



NSW Empty Container Supply Chain Study

Summary of findings, recommendations and next steps

Empty Container Supply Chain Study: Summary

Background

Port Botany is a vital part of Australia's freight and logistics supply chain. As Australia's second largest container port, it plays a critical role in connecting NSW with the rest of the world and keeps the state's economy functioning. Containerised freight at Port Botany is dominated by imports. Demand for full import containers exceeds demand for full exports by a ratio of 2.5 to 1. Empty containers are the result of this imbalance and their efficient movement and storage is a key component of the containerised freight supply chain.

In 2019, Transport for NSW (TfNSW) commissioned a review into issues associated with the NSW empty container supply chain. The study was undertaken by NineSquared and Neil Matthews Consulting, and investigated various concerns raised by industry including service levels at Empty Container Parks (ECPs), fees and charges and empty container redirections. The study investigated these issues, their impacts on the supply chain and solutions which could address them.

The study aligns with a commitment in the NSW Freight and Ports Plan 2018-2023 to collaborate with industry to investigate how to improve the movement of empty containers into and out of Port Botany.

Findings

The study found that there is currently insufficient ECP capacity in Sydney to manage the cycles in demand, creating inefficient movement and handling processes. There has been no meaningful investment in ECP capacity since 2015 despite the growing freight task. The study estimated that additional ECP capacity of around 4,000 TEUs will need to be provided by 2021 and 12,000 TEUs by 2031 to cater for the growth in the containerised freight task.

Capacity expected to be provided by intermodal terminals will assist in addressing the lack of ECP investment since 2015. However, industry feedback suggests that structural changes to the empty container supply chain will take time to occur because of various factors including the likelihood for shipping lines to continue to preference ECPs near the Port for the storage of empty containers to minimise transport costs and time constraints.

While the need for increased capacity for empty containers is a concern, issues with operational practices around their movement and storage are exacerbating this. The study identified various issues that are contributing to this, including a lack of transparency over supply chain performance and a lack of information sharing needed to provide an objective picture of operations. Broader commercial arrangements and operational practices were also found to have exacerbated the effects of capacity shortages and have increased supply chain costs. These impact upon the amount of time available to unload and return import containers, and include:

- *Progressive changes to equipment handling practices by shipping lines*
- *New/additional customs requirements*
- *Limitations on ECP operating hours and practices by road transport operators*
- *Operational issues at ECPs and empty container redirections*
- *The current practice of applying empty container redirections without minimum notice periods or expiration dates.*
- *Disparity in the use of Electronic Data Interchange by shipping lines and other information management practices*

The review has estimated that inefficiencies in the NSW empty container supply chain result in additional costs of \$49 million per year.

Demand for imports is expected to grow given NSW's population is projected to increase from 7.7 million in 2016 to 9.9 million in 2031. It is estimated that empty container storage demand will increase from 38,000 TEUs in 2015 to more than 59,000 TEUs in 2031. This will further exacerbate issues with ECP capacity, such that the costs associated with empty container inefficiencies are expected to increase to \$100 million per year.

These unnecessary costs impact on the competitiveness of Sydney and NSW as a place to do business. They impact on all parties in the empty container supply chain. At present, empty container logistics is seen as a cost impost rather than a necessary and important part of the containerised freight supply chain. The supply chain is not conceptualised or managed in a way that aligns with its scale and importance given the trade imbalance at Port Botany.

The study found that coordinated actions across the empty container supply chain could have an immediate impact in addressing current issues and reducing unnecessary costs, and that a large number of actions can be implemented voluntarily by industry. Actions to improve the transparency of supply chain performance were recommended as a priority.

Recommendations and next steps

Recommendations made by the study and next steps that will be taken by TfNSW are discussed below

1. Industry should implement a series of immediate actions to address issues with the NSW empty container supply chain. To facilitate this, Transport for NSW should, under the oversight of the Port, Transport, Logistics, Taskforce (PTLT), establish a temporary empty container working group to:
 - a) Implement actions which can be taken by industry on a voluntary basis (see below)
 - b) Provide information to support the development of performance measures for the NSW Empty Container Supply Chain (see Recommendation 5)
 - c) Develop and implement other options for improving the collection and sharing of information, such as formal alliances and information sharing arrangements between ECP operators and selected industry representatives
 - d) Identify opportunities for transport operators (either individually or collectively) to develop additional empty container storage capacity in Western Sydney
 - e) Scope targeted trials of new equipment or systems which could reduce pressure on ECPs

This working group should include representatives of shipping lines, road and rail transport operators, ECP operators, stevedores and freight forwarders and selected industry associations. The working group should be chaired by Transport for NSW. If voluntary actions cannot be meaningfully progressed within a 6 month period, measures to compel changes in supply chain practices should be implemented.

TfNSW will establish a temporary Empty Container Working Group by the end of July 2020 with the Draft Terms of Reference circulated and a combination of invitations and expressions of interest issued in July 2020. This Working Group will facilitate industry implementing measures to address recommendation 1. If voluntary actions cannot be meaningfully progressed within a 6 month period, measures to compel changes in supply chain practices will be considered by TfNSW.

2. Transport for NSW should implement a telematics and/or CCTV system to independently monitor delays and other issues at ECPs, with information provided to road transport operators via the Port Botany Performance Data app or other appropriate channel.

TfNSW implemented Phase 1 of the Truck Tracking project on 17 December 2019, and is currently in the process of implementing Phase 2. This project will provide independent monitoring and an independent data source for understanding road transport network usage, demand and performance in and between the port precinct, including ECPs, distribution centres and intermodal terminals.

3. ECPs should voluntarily provide data on capacity, demand, dwell time, throughput and utilisation to Transport for NSW, to be shared among members of the empty container working group (see Recommendation 1).

This recommendation will be addressed in the Terms of Reference for consideration of the working group referred to in the response to recommendation 1.

4. Transport for NSW should develop performance measures for the NSW Empty Container Supply Chain using data provided by industry. This should include:
 - a) Empty container redirection notices issued via ECP booking systems.
 - b) Utilisation of extended operating hours for ECPs.
 - c) ECP capacity and utilisation.
 - d) Dwell time reports for empty containers by size, type and shipping line
 - e) Average truck turnaround times at ECPs.
 - f) Use of rail for the return of empty containers to stevedore terminals.
 - g) Use of EDI in ECP booking systems.

Performance reporting should initially be developed using information shared among industry stakeholders via the PTLT and empty container working group. If required, a data sharing agreement should be established between key stakeholders to enable this.

The development of performance measures will be facilitated through the working group referred to in the response to recommendation 1.

5. In the event that voluntary actions cannot be meaningfully progressed within a 6 month period including sharing data required to develop empty container supply chain performance measures, Transport for NSW will be implementing measures to compel the industry to make changes in practices to reduce unnecessary costs in the supply chain. These may include but are not limited to:
 - a) Mandatory ECP performance reporting based on items identified in Recommendation 4, with performance measures published on the Transport for NSW website.
 - b) Reporting and minimum notice periods for redirections issued by ECP operators and other entities via ECP booking systems.
 - c) Minimum notice periods for changes to user charges by ECPs.
 - d) Mandatory standards for ECPs and transport operators using ECPs.
 - e) Curfew periods for stack runs from ECPs
 - f) Requirements for shipping lines to provide EDI information in ECP booking systems.
 - g) Regulation of charges by ECPs

Implementing these requirements will involve extending and/or revising Port Botany Landside Improvement Scheme under Part 3 of the Ports and Maritime Administration Regulation 2012 to apply to ECPs and transport operators using ECPs. Broader improvements to this scheme (e.g. changes to incentivise use of high productivity vehicles and two-way loading) could also be considered.

The viability of an interpretative rule on container detention similar to that being considered in the US should also be assessed. This could facilitate more transparent, consistent, and

reasonable container rental/detention practices.

Costs associated with the development and operation of any regulatory measures should be recovered directly from the freight industry.

The economic costs and benefits of any regulatory measures and cost recovery mechanisms should be assessed by Transport for NSW prior to implementation.

If voluntary actions cannot be meaningfully progressed within a 6 month period, measures to compel changes in supply chain practices will be considered by TfNSW.

6. Transport for NSW and NSW Ports should gauge industry interest in developing longer term solutions for empty container supply chain issues identified in this report. This may include:
 - a) The provision of new ECPs, including a joint venture to develop and operate an ECP at Enfield.
 - b) Improvements to existing ECPs.
 - c) Transport operator led proposals including options to commercialise the staging containers through transport operator yards.
 - d) Opportunities to increase the use of triangulation through existing or new technology platforms.
 - e) Other solutions involving new technology and equipment.

This recommendation will be addressed in the Terms of Reference for consideration of the working group referred to in the response to recommendation 1.

7. Transport for NSW, NSW Ports and rail freight operators should accelerate work to enable rail to play a stronger role in the empty container supply chain, encompassing
 - a) Scoping operational improvements and other measures needed to enable greater bi-directional movement of full and empty containers.
 - b) Assessing any new commercial arrangements that may be needed to be developed by IMT/rail operators to initially assist the growth empty containers on rail, recognising that a proportion of the road transport cost avoided by not travelling to Botany needs to be shared with IMT operators and shipping lines.

TfNSW will commence a project in the 2020/2021 financial year to investigate options to enable greater bi-directional movements of full and empty containers to and from Port Botany.

Many of the recommendations of the review are voluntary actions which can be implemented by industry. TfNSW is committed to working with industry, through the Empty Container Working Group, to achieving these recommendations to reduce unnecessary transport costs in the supply chain.