Australia’s economy depends on the ability to move freight around the country for use or to our ports for export. It is important for Australia’s competitiveness that transport can maximise efficiencies to offer as competitive a price as possible when moving freight. It is also important in meeting future emission reduction targets that Australia continues to reduce its emissions throughout the supply chain by utilising more efficient modes where applicable.

It is impossible to directly air, rail or sea freight deliver a package to your house, and it is equally impossible to road freight imports into Australia. A combination of these modes will be required for you to receive a package. It therefore is important that these modes work together to boost efficiencies.

An intermodal hub is an “inland port” that can transfer goods off one mode and onto another mode to maximise these efficiencies. It is more expensive to move freight by road on a per tonne basis in comparison to sea and rail. Furthermore it also produces more greenhouse gas emissions than the other freight transfer modes, with the exception of air freight. Intermodal hubs are therefore positioned in areas that can facilitate the transfer of road, rail and often sea freight. By utilising or allowing for the use of more efficient transport modes, intermodal terminals can reduce the transport costs and emissions on a per tonne-kilometre basis.

**Environmental Benefits**

Intermodal terminals primarily produce sizeable emission reductions through facilitating the greater use of rail transport in moving goods throughout the country. Freight can be railed to the intermodal terminal from a port or distant rail terminal and stored to be carried on trucks for the final part of their journey.

To emphasize these benefits the example of the future Moorebank Intermodal Freight Precinct is often used. One reason among many others the future freight precinct is being developed is to help relieve the pressure of congestion around Port Botany.
The freight precinct will allow a significant amount of containers arriving in the port to be railed out of the port where previously they would have had to be road transported in many cases. Presently road transport operators use about 8 litres of fuel per container transporting it from Moorebank to Port Botany. Rail transport uses about half of that.

Moorebank Intermodal Company reckons for every 100,000 containers switching from road to rail would save an estimated 350,000 litres of diesel, producing 950 fewer tonnes of greenhouse gas emissions.

According to their projections by the year 2030 the freight precinct could be responsible for the saving of 4 million litres of diesel, producing 11,000 fewer tonnes of greenhouse gas emissions annually.

Similarly an Intermodal Freight Terminal at Wimmera in Victoria on the Adelaide-Melbourne interstate opened in 2012. While previously a capacity constrained intermodal terminal existed 10km south west in the city of Horsham, the new terminal has been instrumental in increasing the amount of freight carried by rail. Since opening in 2012 it has been responsible for the increased containers being transported by rail from the Wimmera region from 13,500 TEUs to 22,000 TEUs in 2013/14. This again, has significantly reduced the amount of truck trips to the Port of Melbourne, a 600 kilometre round trip.

**Pooling Freight**

Intermodal terminals also create further efficiencies in the transport of freight. A sizeable percentage of road freight is transported in trucks that are not at capacity. This creates inefficiency as many trucks could increase their carrying capacity without impacting too greatly on their fuel use.

Intermodal terminals allow freight to be pooled in one central location, and transferred to a city or other area when a truck has enough cargo to increase its carrying load. This will result in less fuel being used in transferring an equal amount of freight, producing fewer emissions. It will also increase the profit margins of road transport operators as they carry more freight on a single run.

**Less Congestion**

Pooling will also result in less congestion by maximising the amount of freight that can be carried on a truck. However, through allowing for the greater utilisation of rail transport intermodal terminals will produce a much more significant impact in reducing congestion than pooling alone.

Again referring to the example of Moorebank Intermodal Freight Precinct each additional freight train ran could replace 110 interstate trucks and up to 45 trucks travelling to and from Port Botany. When running at full capacity the freight precinct will reduce truck movements by 3,300 between Port Botany and Moorebank every day. This will result in 1.2 million fewer truck journeys per year or just short of 25,000,000 kilometres a year. This will have significant fuel and emission saving results.

Heavy congestion is already experienced at Port Botany on the M5 route, however this congestion is likely to be significantly exacerbated by the nation’s growing freight task. The number of containers forecasted to pass through Port Botany is expected to double if not triple from their current 1.7 million TEUs in coming years. By 2030 up to 7 million TEUs are expected to pass through Port Botany, this will produce significant constraints on the transport network and emphasises the importance of putting as much freight as possible onto rail.

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*Future Moorebank Intermodal Terminal Design*