Update of the National Freight Demands Study

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Background to the study

- Important tool for the planning for freight
- Earlier versions have had widespread use
- Understanding the freight sector and the patterns of movement that result.
- Third version of this
  - 2006/7, 2012, 2017/18
- Scale of recent update (short timeframe and small budget)
- Focussed on data for input to MoT Freight Futures Mode

Sources of data

- Developing NFDS brings together data from a number of sources
  - Some publicly available
  - Some from private sources
- Availability of data changing over time
- Also published data revised over time
- Took opportunity to use EROAD GPS data
- Details of current results not always comparable with earlier results

Putting it all together

- Estimates of movement patterns determined for specific commodities
- Compared with data on movements by mode
  - Road
  - Rail
  - Coastal shipping
- Identify gap and estimate the pattern of traffic that this represents.
- Allows estimates to be made of the sector as a whole.

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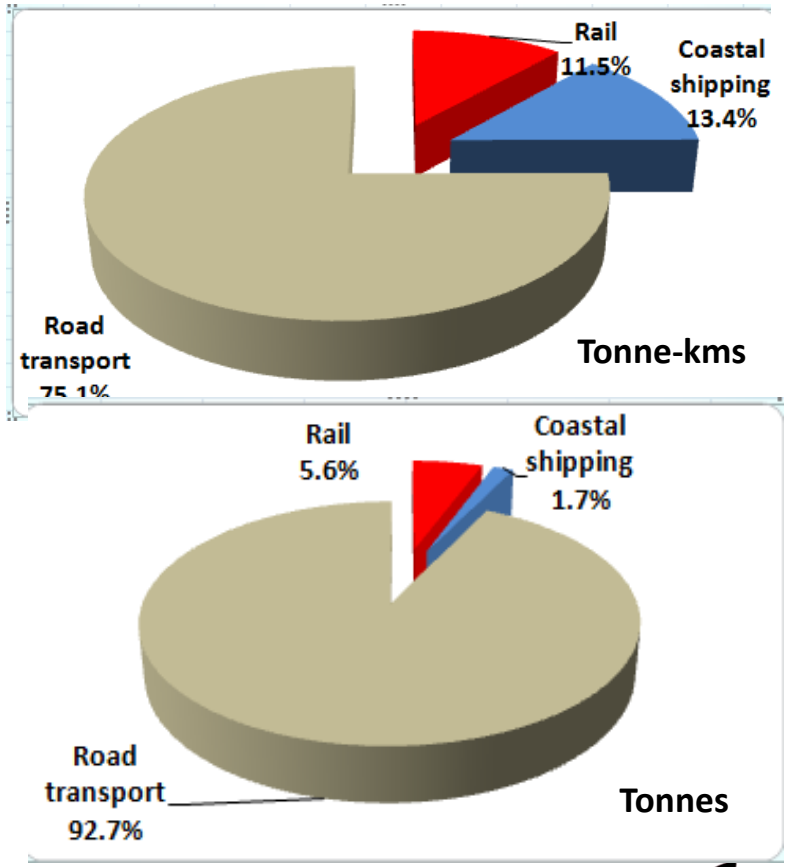
Results for 2017/18

- Overall results
  - 279m tonnes (cf 236m in 2012)
  - 33bn tonne km (29.5bn, adjusted)
  - Average haul 117km (111km)
- Modal splits
  - Road 93% of tonnes, rail 6%, coastal 2%
  - Road 75% of tonne km, rail 12%, coastal 13%
- Modal splits reflect longer hauls for rail and even longer for coastal shipping (mainly oil and cement)



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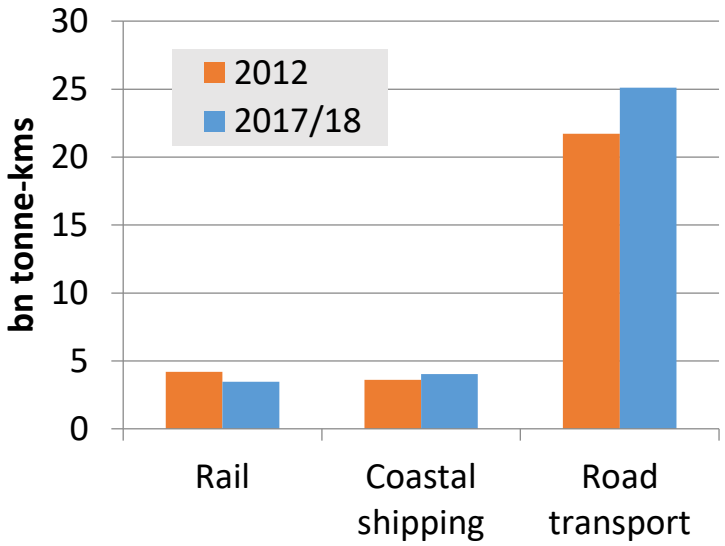
Changes since 2012

Total changes in freight movements by mode 2012-2017/18 (billion tonne km)

Mode	2017-18	2012	Growth
Rail	3.47	4.19	-17%
Coastal Shipping	4.04	3.61	12%
Road	25.11	21.71	16%
Total	32.62	29.51	10.5%

Note that the total 2012 tkm has been adjusted upwards since the 2014 report

Rail decline because of Kaikoura earthquake disruption and reduction in coal



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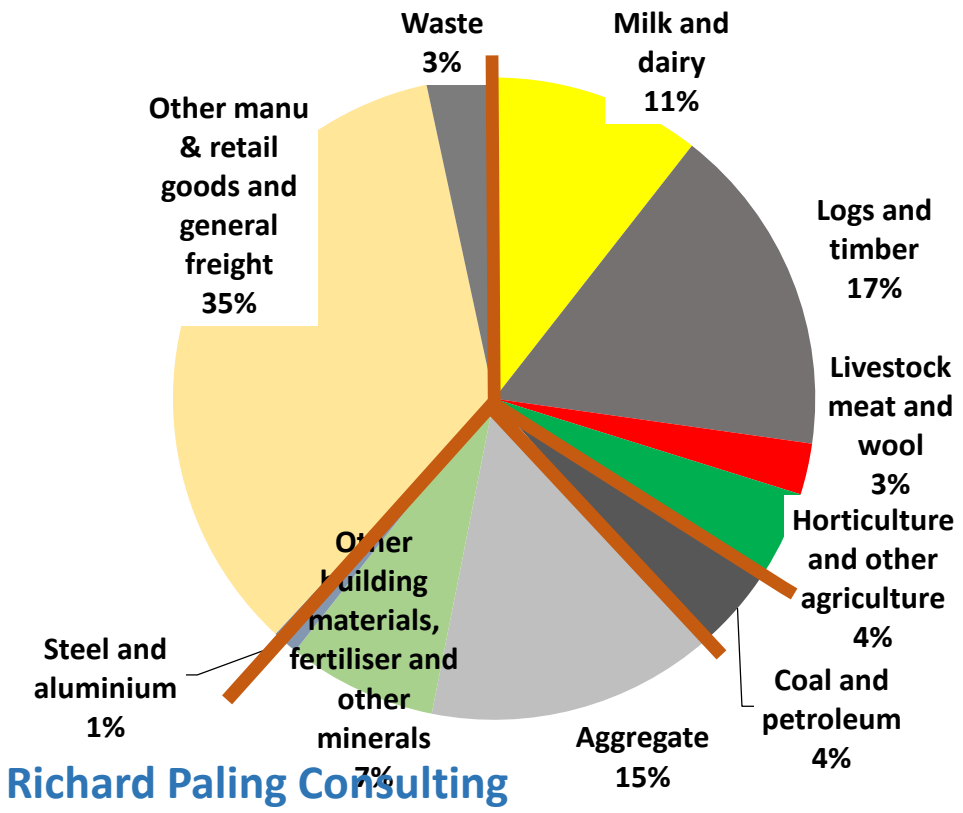

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- Freight divided into 4 categories
- In tonnage terms
  - Agricultural products 35%
  - Coal and petroleum 4%
  - Building materials and waste 25%
  - Manufactured and retail goods 36%

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Forecasting the future

- The MoT freight model uses a combination of approaches to forecast future flows
- Study brief just to forecast supply driven commodities
- Internal model estimates for other commodities
  - Demands dependent on a number of factors
  - Primarily population and GDP growth at a regional level and a range of other factors
  - Pivot off observed data.

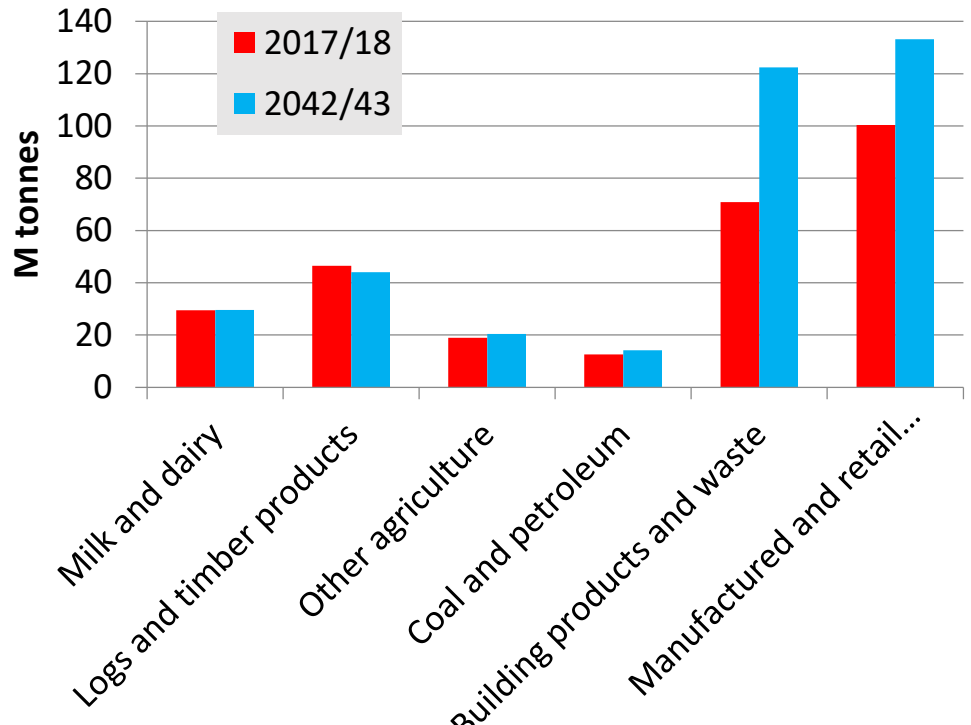
Supply driven commodities

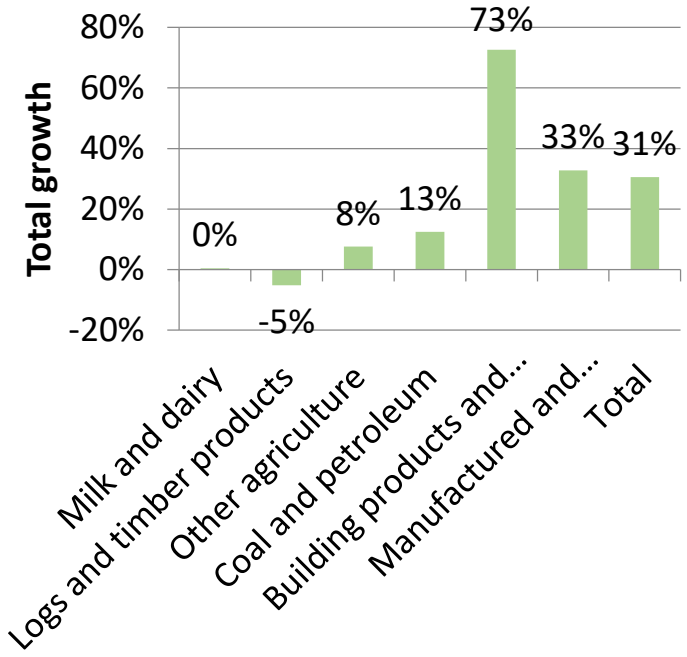
- Dairy
  - Growing evidence that at peak dairy in volume terms
  - For future have assumed broadly constant total output
- Logs
  - More volatile picture
  - Wall of wood seems to be happening or have happened
  - Constraints emerging in supply chains
  - Assumed flat over immediate future and then followed MPI Forecasts
- Horticulture
  - Growth especially reflecting apples and kiwifruit
- Other agricultural products
  - Assumed no growth

Demand driven commodities

- Not in brief for NFDS update
- However preliminary outline forecasts produced for 2042 using estimates for 2017/18 and MoT model
- Not official forecasts
- Total flows
  - 2017/18 279m tonnes
  - 2042/43 364 m tonnes
  - Total growth 31 per cent
  - Or 54 per cent 2012-2042/43

Total forecasts by commodity group 2017/18-2042/43





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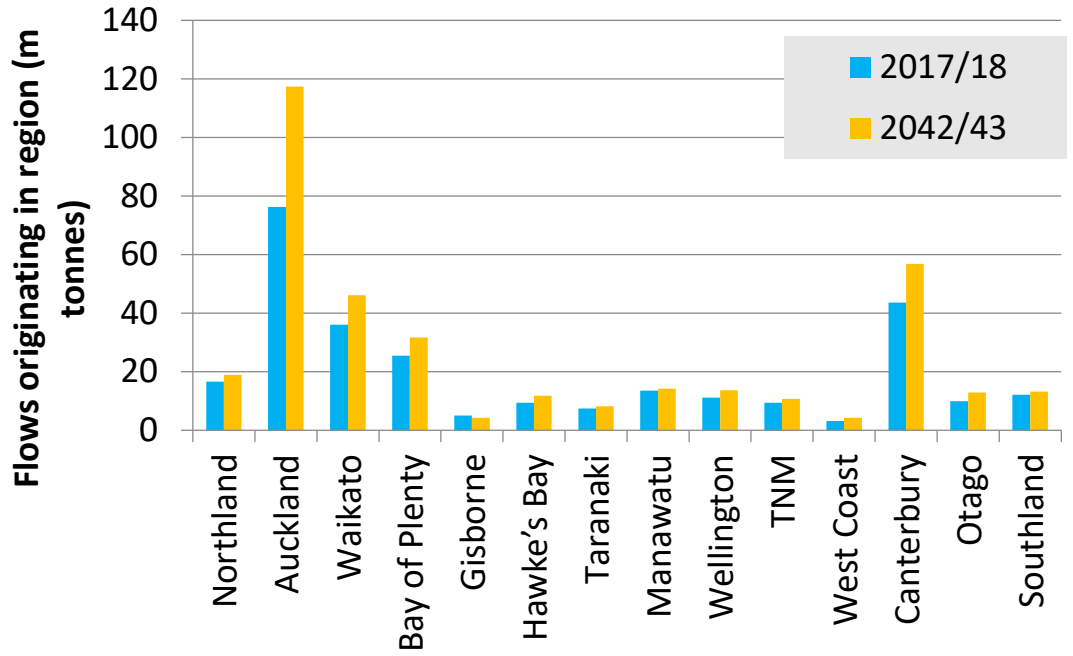
Forecasts by region



- Two thirds of forecast growth focussed on golden triangle and Canterbury
- Reflects low growth in agricultural products from other regional economies
- Higher growth related to population and economic growth in Upper North Island and Canterbury

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Key findings

- Forecasts show high growth for commodities associated with population and employment growth
- Lower share for agricultural products
- Increasing balance towards major centres in Golden Triangle and Canterbury