

Voluntary Port Performance Model Performance Monitoring Framework

Quarter 3, July to September 2021



Voluntary Port Performance Model – Overview

What is the VPPM?

- In May 2020, the Ports and Freight Minister advised industry of the intention of the Victorian Government to create a Voluntary Port of Melbourne Performance Model (VPPM). The VPPM comprises of a:
 - Draft protocol governing notification processes and timing for how stevedores levy fees and charges are set in respect to the landside.
 - Voluntary Performance Monitoring Framework (VPMF) which will include the development of performance metrics to provide transparency to industry and Government on the performance of the Port of Melbourne landside container supply chain.
- Initially, the VPMF will cover the landside interface at container stevedore terminals in Melbourne, including performance of container stevedores and transport operators.
- Following the Minister for Ports and Freight Launch of the [Strategic Review of the Victorian Empty Container Supply Chain](#) in September, the Department has commenced industry consultation on how to expand the VPPM to further cover the empty container supply chain.

Overview of the VPMF

- This dashboard presents data received from the three stevedores in Melbourne as part of the VPMF and covers port terminal activity for Quarter 3 2021.
- To support a consistent and standardised data set from stevedores, definitions are consistent with the Commonwealth Government's Waterline reporting and exclude bulk run data from all metrics. This meets the objectives of the VPPM by providing greater transparency to industry on land-side port operations as data is reported monthly and not aggregated at the port level. Changes to the report include:
 - Expanding the total performance measures to 16 by adding the total number of containers transported by road (Waterline metric 1.09) and number of trucks used in VBS/TAS operations (Waterline metric 1.05).
 - Restructuring the report so it aligns with the sections used in the Waterline report, with the fourth section focusing on the empty container supply chain.
- Freight Victoria would like to thank DP World, Patrick Terminals and Victoria International Container Terminal (VICT) for their continued support and collaboration in this process.
- For further information on the VPPM, please do not hesitate to contact Freight Victoria via email at freightvictoria@transport.vic.gov.au.

Voluntary Performance Monitoring Framework – Dashboard Q3, 2021

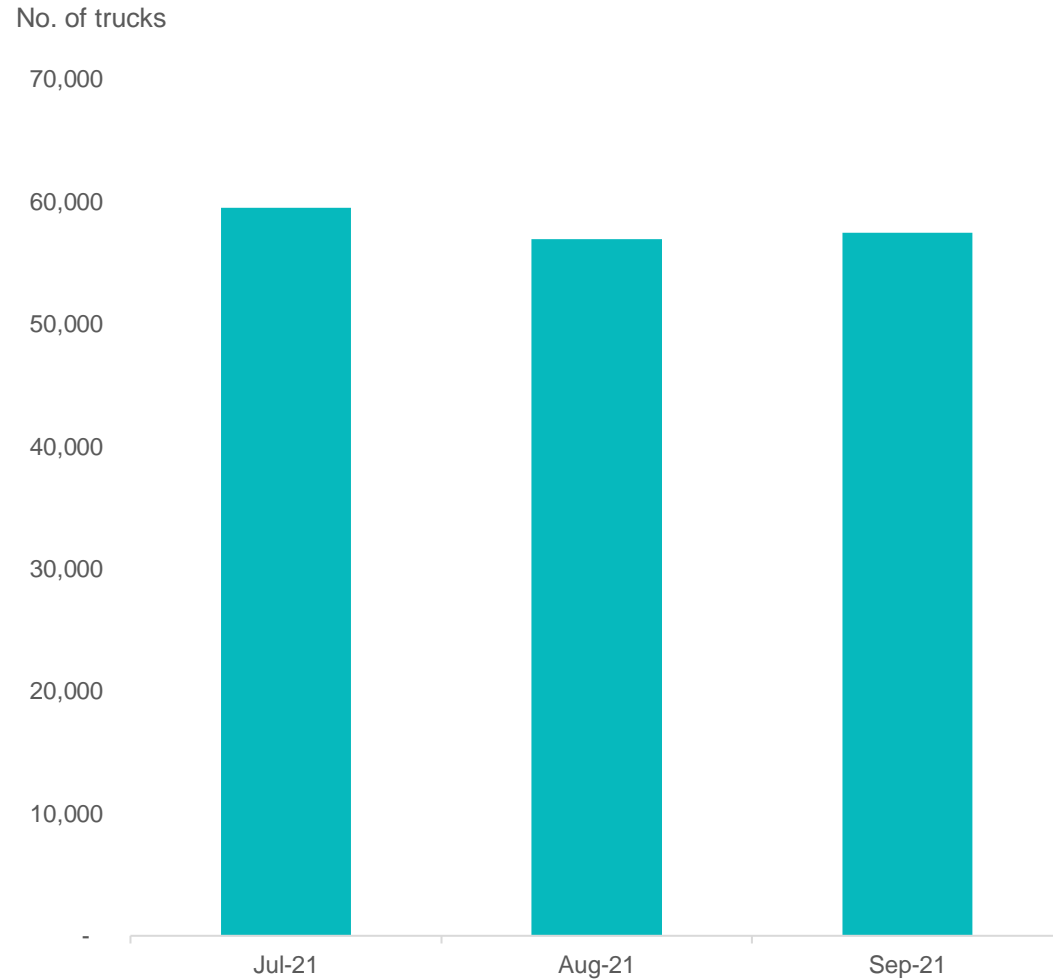


Section 1

Landside measures of
container terminal throughput



Number of trucks used in VBS/TAS operations



Source: DP World, Patrick Terminals and VICT

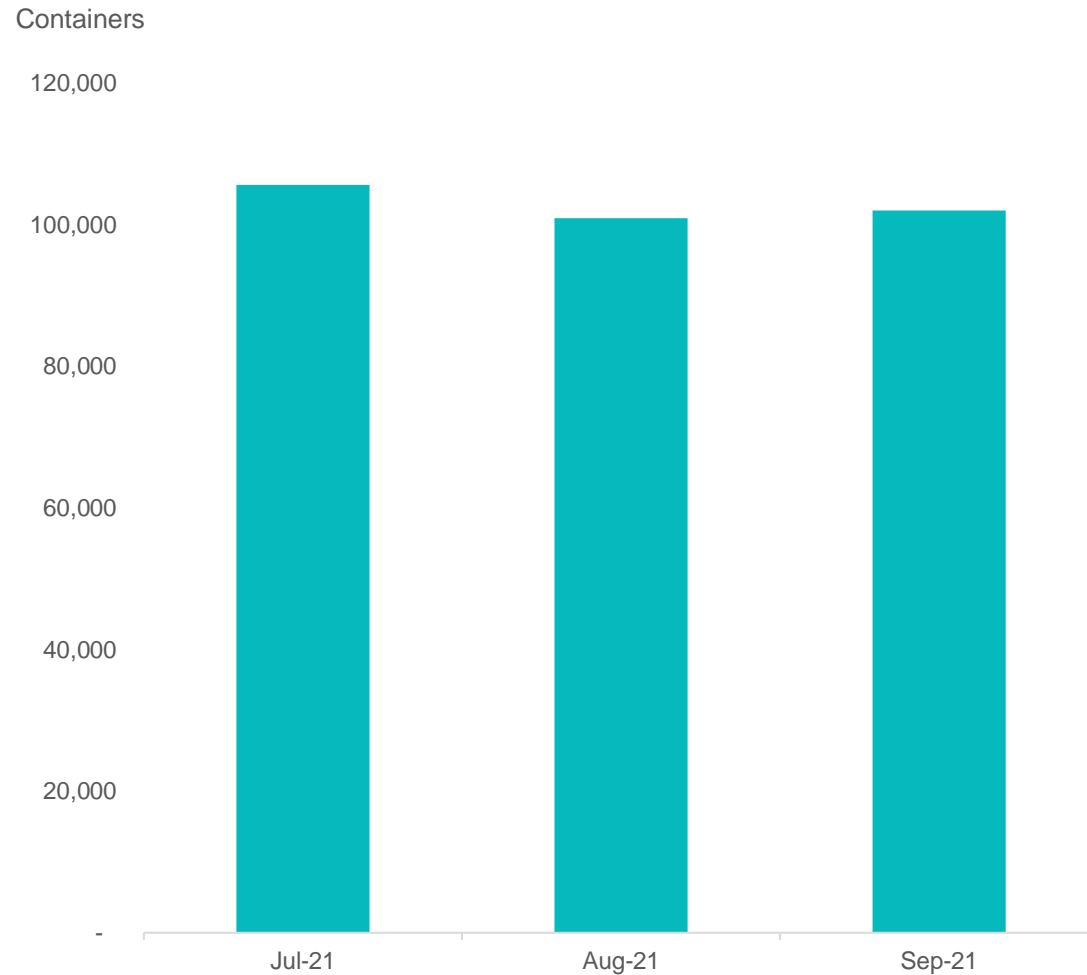
Description

As per BITRE Waterline 1.5, This is the count of trucks processed through either the vehicle booking system (VBS) or the truck appointments system (TAS). This count excludes trucks that perform bulk runs of empty containers between the container parks and container terminals. This indicator counts trucks on a round trip. That is, a truck entering a container terminal and the same truck exiting the container terminal is counted as one truck.

Notes

- N/A

Total number of containers transported by road



Source: DP World, Patrick Terminals and VICT

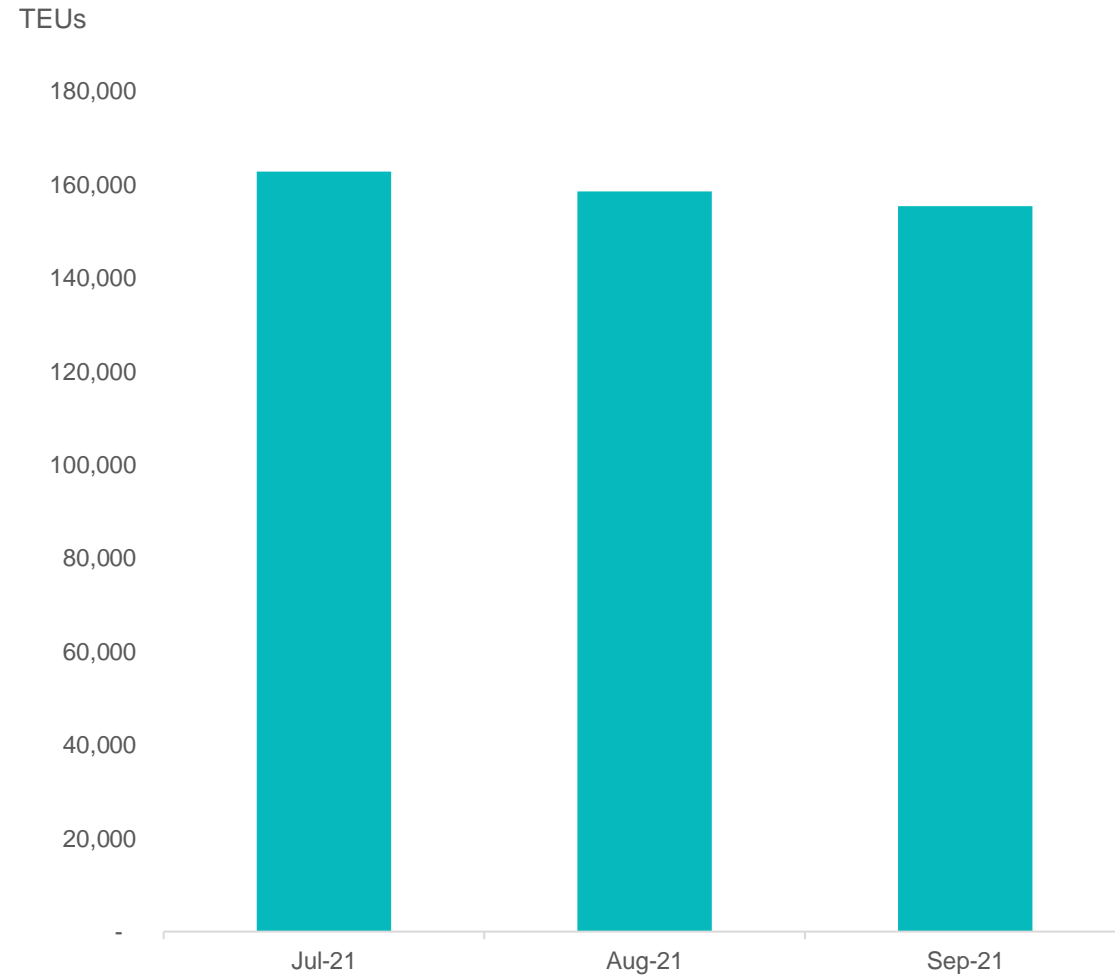
Description

As per BITRE Waterline 1.09, This indicator includes the total number of containers transported by VBS/TAS trucks. This indicator is computed using data provided by stevedores. Up to Waterline 55, this indicator included the trucks undertaking bulk runs; this has been discontinued due to inconsistent data.

Notes

- N/A

Total number of TEUs transported by road



Source: DP World, Patrick Terminals and VICT

Description

As per BITRE Waterline 1.10, this indicator includes the total number of TEUs transported by VBS/TAS trucks. Up to Waterline 55, this indicator included the number of TEUs transported by trucks undertaking bulk runs; this has been discontinued due to inconsistent data.

Notes

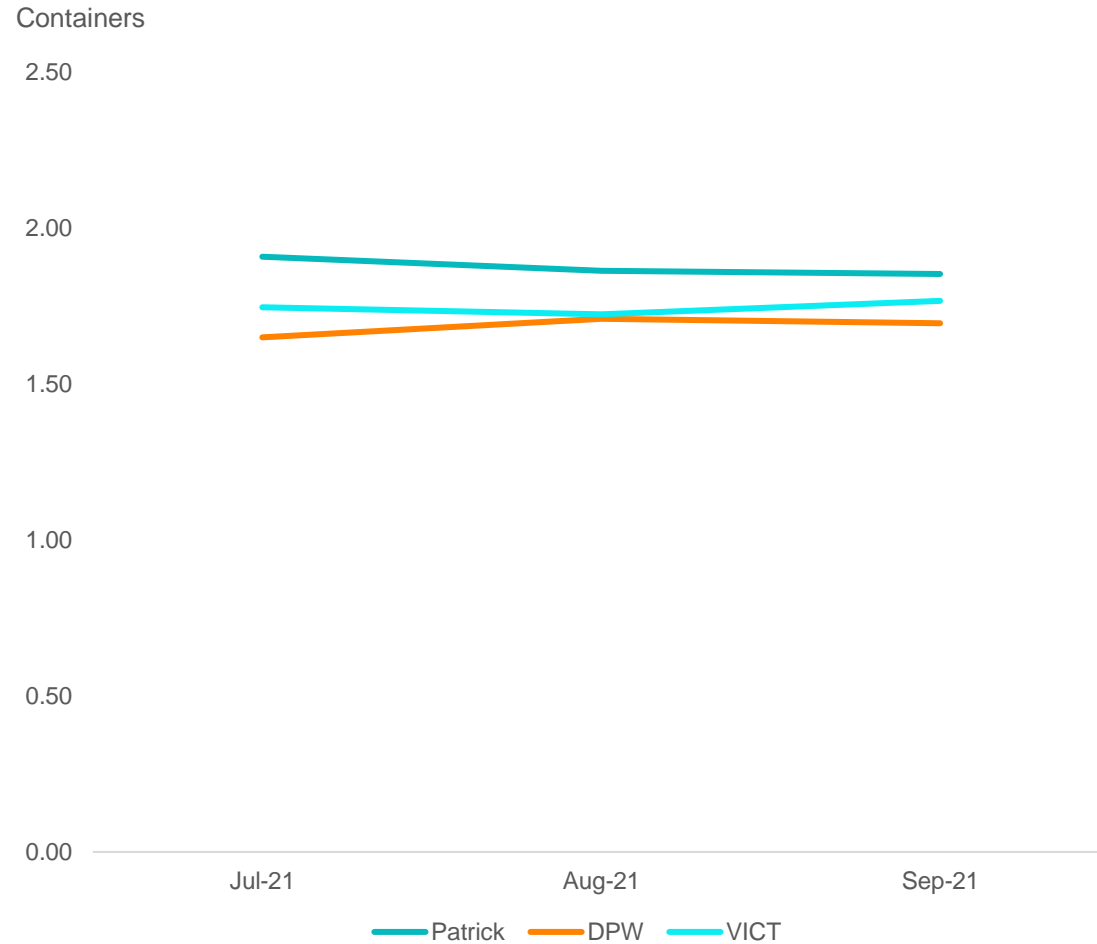
- N/A

Section 2

Landside measures of
container terminal productivity



Containers per truck



Source: DP World, Patrick Terminals and VICT

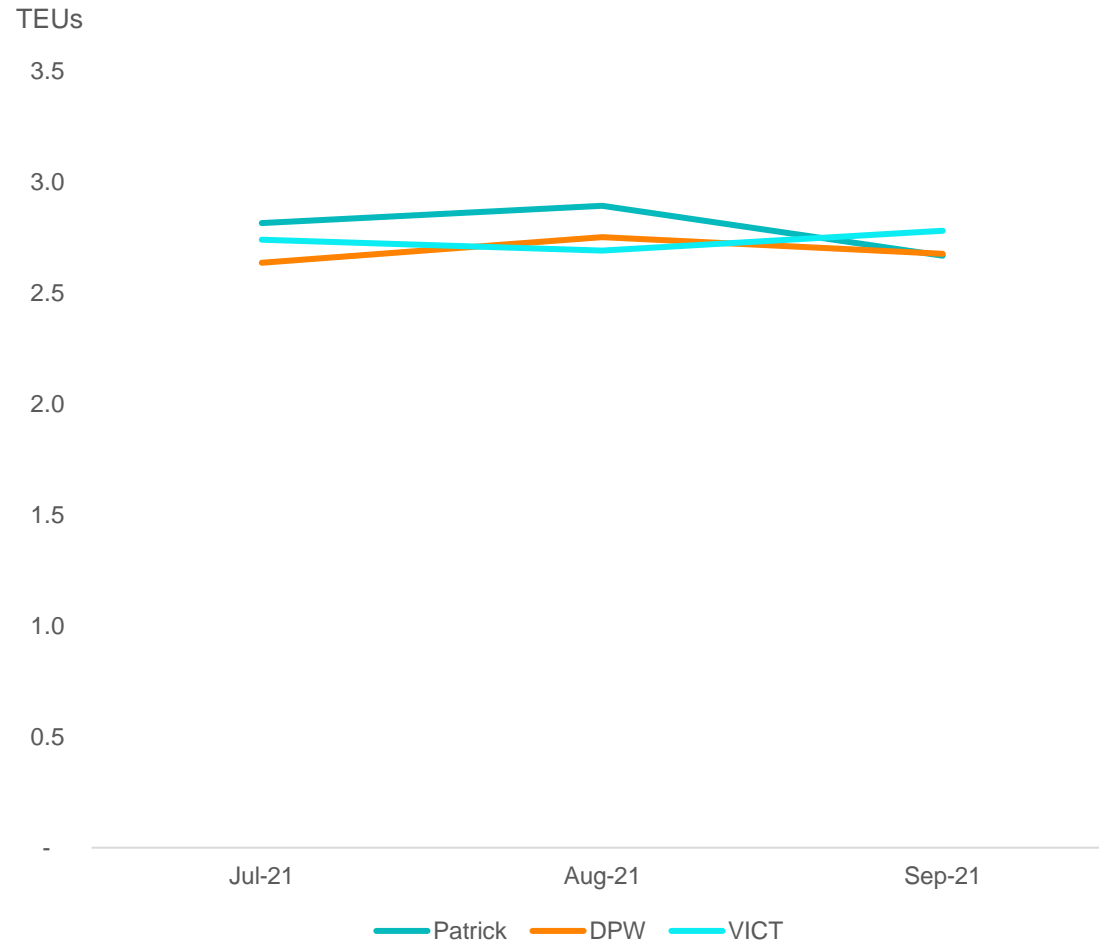
Description

As per BITRE Waterline 2.8, this indicator measures the count of containers processed through the VBS/TAS systems divided by the total number of VBS/TAS trucks used.

Notes

- N/A

Average TEU per truck movement



Source: DP World, Patrick Terminals and VICT

Description

As per BITRE Waterline Indicator 2.9, this indicator measures the count of TEUs through the VBS/TAS systems (Indicator 1.10) divided by the total number of VBS/TAS trucks used (Indicator 1.5). This indicator measures the truck efficiency in a standard unit, a TEU, and thus takes into account the different sizes of containers.

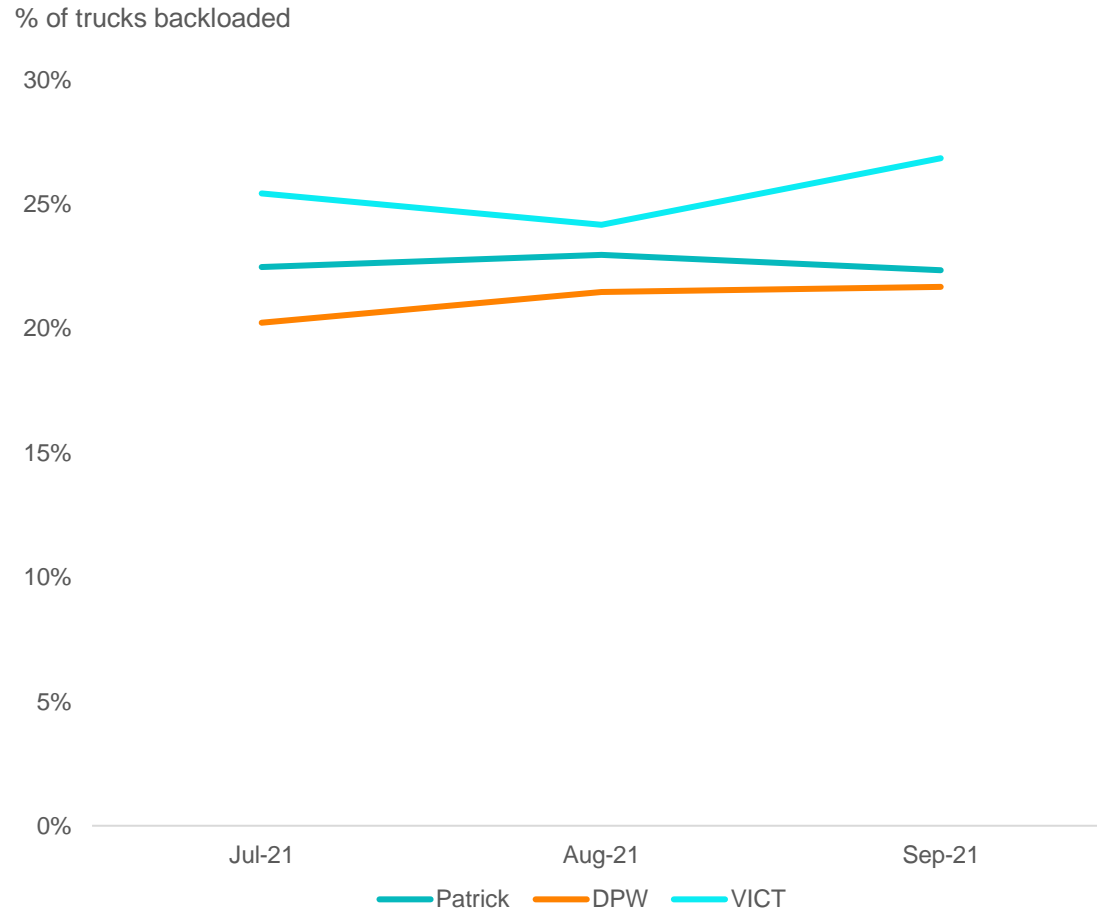
As per BITRE Waterline:

- Indicator 1.10: This indicator includes the total number of TEUs transported by VBS/TAS trucks. Up to Waterline 55, this indicator included the number of TEUs transported by trucks undertaking bulk runs; this has been discontinued due to inconsistent data.
- Indicator 1.5: This is the count of trucks processed through either the vehicle booking system (VBS) or the truck appointments system (TAS). This count excludes trucks that perform bulk runs of empty containers between the container parks and container terminals. This indicator counts trucks on a round trip. That is, a truck entering a container terminal and the same truck exiting the container terminal is counted as one truck.

Notes

- N/A

Proportion of trucks backloaded



Source: DP World, Patrick Terminals and VICT

Description

As per BITRE Waterline Indicator 2.10, this indicator shows the number of backloaded trucks as a proportion of the total VBS/TAS trucks (Indicator 1.5). Such operations make more effective use of trucks and landside infrastructure.

'Backloaded operations' refers to trucks which haul containers on both the inbound and outbound legs of a single trip to a terminal.

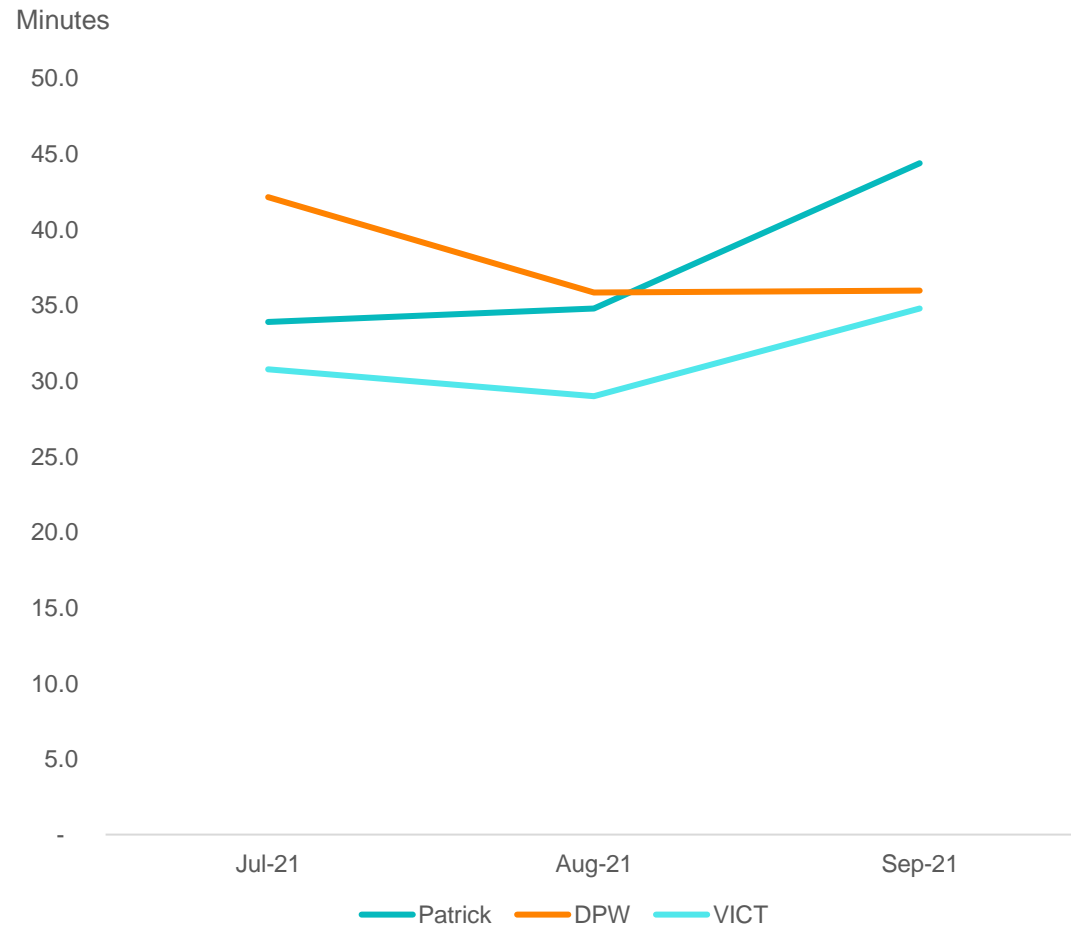
As per BITRE Waterline:

Indicator 1.5: This is the count of trucks processed through either the vehicle booking system (VBS) or the truck appointments system (TAS). This count excludes trucks that perform bulk runs of empty containers between the container parks and container terminals. This indicator counts trucks on a round trip. That is, a truck entering a container terminal and the same truck exiting the container terminal is counted as one truck.

Notes

- N/A

Average truck turnaround time (minutes)



Source: DP World, Patrick Terminals and VICT

Description

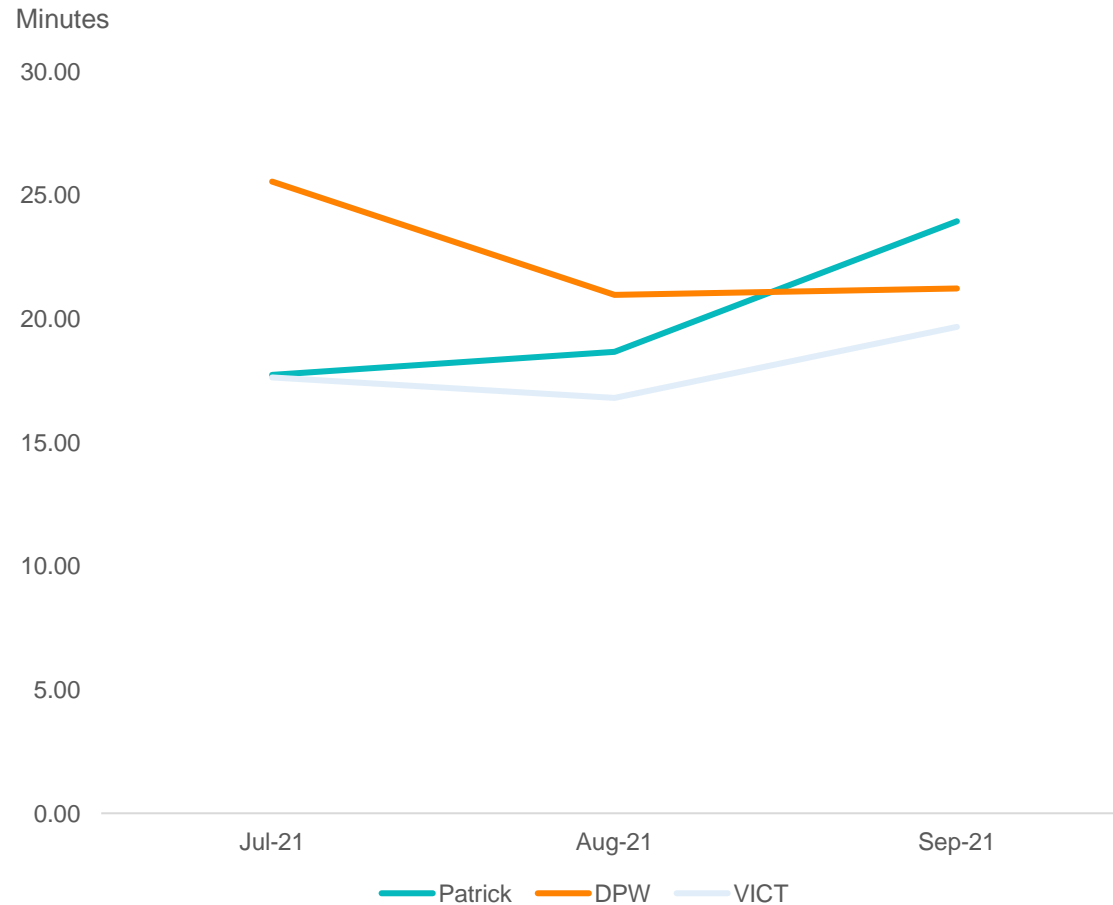
As per BITRE Waterline Indicator 2.11, this indicator measures the time elapsed from when the truck enters the “in-gate” of a container terminal to the time when the last container is loaded, i.e., “job complete”. It does not include the time the truck waits outside the gate of a container terminal, nor does it include the time taken for a truck to exit the terminal following job completion.

This is a measure of stevedoring efficiency and shows how quickly a stevedoring company processes trucks at a container terminal.

Notes

- It is noted that average truck turnaround time is influenced by the number of containers serviced per truck. It is recommended that this indicator be viewed in conjunction with ‘Containers per truck’ (See Page 9).

Average container turnaround time (minutes)



Source: DP World, Patrick Terminals and VICT

Description

As per BITRE Waterline Indicator 2.12, this indicator is calculated as the 'average truck turnaround time' (Indicator 2.11) divided by 'average containers per truck' (Indicator 2.8). It is a measure of the stevedoring efficiency in handling containers at a container terminal.

Container turnaround time improves (that is, it goes down) if either the truck utilisation rates improve, implying that the number of containers per truck increases, or the container terminal is faster in processing each truck.

Notes

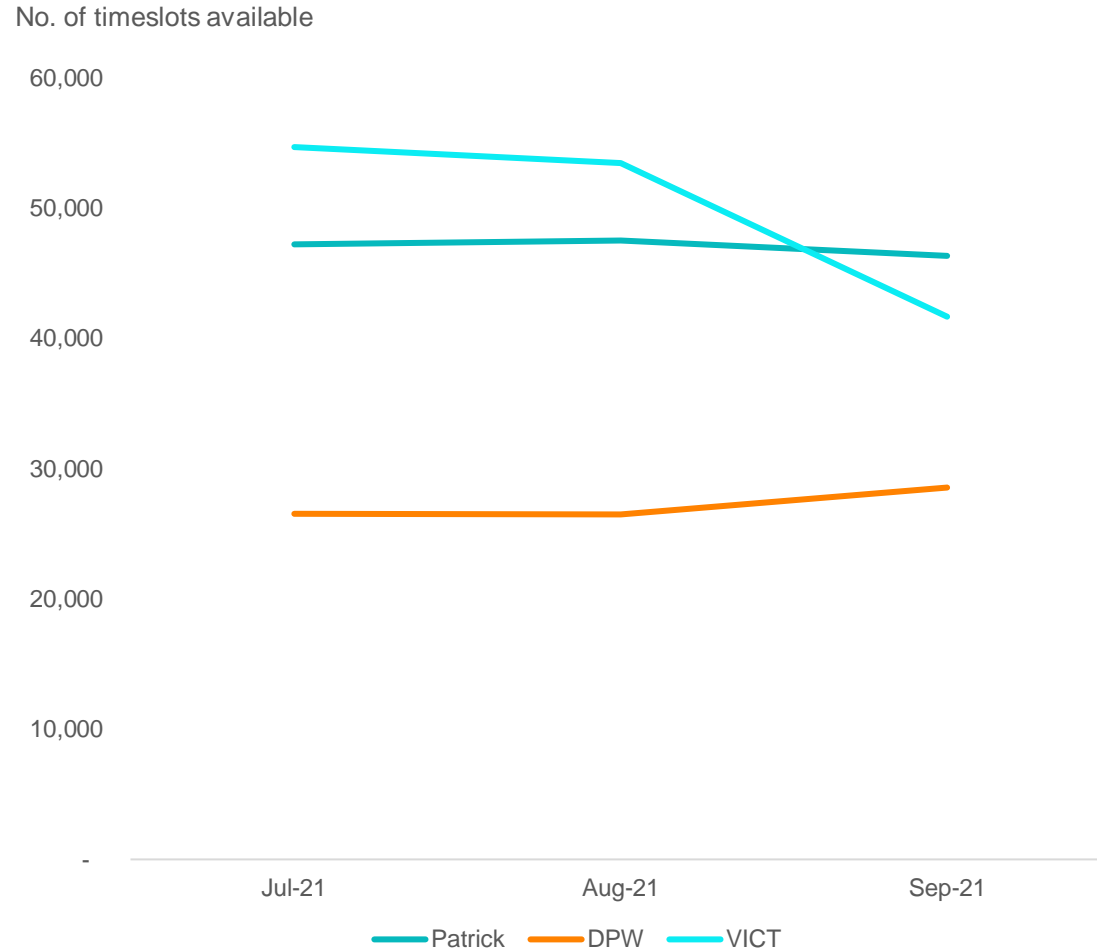
- N/A

Section 3

Vehicle booking system operations



Number of timeslots available



Source: DP World, Patrick Terminals and VICT

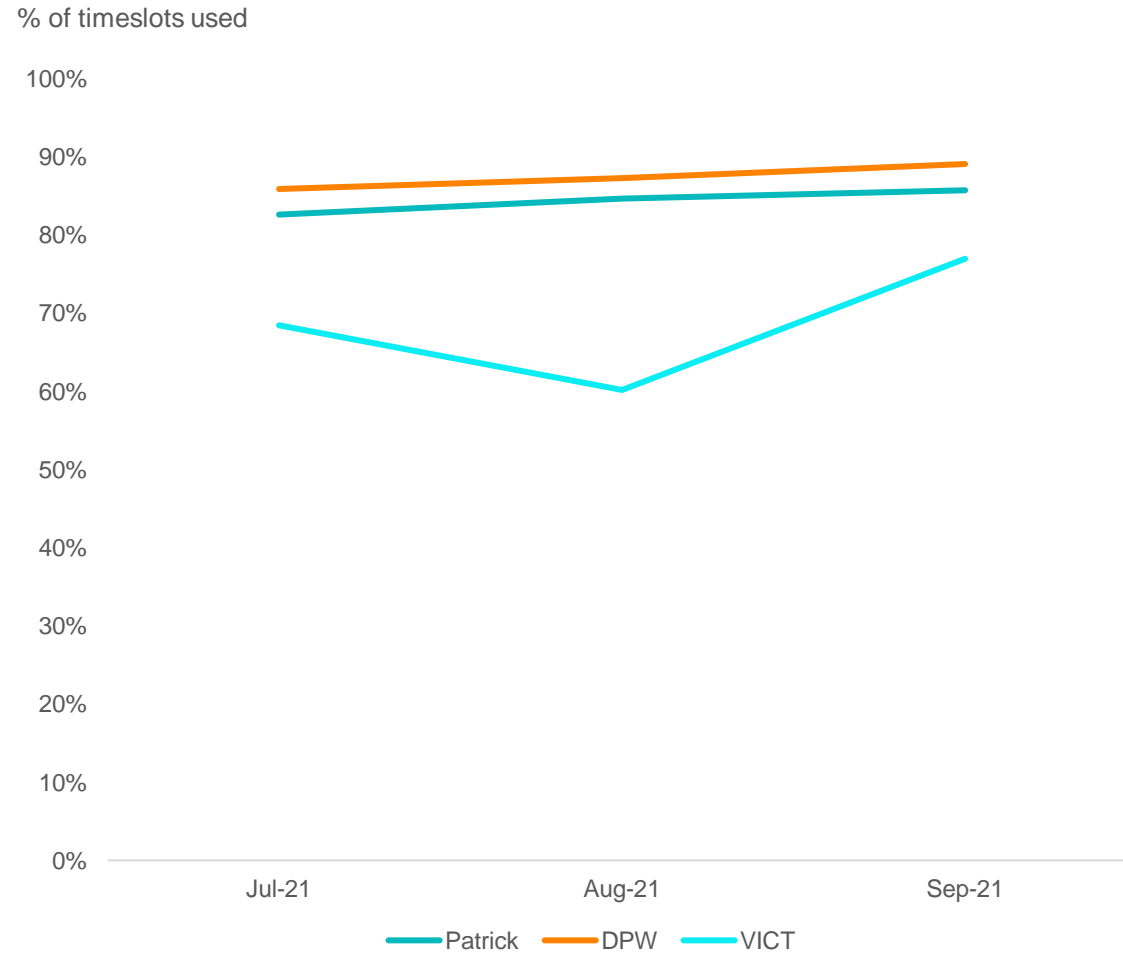
Description

As per BITRE Waterline Indicator 3.1, stevedoring companies make available truck timeslots at various times in each day, based on the deployment of container handling equipment. The main factors affecting the availability of truck timeslots are the volume of containers to be processed, and terminal resources available to process containers.

Notes

- It is noted that process of making truck timeslots available varies across the three stevedores.

Proportion of timeslots actually used



Source: DP World, Patrick Terminals and VICT

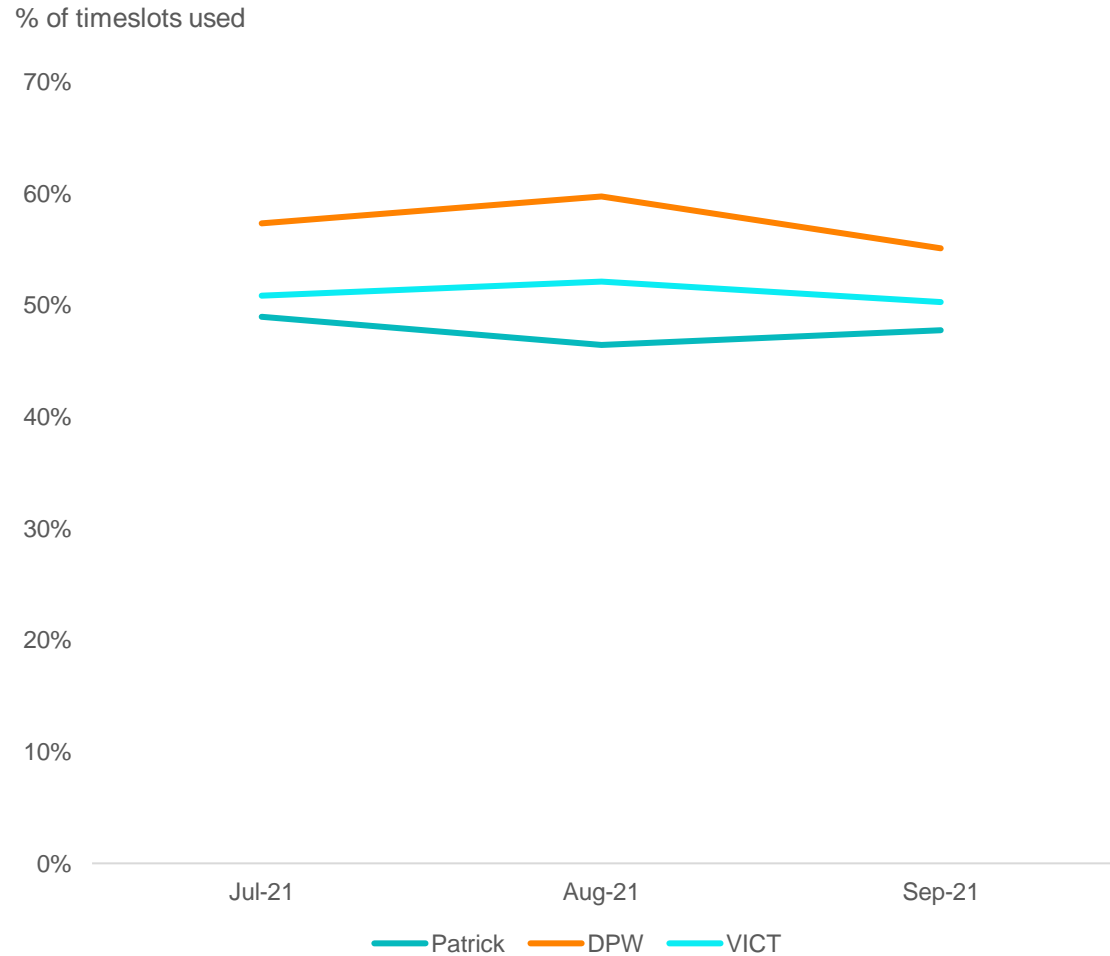
Description

This is not a BITRE Waterline indicator. This indicator measures the count of timeslots actually used (BITRE Waterline Indicator 3.2) as a proportion of the number of truck timeslots available (BITRE Waterline Indicator 3.1)

Notes

- N/A

Timeslots used in all off-peak periods as proportion of total timeslots used at container terminals



Source: DP World, Patrick Terminals and VICT

Description

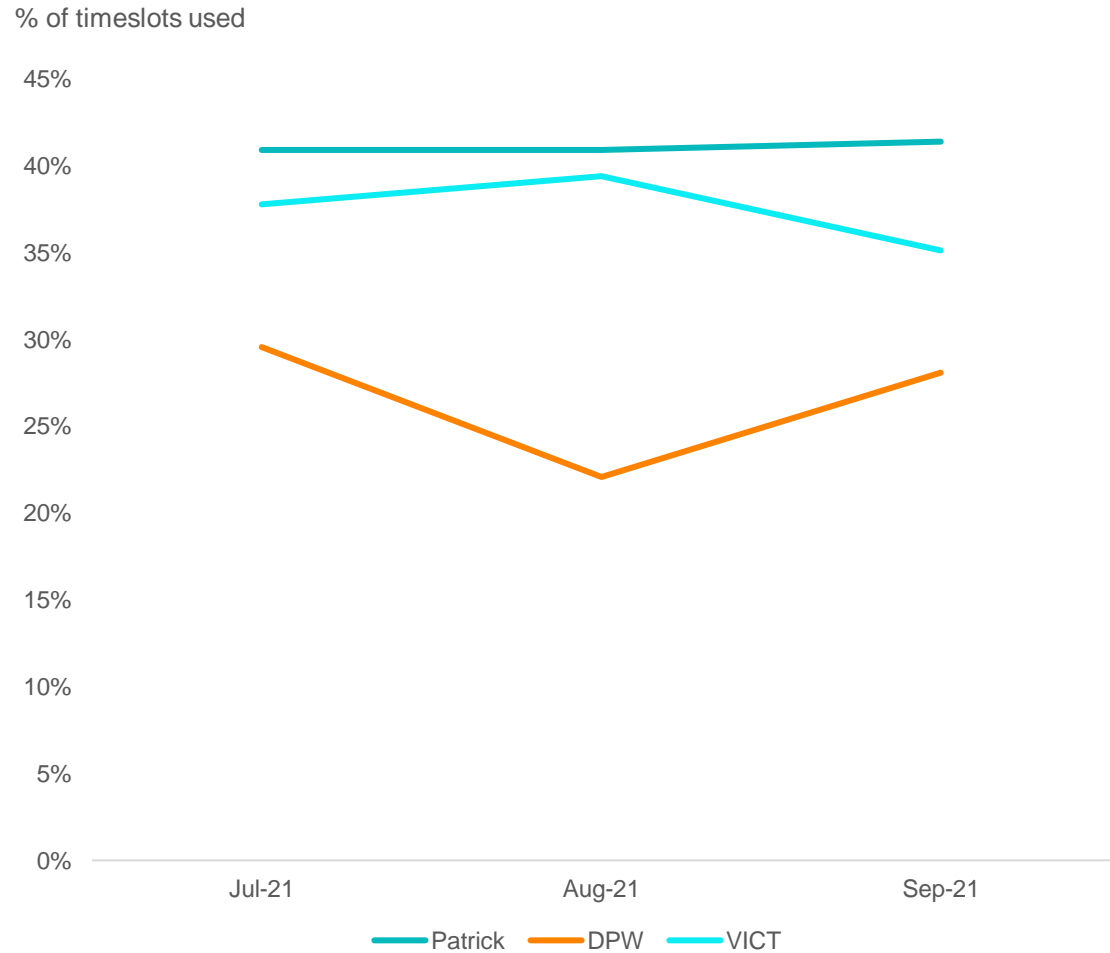
As per BITRE Waterline Indicator 3.3, this indicator is derived from BITRE Waterline Indicator 3.2 (Number of timeslots actually used) and gives the count of timeslots used by trucks during the off-peak period as a proportion of all timeslots used.

The off-peak period is defined as all time periods except Monday to Friday 6:01 AM to 6:00 PM.

Notes

- N/A

Timeslots used in Monday to Friday off-peak periods as proportion of total timeslots used



Source: DP World, Patrick Terminals and VICT

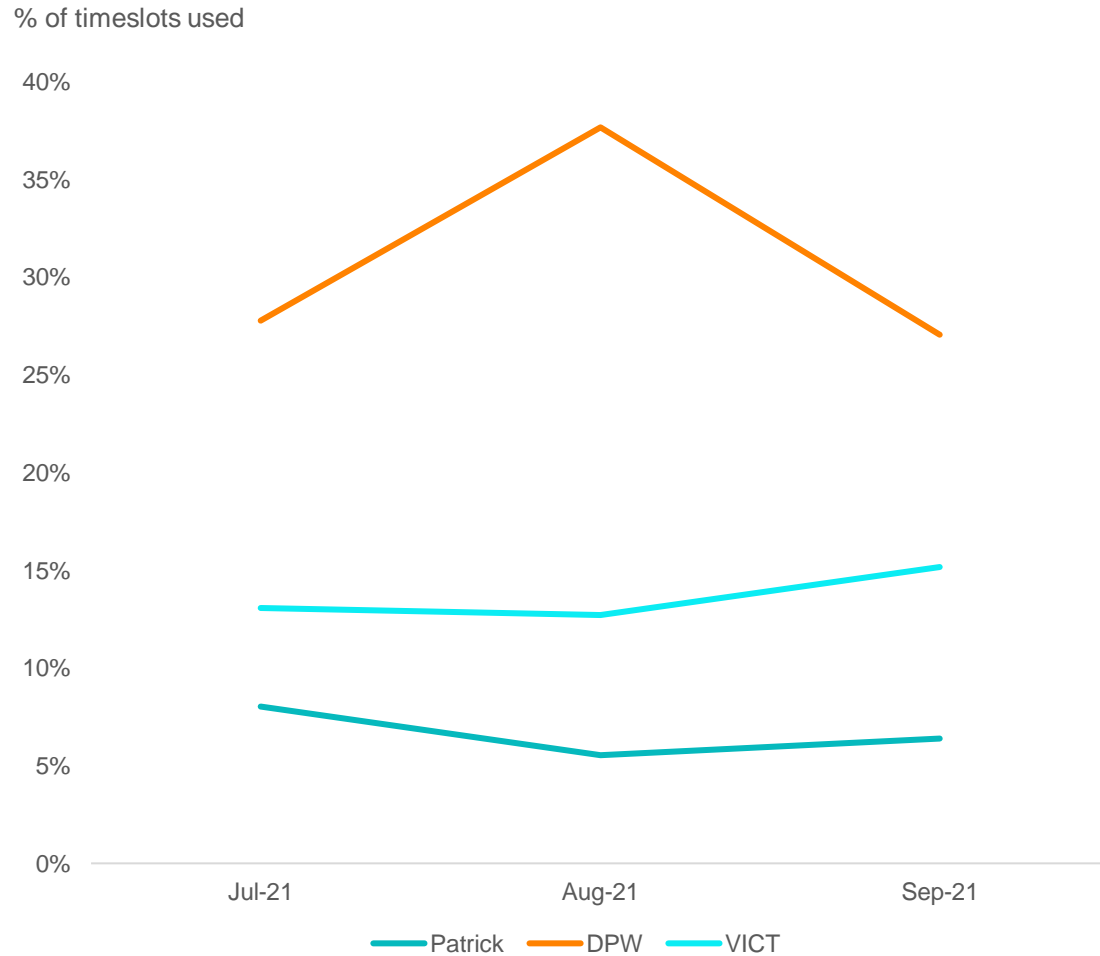
Description

As per BITRE Waterline Indicator 3.4, this indicator is derived from Indicator 3.2 and gives a count of timeslots used by trucks during the Monday to Friday off-peak period as a proportion of all timeslots used.

Notes

- N/A

Timeslots used on Saturday and Sunday as proportion of total timeslots used



Source: DP World, Patrick Terminals and VICT

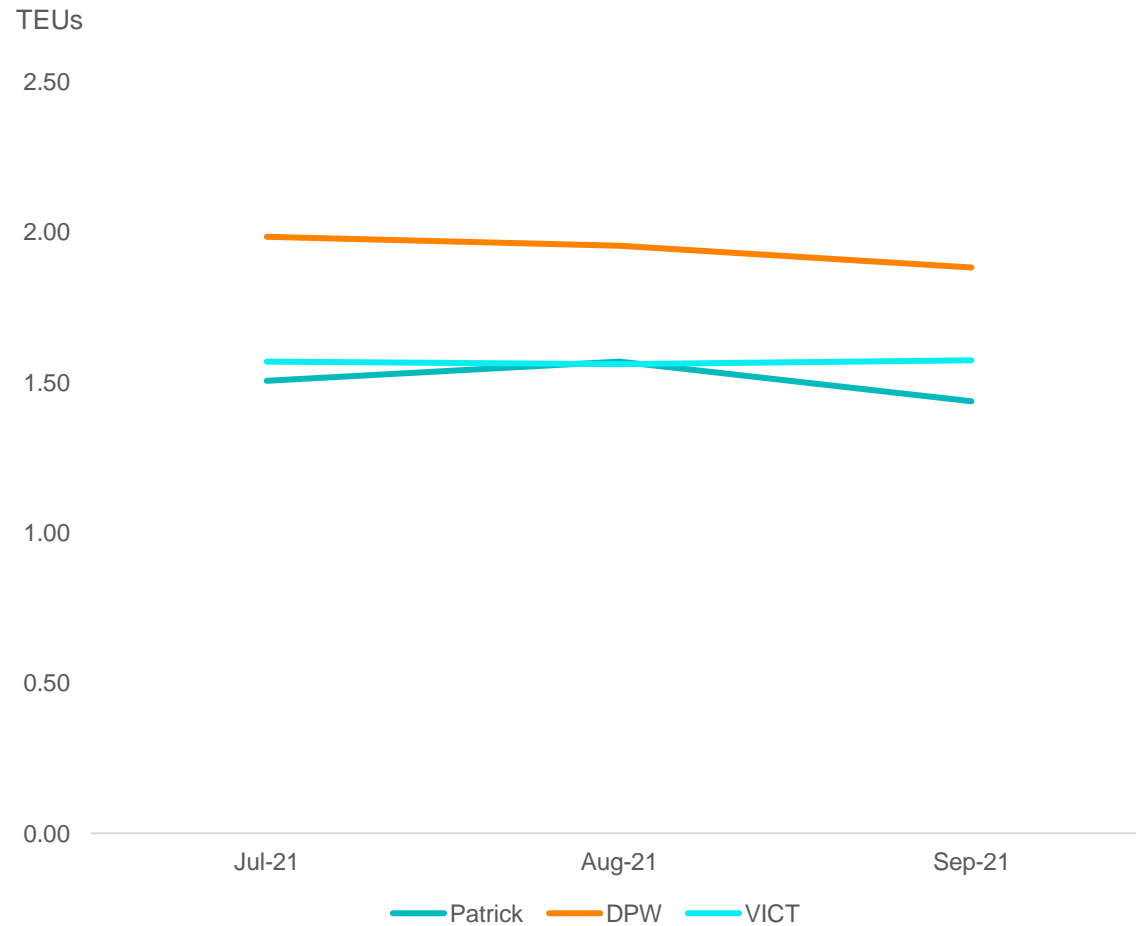
Description

As per BITRE Waterline 3.5, this indicator is derived from Indicator 3.2 and gives a count of timeslots used by trucks during the Weekend (Saturday to Sunday) as a proportion of all timeslots used.

Notes

- N/A

Average TEUs handled per VBS/TAS timeslot



Source: DP World, Patrick Terminals and VICT

Description

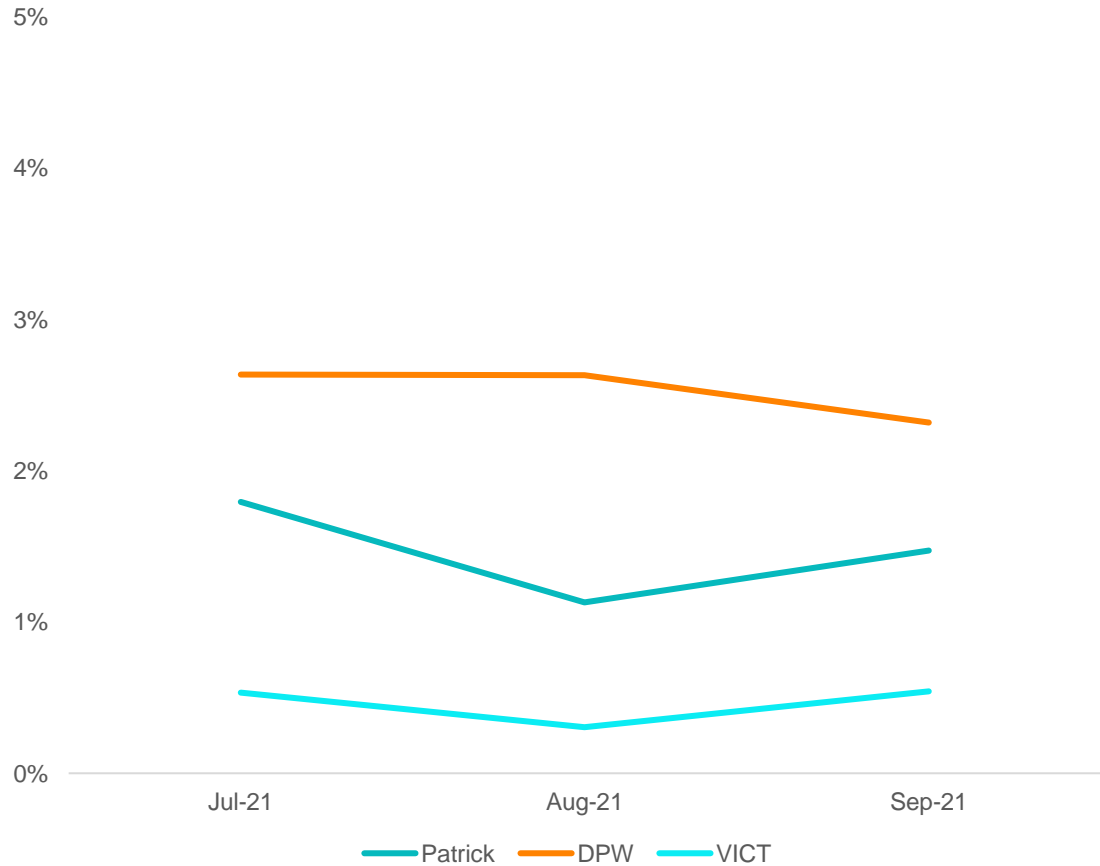
As per BITRE Waterline Indicator 3.6, this indicator is a measure of the intensity of usage of timeslots. The indicator increases as opportunities for out/return load carrying trips in one job increase.

Notes

- N/A

Proportion of truck no-shows

Portion of truck no shows (% of timeslots used)



Source: DP World, Patrick Terminals and VICT

Description

This indicator is not included in Waterline reporting. This indicator represents the total number of no-shows as a proportion of total timeslots used over a given month, across each stevedore terminal.

A no-show is defined as an instance in which a transport operator makes a timeslot booking to collect or dehire a container at a stevedore terminal but fails to arrive for the booking (excluding off-window or early/late arrivals).

Notes

- N/A

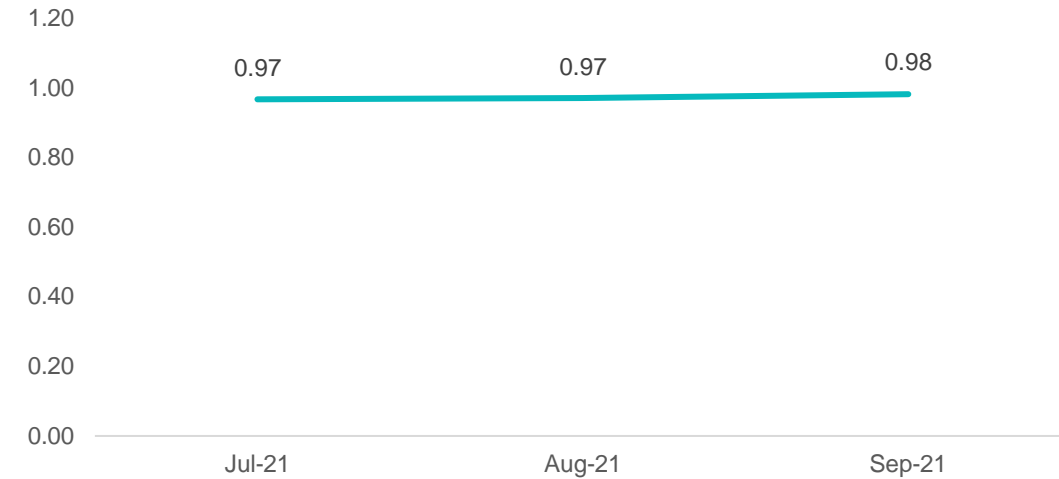
Section 4

Empty container supply chain measures



Load-Discharge Ratio

Load-Discharge Ratio



	Jul-21	Aug-21	Sep-21
Imports (Full)	113,481	109,335	111,499
Imports (Empty)	6,733	3,869	3,616
Exports (Full)	59,574	54,628	55,095
Exports (Empty)	56,733	55,218	58,008
Variance (Imports – Exports)	3,907	3,358	2,012
Load-Discharge Ratio	0.97	0.97	0.98

Source: Port of Melbourne

Description

This measure is not included in Waterline reporting. The load-discharge ratio is the ratio of total exports to total imports (full and empty), aggregated across the three stevedores at the Port of Melbourne. This indicator shows whether trade is generating or removing surplus empty containers at the port.

A ratio of less than 1 means that trade is generating surplus empty containers whilst a ratio of greater than 1 means that trade is removing surplus empty containers at the port.

A sustained period where the load-discharge ratio is less than 1 indicates that a large amount of surplus empty containers are accumulating at empty container parks and stevedore terminals and will require shipping lines to increase empty container evacuations.

Notes

- N/A