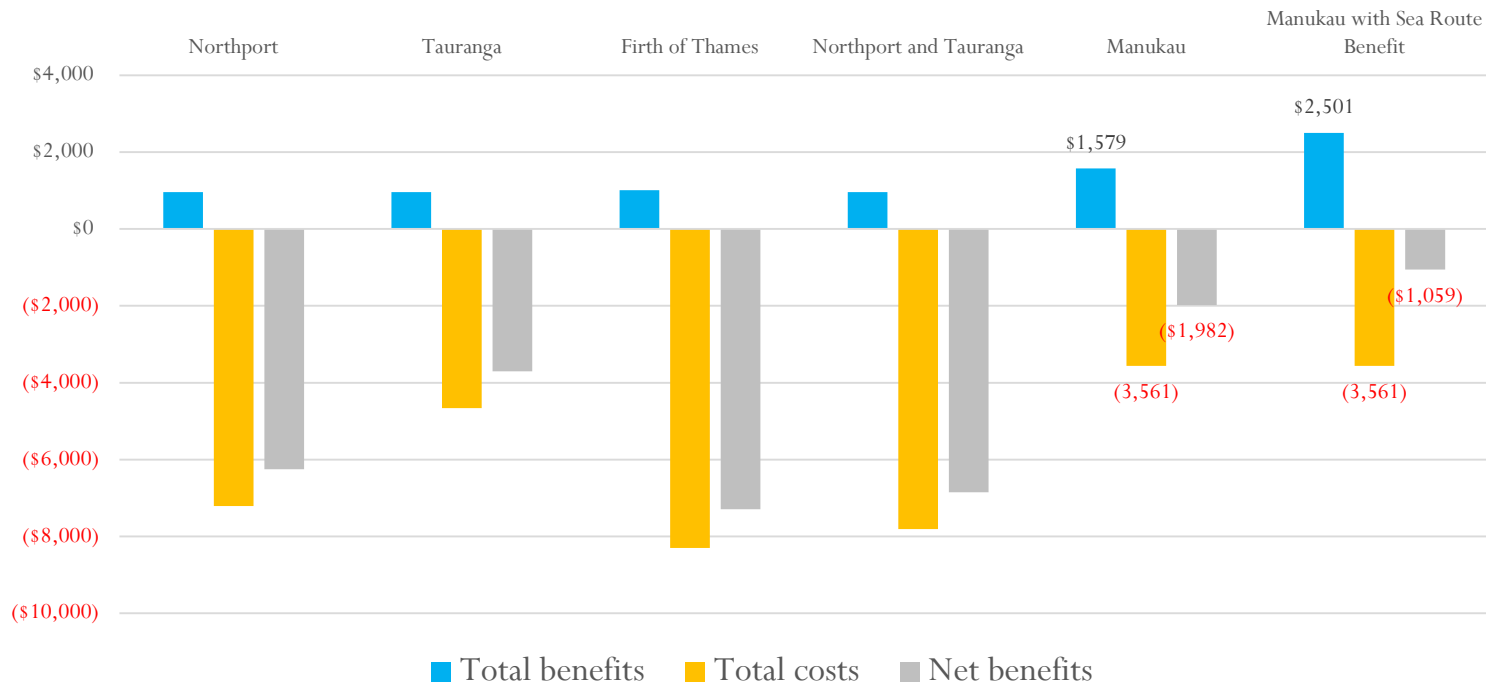
- Coal imports and steel exports direct to/ from mill.
- Saving in rail freight Mt Maunganui to Glenbrook about \$16m to \$18m pa.
- **PV of \$240m** (start in 2040)

## Fuel Imports

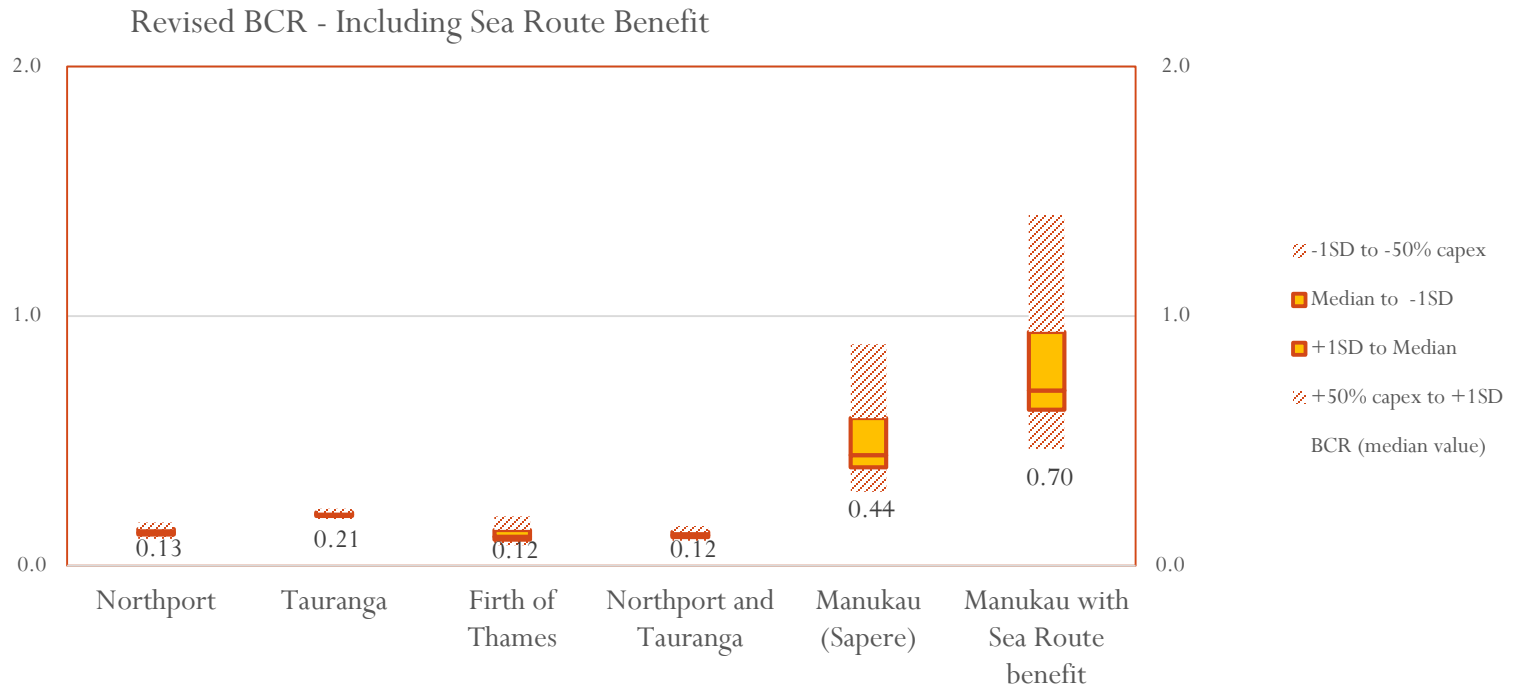
- Direct imports for Auckland
- Shorter sea distance round South Australia
- Avoids pipeline transport cost
- Provides Auckland with fuel supply resilience
- **More PV benefits**

# Cost Benefit Analysis including Sea Route Benefit

CBA results (PV, \$m): Including Sea route benefit



# Revised BCR, including Sea Route Benefit



- Manukau BCR increases from 0.44 to 0.70
- **Increases gap between Manukau and East Coast Options**

# Dredging Costs need updating

Sapere analysis has inconsistent estimates for dredging:

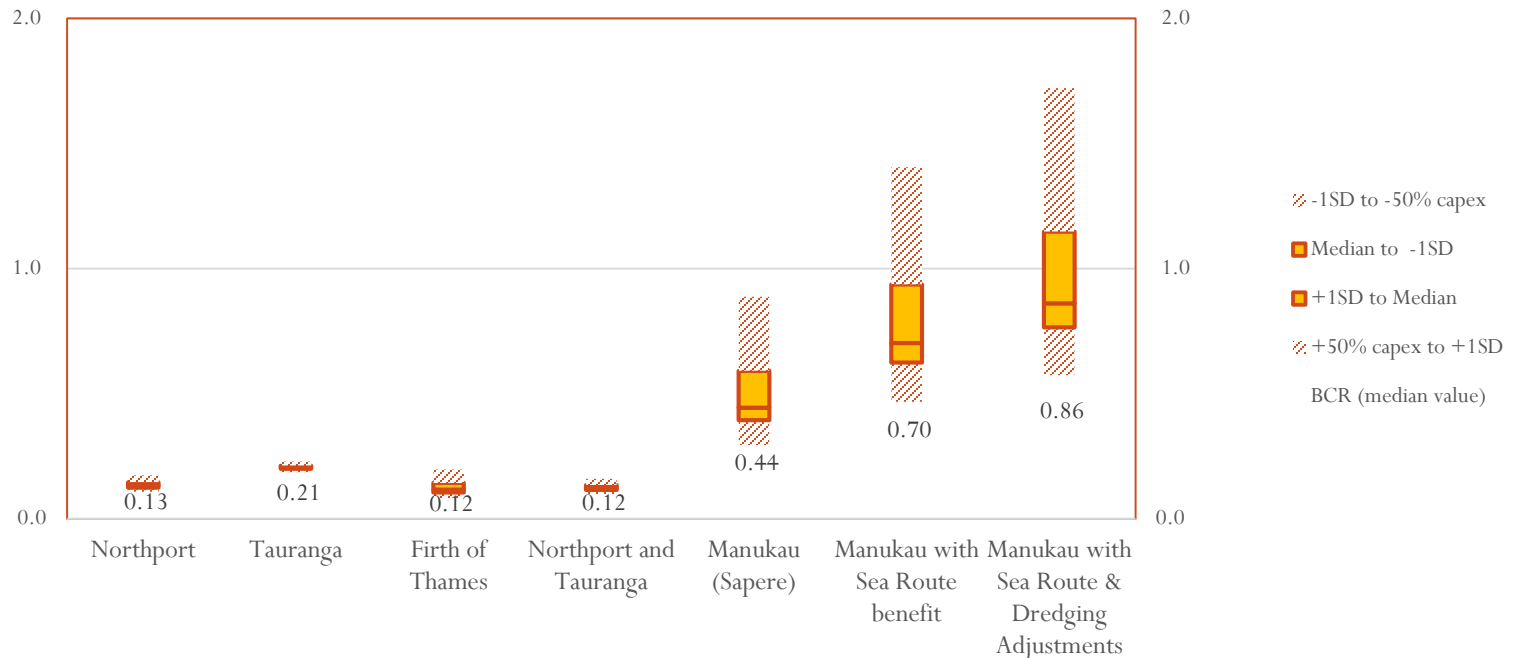
- Manukau & Firth of Thames: NZ\$60/m<sup>3</sup> (draws on Ports Future Study (PFS) port capex estimates)
- POAL, Northport & Tauranga: NZ\$15/m<sup>3</sup> (new estimates)

Recent (2016) dredging estimates for Marsden Point are at unit cost of NZ\$10/m<sup>3</sup>, suggesting the PFS estimates were greatly overstated

**Adjusting to \$15/m<sup>3</sup> for Manukau reduces port capex costs by \$1.7bn, and its PV by \$654m.**



# Revised BCR, including Sea Route Benefit & Adjustment for Dredging



- Manukau BCR increases from 0.44 to 0.86
- About 40% probability BCR > 1.0
- **Further increases gap between Manukau and East Coast Options**

# Where

Choice seems clear cut. Economic and Social case is compelling.

- Manukau is the front-runner.
- On this basis, there would need to be an extremely strong reason to not move to Manukau.

What remains is How.

# How

Richard will talk about engineering issues:

- Port Entrance, Channels, Navigation and Reclamation

Greg will comment on:

- Port Locations and Links with Hinterland