



Maritime transport and freight hubs – a New Zealand perspective

Context



- ▶ competitive pressures are changing the freight system



NZ expected freight growth 2012 to 2042

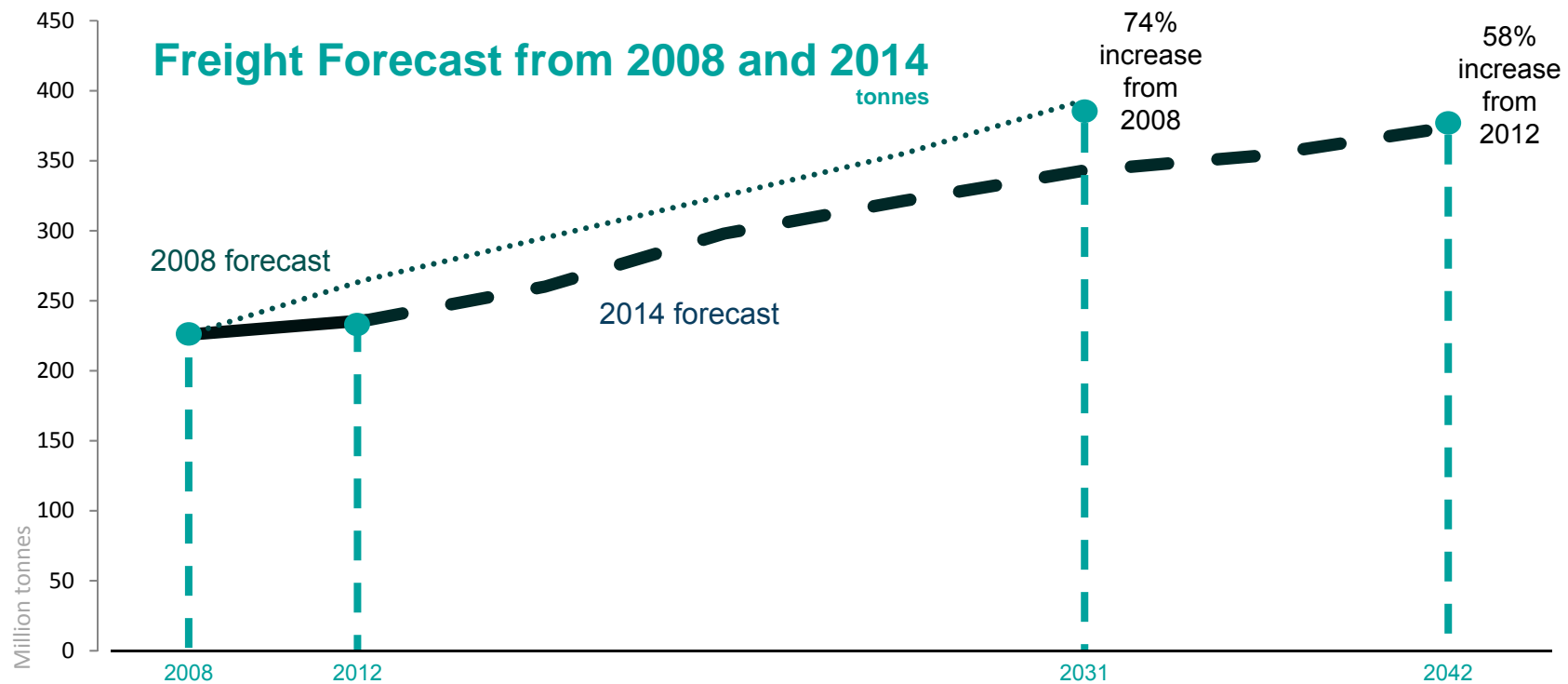


236_m
tonnes

58%

373_m
tonnes

This predicted growth is lower than the 2008 forecast

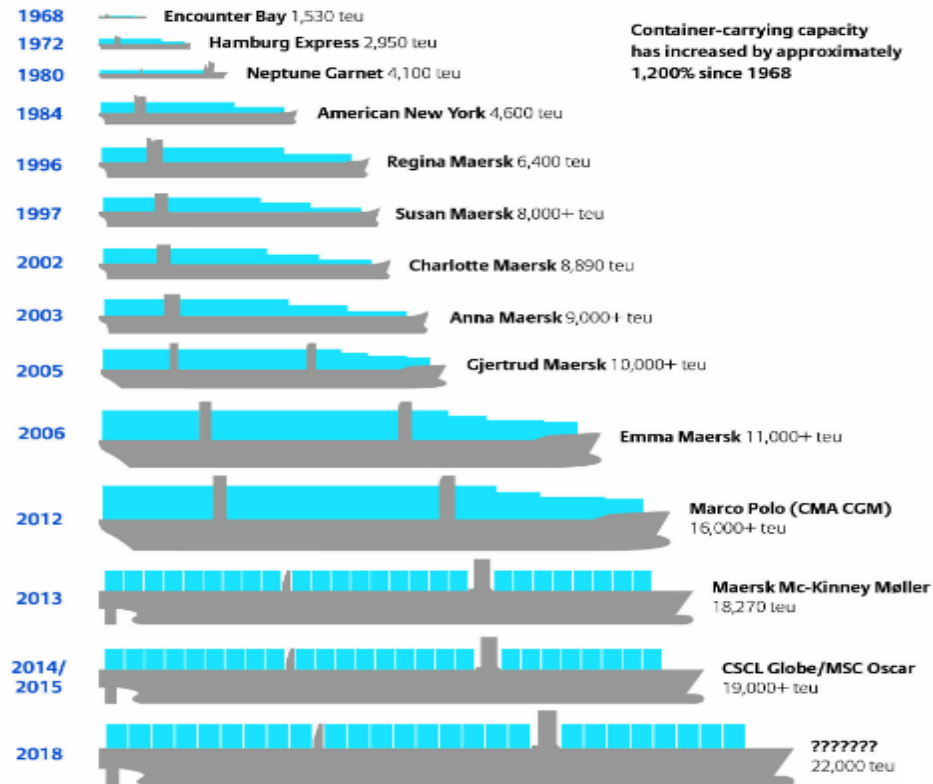


Vessel size



- ▶ Container vessels are getting larger

50 years of Container Ship Growth



Graphic: Allianz Global Corporate & Specialty.
Approximate ship capacity data: Container-transportation.com

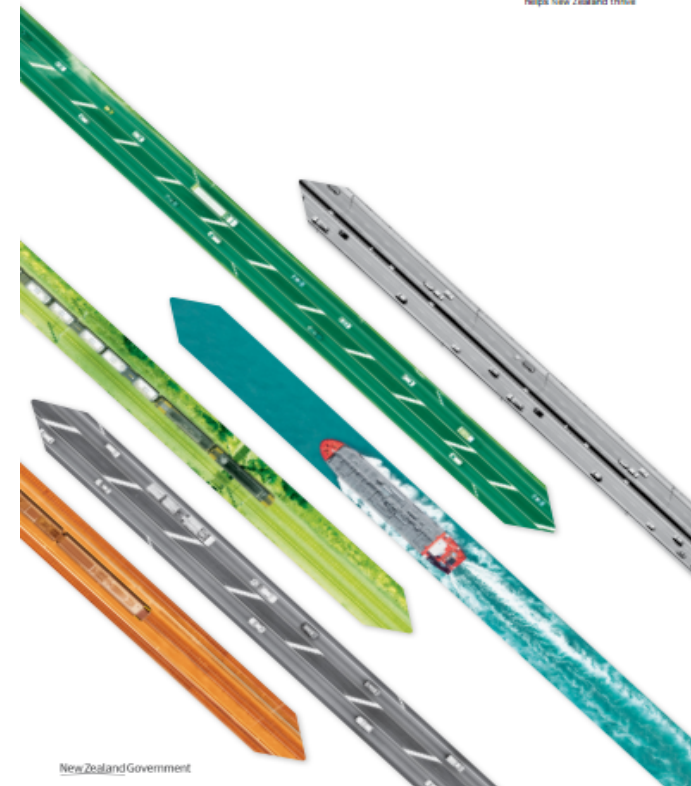
Future Freight Scenarios Study 2014



Future Freight Scenarios Study
November 2014

Ministry of Transport
TE MANATU WAKA
Ensuring our transport system
helps New Zealand thrive

- ▶ written by Deloitte for the Ministry of Transport
- ▶ released in 2014: www.transport.govt.nz
- ▶ considered several scenarios for development of the New Zealand freight system and the implications for cost and efficiency



Ministry of Transport
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New Zealand currently has 10 container ports

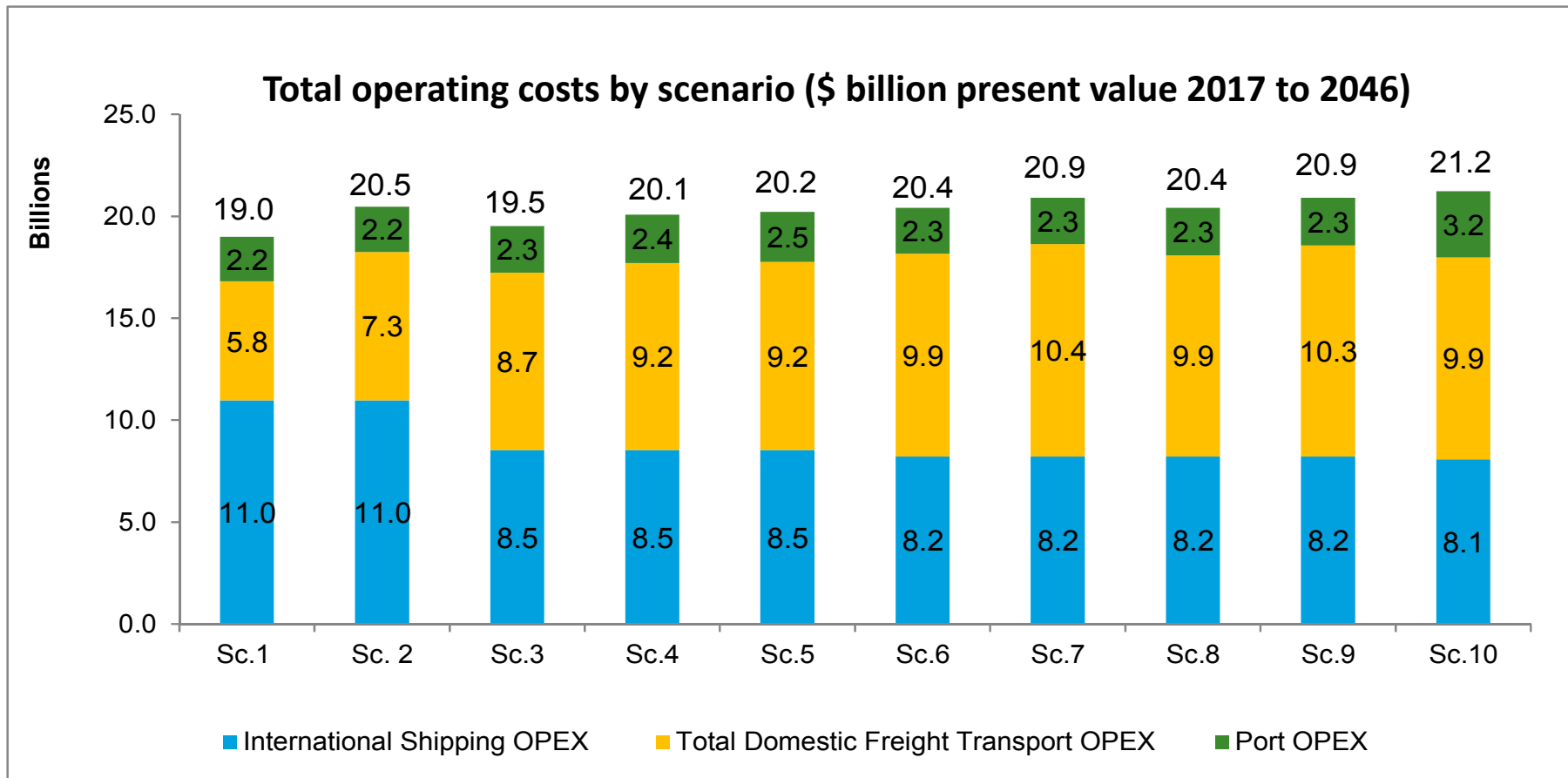


The scenarios used in the Study



	1	2	3	4	5	6	7	8	9	10
Hub ports	Status quo 10 ports	Akl	Akl	Akl	Akl	Akl	Trg	Akl	Trg	Trg
Others are feeder ports		Trg Npr Lyt Otg	Trg Lyt Otg	Trg Lyt	Trg Otg	Lyt	Lyt	Otg	Otg	
Largest ship (TEU)	4,500	4,500	7,000	7,000	7,000	8,000	8,000	8,000	8,000	8,000

Savings in international shipping costs are likely to be outweighed by the increase in domestic costs



Findings



- ▶ container vessels visiting New Zealand will get larger
- ▶ there is likely to be a reduction in the number of international sea ports
- ▶ this will reduce cost for international shipping lines
- ▶ but will lead to greater cost for the domestic freight system



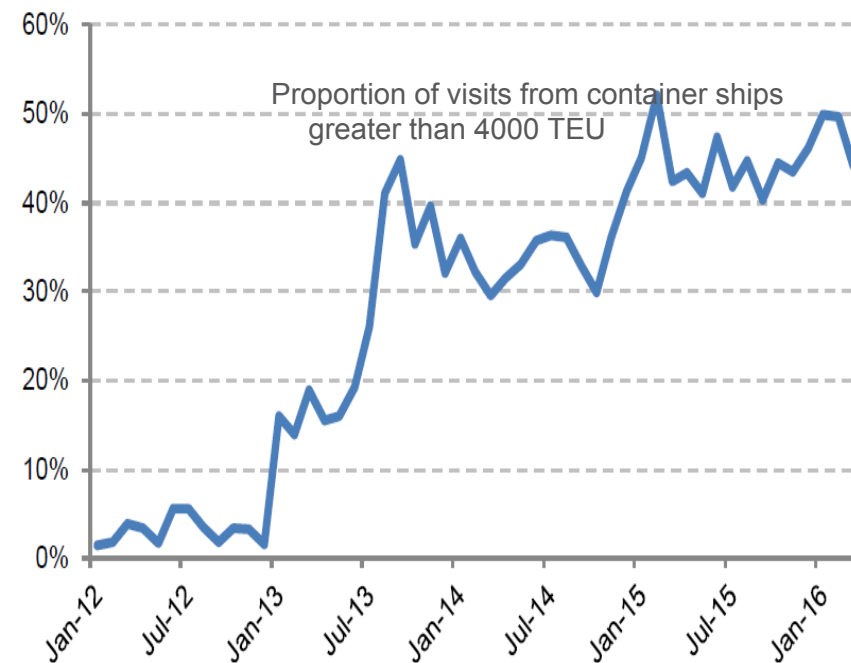
What does the data tell us?



Vessel size



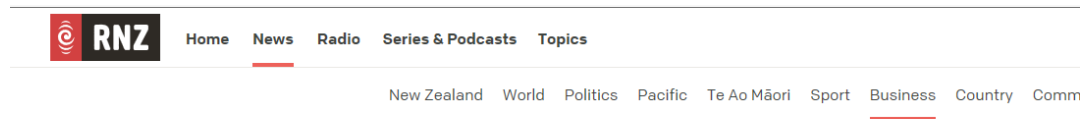
- ▶ container ships are getting larger
- ▶ it is unclear yet whether this is leading to concentration of the freight task in a smaller number of ports



Port responses



Many ports are investing in capacity improvements to enable them to take larger ships. Several, including Lyttelton, Otago, Napier, Tauranga and Wellington, have plans for dredging



BUSINESS

Napier port dredging plans criticised

3:30 pm on 6 March 2016

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New Zealand should be careful not to over-invest in its ports, major exporters and importers say.



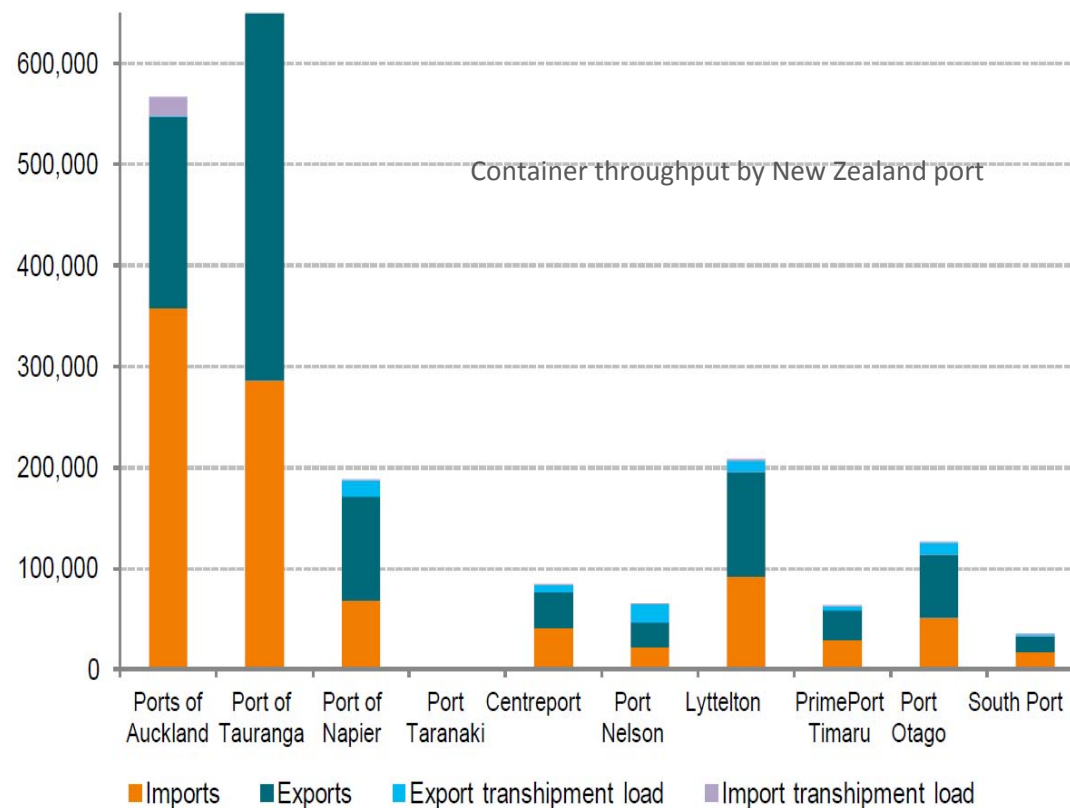
Photo: 123rf

The Port of Napier has announced a \$100 million scheme to build an entire new berth and dredge its harbour, the most expensive development in its history.

Container volumes by port



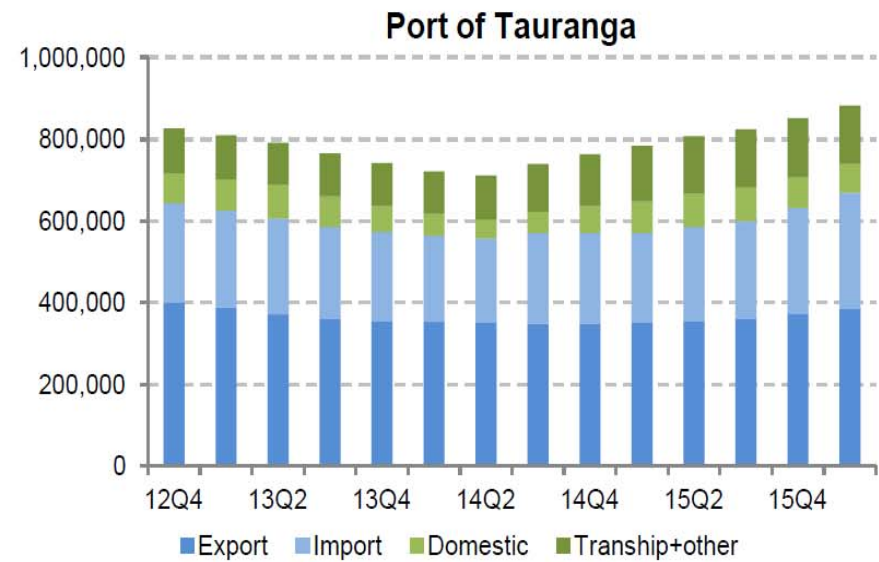
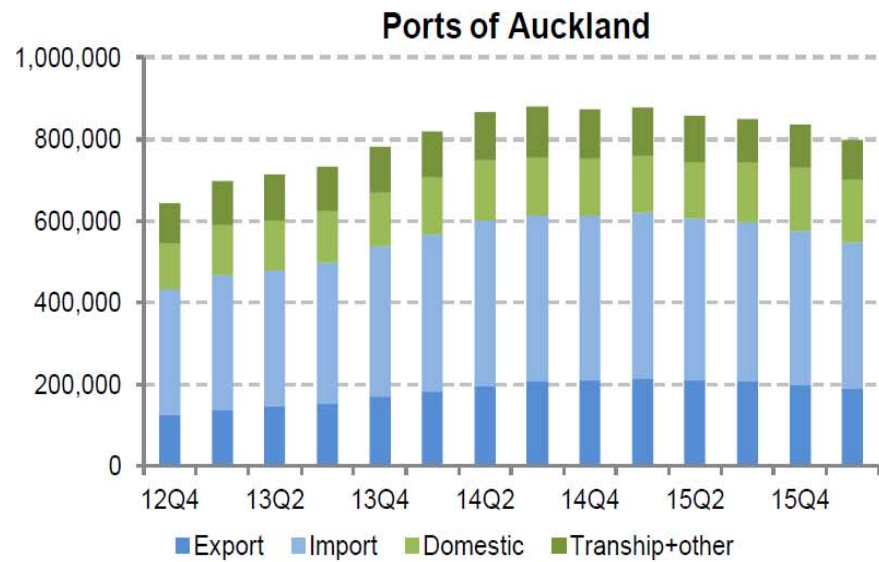
- ▶ the majority of New Zealand's goods exports and imports enter or leave through two ports



Two ports



Auckland and Tauranga container volumes

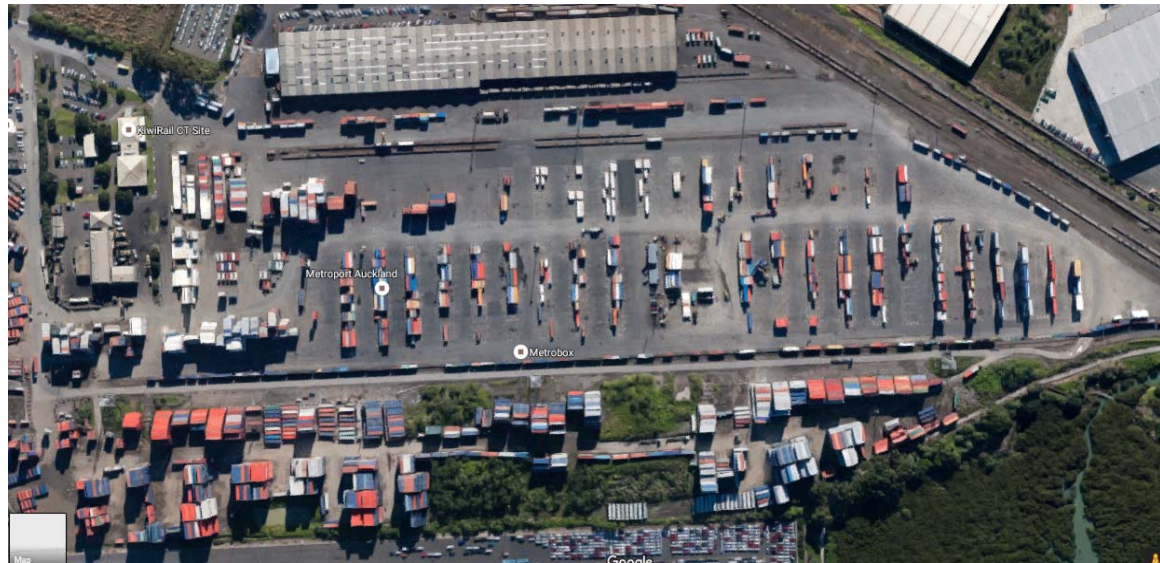


Metro Port freight hub



competition between ports and rising freight demand are driving changes in logistics

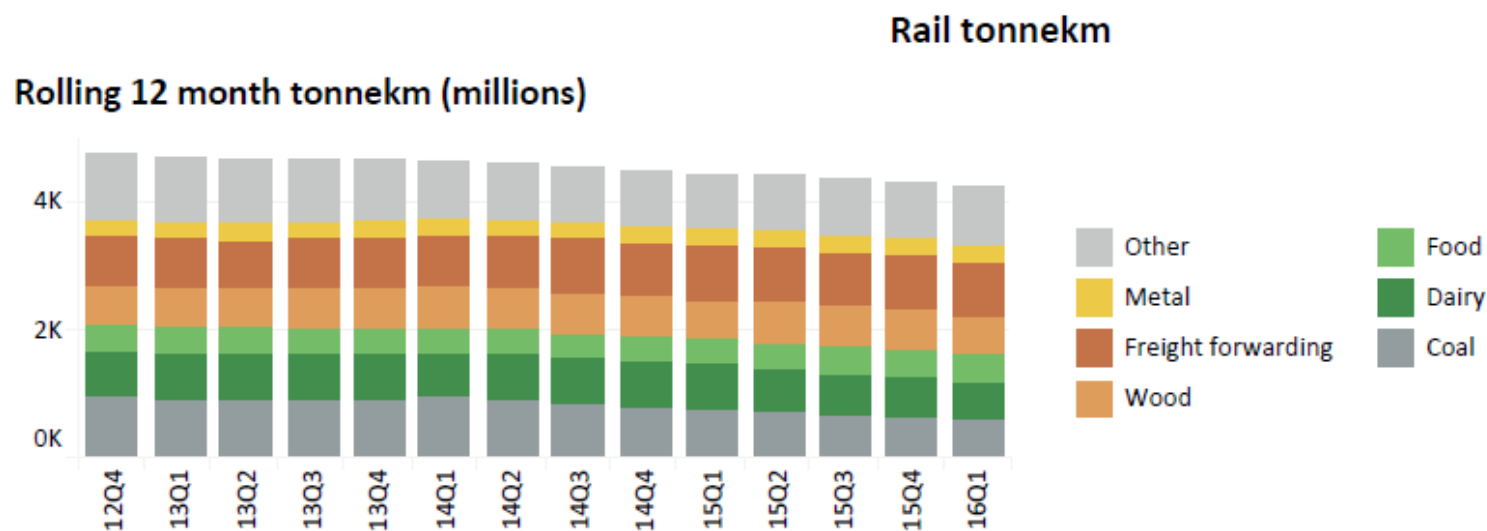
- ▶ several ports are using inland freight hubs to aggregate (or disaggregate) freight
- ▶ most freight hubs use rail to move containers to and from ports



Rail volumes



- ▶ rail volumes are falling
- ▶ but this is mostly due to falling coal volumes

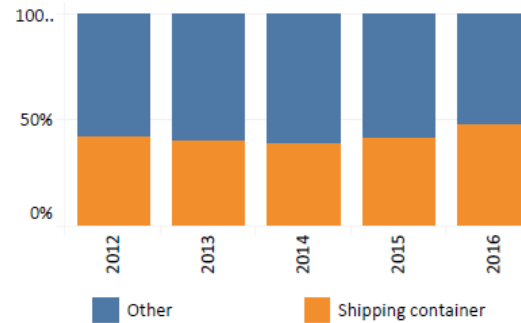


Rail containers

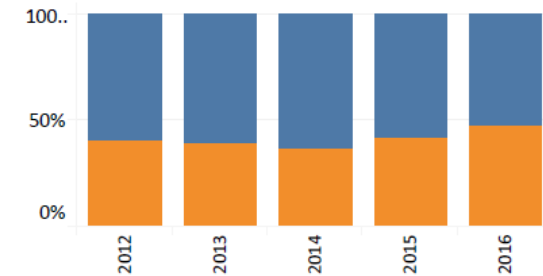


- ▶ movement of shipping containers by rail increased in 2015

Rail tonnage that is shipping containers

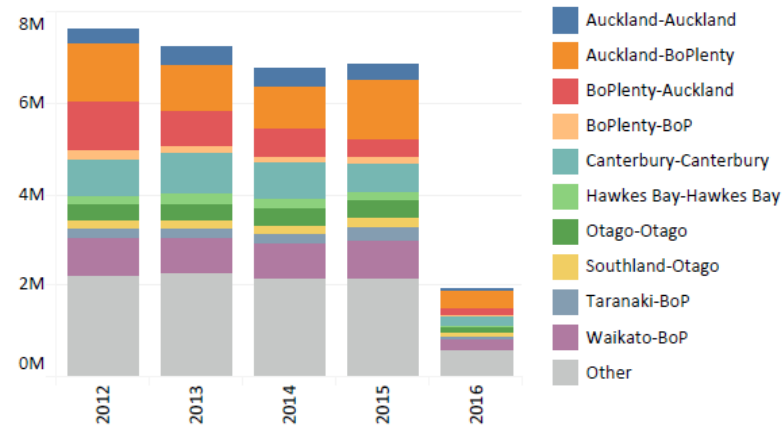


Rail tonnekm that are shipping containers



- ▶ the strongest growth has been in containers moved from Auckland to Bay of Plenty (Tauranga)

Shipping container tonnage - origin and destination



Other freight hubs



note the presence of rail

Longburn (Palmerston North)



Rolleston (near Christchurch)



Future growth



- ▶ the ability of ports to grow their international business will depend to some extent on their ability to expand in their current locations

Tauranga



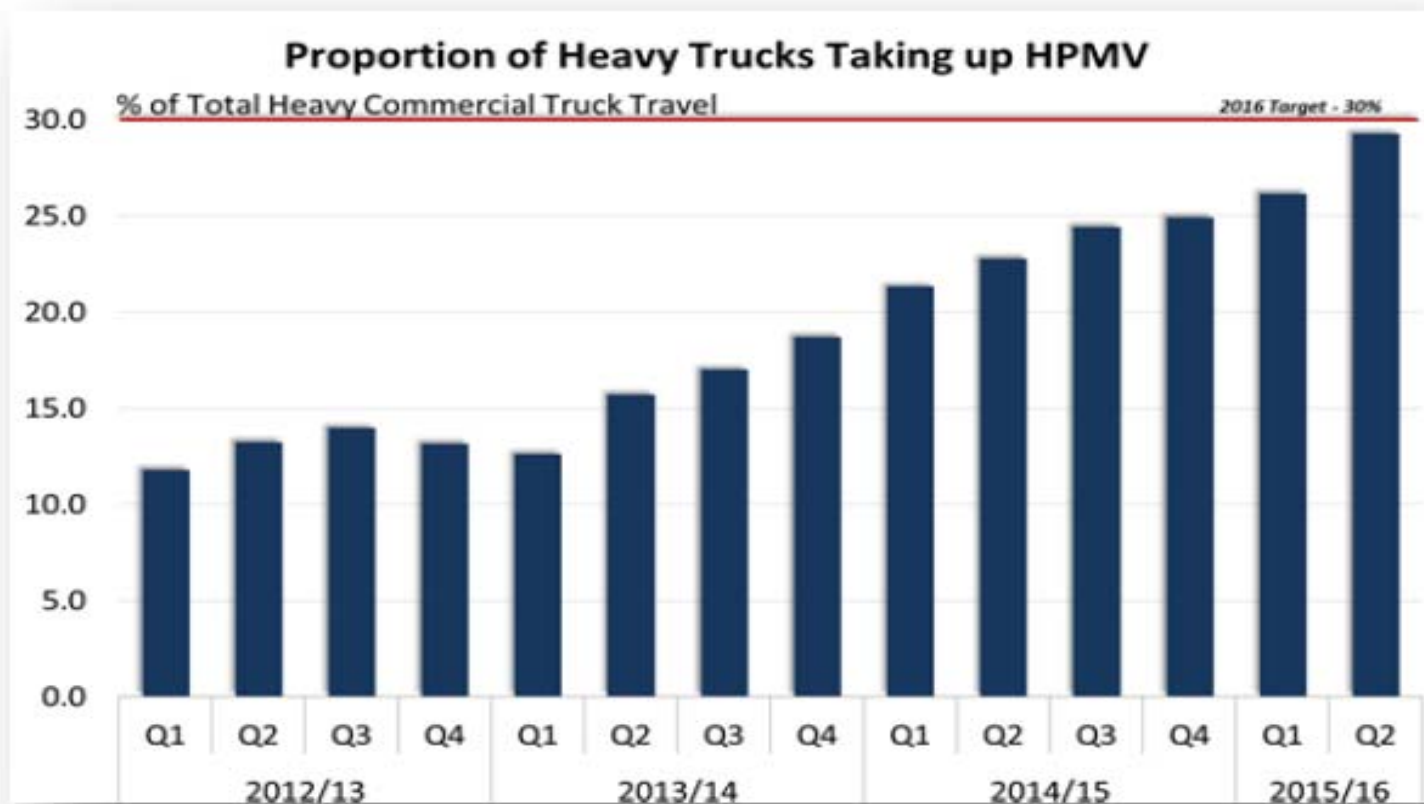
Auckland



Road



High productivity motor vehicles



Technology is making a difference



The number of hybrid vehicles in the freight fleet is increasing

Historically, rail has produced significantly less emissions per unit of freight than trucks, but the gap is closing



Concluding comments



Earthquakes and shipping

