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Terminal Operator Performance Standards Analysis Report: 2020/21

PUBLIC CONSULTATION ROADSHOW DISCUSSION DOCUMENT

Comment is invited via written submission by:
30 July 2021, addressed to: The Chairperson, Ports Regulator, Private Bag X54322, Durban, 4000 Or email submissions to: comments@portsregulator.org

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1. Introduction

The competitiveness or usefulness of a port heavily depends on the quality, efficiency and pricing of its port services[1]. Pursuant to making the South African port system more competitive, interest in this report will be on efficiency through assessing various performance measures. Most regulators, including the Ports Regulator of South Africa (the Regulator), in carrying out some of their mandate seek to affect or reduce undesirable behavior through measures that often include commanding, controlling or informing i.e. where information is deployed to empower stakeholders (Baldwin, Cave & Lodge: 2012). Generally, performance measurement is undertaken to show how well someone or something has done against set objectives or its peers. To reduce the number of the many things that could be measured, it is generally accepted that focusing on Key Performance Indicators (KPIs) will cover aspects of performance that are critical to the current and future success of ports.

Scholar James Harrington (1991) holds that if you cannot measure something, you cannot control it, and if you cannot control it, you cannot manage it, and if you cannot manage it, you cannot improve it. It is with such reasons that the National Ports Authority (the Authority) together with other stakeholders initiated what became known as Terminal Operator Performance Standards (TOPS) which essentially gathers the performance of terminal operators across the port system. This report then serves to showcase results on KPIs covered in the TOPS initiative, using each of the terminal operator's actual annual performance compared against each of its set annual targets. Furthermore, the report will evaluate the set targets against the established design/ installed norms in order to have a view on the effective use of installed capacities at the terminals[2]. TOPS gathers data terminal performance on the following KPIs:

- Berth Productivity *(total volumes handled during total time of ship alongside);*
- Cargo Dwell Time *(average time spent by cargo at the terminal);*
- Rail Turnaround Time *(average time freight trains spend at the terminal);*
- Ship Working Hours *(total volumes handled during total ship productive hours);*
- Terminal Delays *(average delays to vessels as a direct result of the terminal);*
- Terminal Throughput[3] *(total volumes handled); and*

[1] Where quality refers to providing the correct mix and standard of port services; with efficiency referring to providing the mix and standard with minimum use of resources; and pricing concerned with ensuring that customers do not have to pay more for services than their costs plus a normal profit commensurate with the level of risk involved.
[2] The operator performance targets are agreed to between the Authority and the terminal operators through a consultative process whereby the Port Consultative Committees (PCC) in each port have inputs.
[3] The volumes/ throughput numbers are usually treated as confidential on reports and therefore may need to be removed if the report is to be published.

- Truck Turnaround Time *(average time trucks spend at the terminal).*

1.1. Objectives

Regulators tend to face difficulties in directly setting performance standards for a regulated entity (see Baldwin et al., 2012) due to asymmetries of information, especially technical information, and often time the lack of capacity to technical information and legal considerations that may arise. This is evidenced in the lack of punitive measures or incentives for terminal operators, despite the fact that on inception it was indicated that such measures would be introduced by Year 4 of implementation. At the same time, the Regulator is limited by the lack of detailed information and technical expertise that would enable the setting of performance targets as initially envisaged. It is mainly for this reason that the Regulator retained the right to make the final call on KPIs and their weight on the WEGO initiative.

This report in providing an analysis of port performance through the KPIs will continue to assist with the WEGO process, hence the detailed and more nuanced appreciation of where terminal performance is at and how targets are set beyond anecdotes shared in the sector. The findings from the report on applicable KPIs is also taken into account in adjusting the weighting of applicable WEGO KPIs. The report will show trends and instances where target setting is below acceptable practice.

At this stage, a prudent approach will be one where target cannot be set below previously achieved performance levels, especially in dedicated terminals and standardised operational environment (e.g. container, roro, iron ore, manganese, marine services, truck and rail operations). Where operational realities change, rather than changing the target, well supported motivation for change in performance must be provided in mitigation. This will be applicable until such time that the (dis)incentive regime for TOPS is finalised and implemented.

1.2. Approach

The Authority introduced Terminal Operator Performance Standards (TOPS), Marine Operator Performance Standards (MOPS), Rail Operator Performance Standards (ROPS) and Haulier Operator Performance Standards (HOPS) in 2013 with the aim of assessing performance standards across operators within the ports system. The Regulator has acquired excel files capturing terminal performance data of the TOPS process. In combining all the data over 11 000 data-points were generated on excel, where each entry line reflect performance of each commodity handled from the various terminals in the port system. It must be appreciated that this is a technical and detailed report which intends to provide a basis for the interrogation of port performance in as much details as

possible. Given the vast number of different units of measure across commodities and the great variation in figures, the report will present the findings in percentages, save for terminal delays which will be shown in hours, and this will then allow for comparing results across KPIs, terminals and from year-to-year.

A terminal's achieved percentage for each of the indicators will be presented in a graph in order to track performance over a period under review. However, it should be noted that some KPIs are not applicable to certain terminals, for example terminal berthing delays as well as berth productivity are measured only for terminals using dedicated berths, while truck and rail turnaround time indicators only apply to terminals with road and/or rail access. Furthermore, measurement of some KPIs was discontinued when implementation was reviewed in the second year of the program, for example, berth occupancy and productivity were discontinued after the first year and as such do not form part of the report.

Baldwin et al (2012) states that it is difficult for regulators to set standards for an entity due to countless technical issues and legal considerations that may arise. For this reason, neither this report nor any other initiative of the Regulator at this point, is aiming to set out definite performance targets for terminals. However, the report will be of value in airing performance issues in the South African ports system and in targeting those specific performance areas which will require attention. It is mainly for this reason that the Regulator retained the right to make the final call on KPIs and their weights on the Weighted Efficiency Gains from Operations (WEGO) initiative and this report, while providing an analysis of port performance, guides the Regulator's decisions on WEGO KPI weights and verification of some of the WEGO KPIs. Therefore, this begs that there be a detailed and more nuanced appreciation of where terminal performance is at and how targets are set, that goes beyond anecdotes in the sector.

1.3. Structure

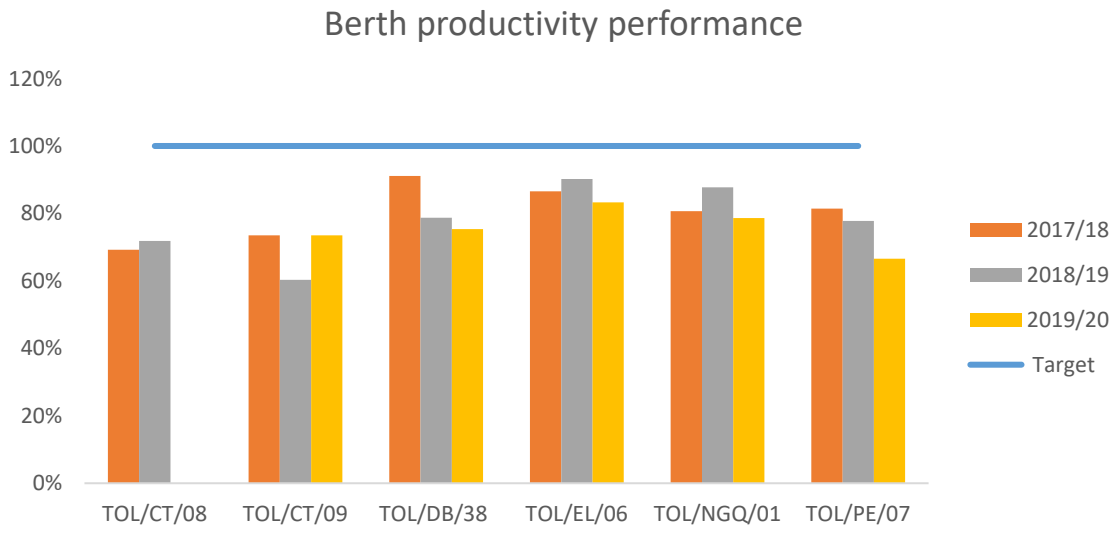
The first section of the report will present results on each KPI per cargo handling type (i.e. by container, dry bulk, liquid bulk, automotive and break bulk) and also indicate how targets were set in relation to reported design/ installed norms as from 2017/18 to 2019/20 (i.e. Year 5 to Year 7). The final section will then provide summaries for the various KPI results across the system, on both performance and on targets against the norms. The analysis, based on the findings, will inform on both target setting and on the assigning of weightings in WEGO, particularly for the TOPS KPIs.

2. Performance and target setting by cargo handling type

This section of the report will be looking at the results, of both performance and target setting against the norm, across all the KPIs covered in TOPS and grouped together for each cargo handling type, that is: containers, automotive, dry bulk, liquid bulk and break bulk.

2.1. Containers

The following results below outline how the container terminal operators performed on the various TOPS Key performance indicators against the targets and targets against the terminal capabilities.



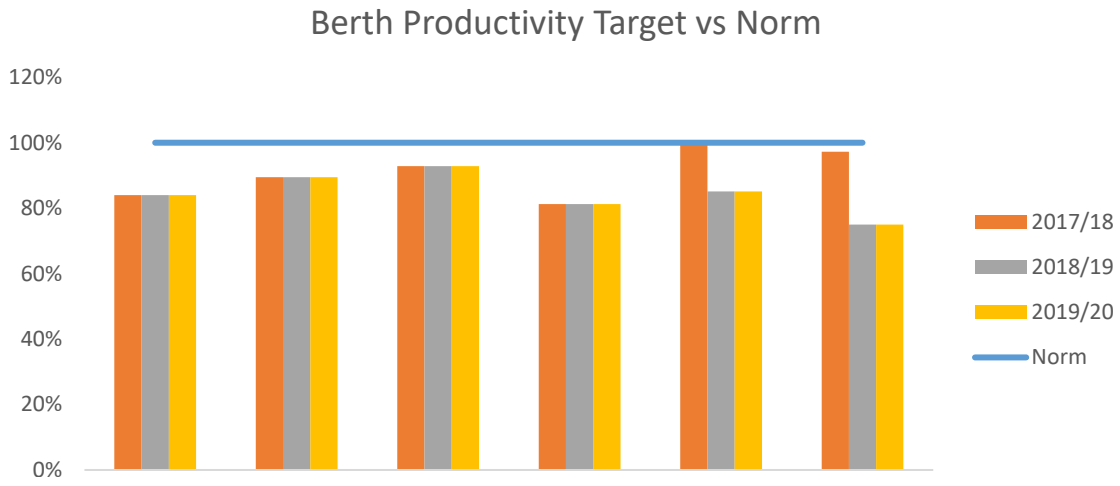


Figure 1: Container - Berth productivity performance & targets vs norms

Container terminal operators are generally performing below their agreed berth productivity targets over the three years. The results in 2019/20 have deteriorated from previous years except from the one terminal in Cape Town with a slight improvement. Targets are mostly set below the installed norms as they have remained the same from 2018/19 to 2019/20.

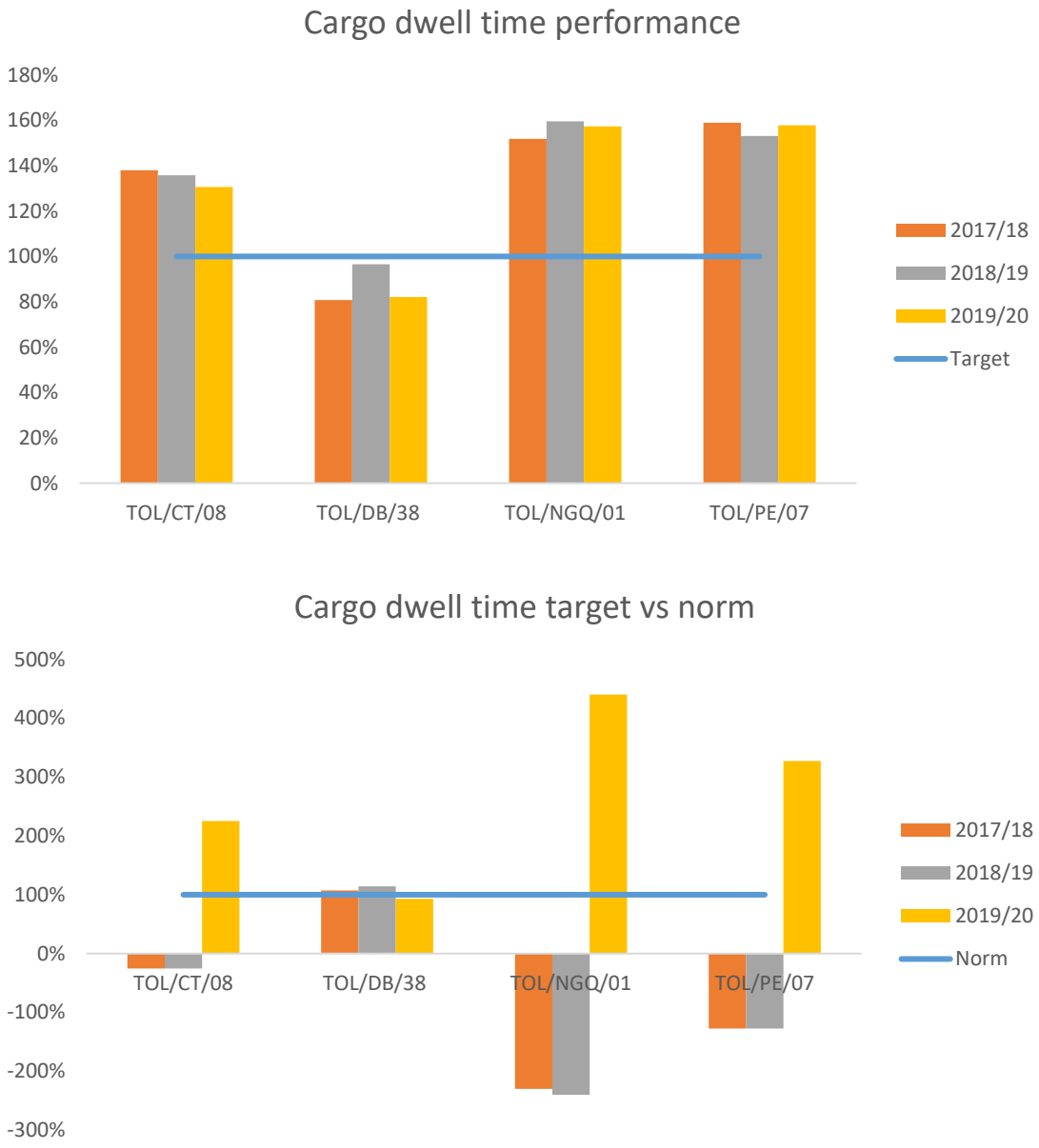


Figure 2: Container - Cargo dwell time performance & targets vs norms

The results show that three container terminals are frequently performing above the targets for the three consecutive years. The Port of Durban container terminal is the only terminal operator that seems to be struggling to reach the cargo dwell time targets. When looking at target setting, the graphs suggest a significant improvement in year-7 since all terminal targets are closer and above the norm.

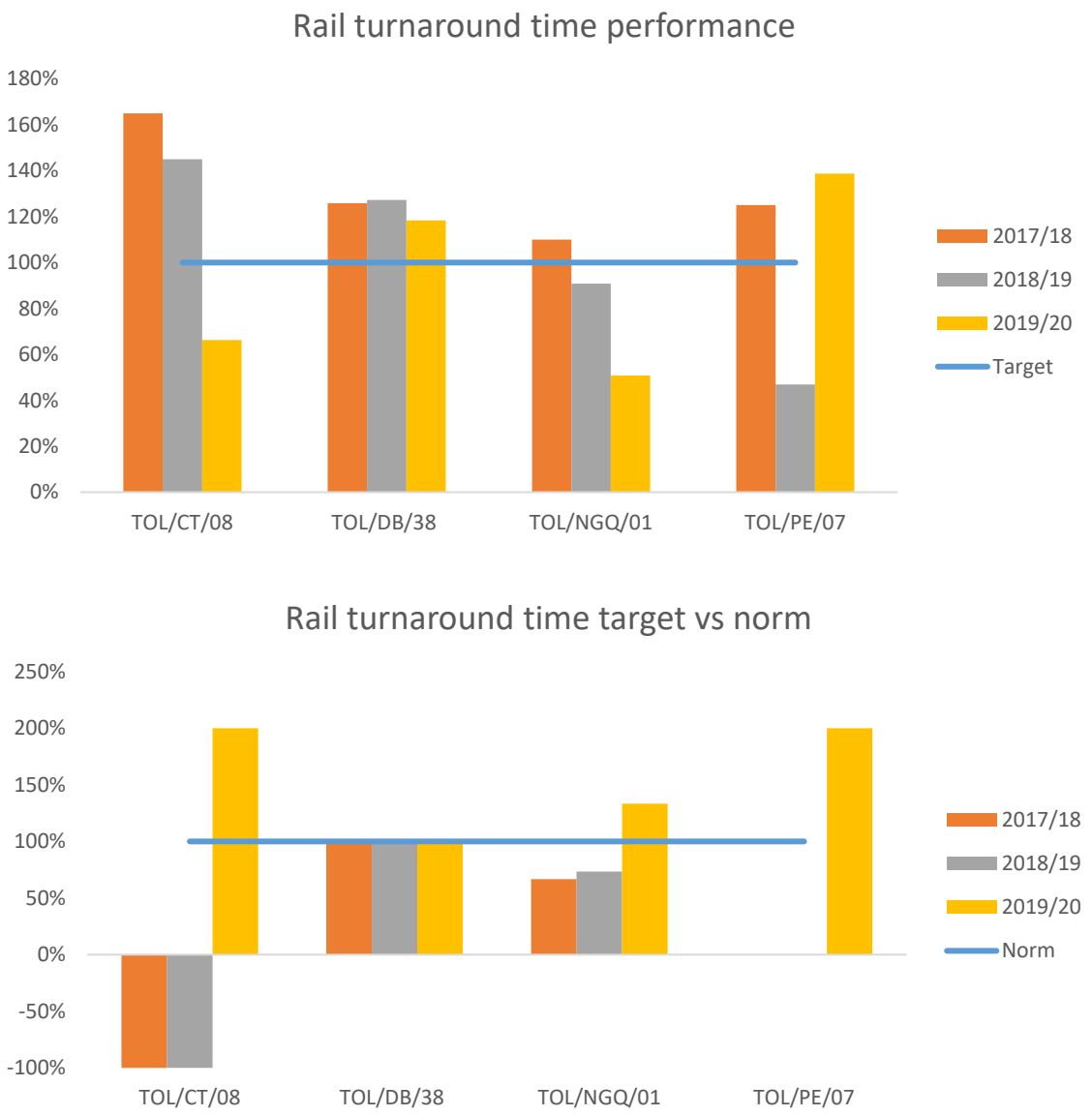


Figure 3: Containers - Rail turnaround time performance & targets vs norms

In year 5, all the terminals performed above the target, but in year 7, Ngqura and Cape Town container terminal failed to achieve the target. Regarding target setting, all the terminals set their targets on par and above with the installed norm.

Figure 4: Containers - Ship working hour performance & targets vs norms

Container terminal performance on ship working hours is generally below the target. Terminals are struggling to reach their performance target on this indicator. The setting of targets over the three

years is typically okay; however, some terminal operators moved towards the installed norm, and some moved away from the installed norm.

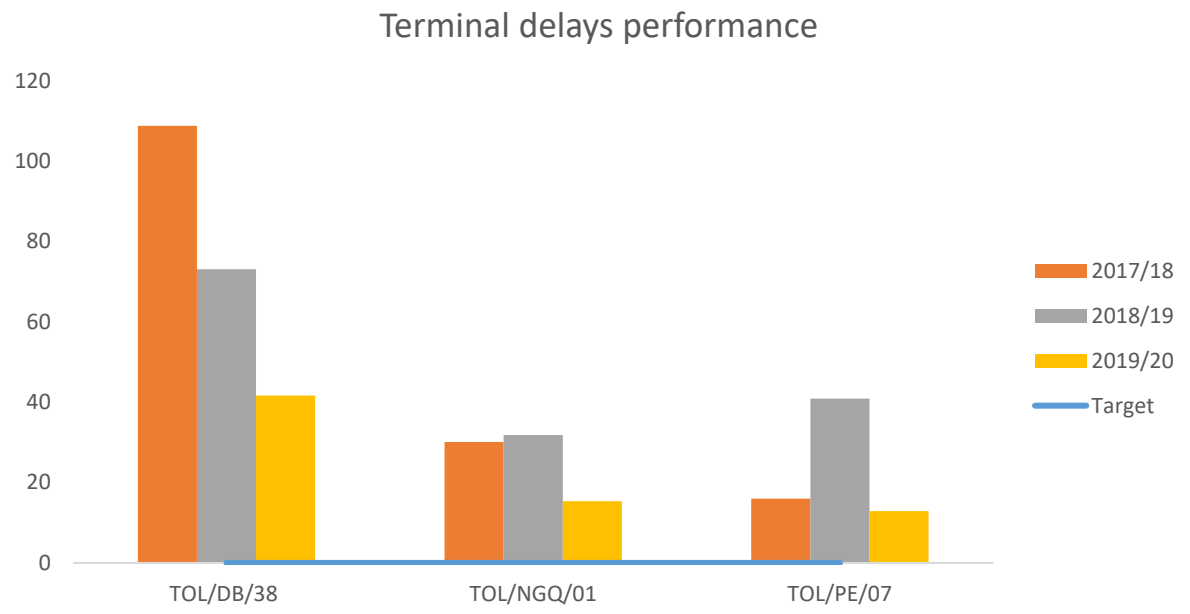


Figure 5: Containers - Terminal delays performance

The above results indicate the total delays experienced by the terminal over the three years. Though there are slight improvements in most terminals, Port of Durban container terminals are experiencing severe delays over the three periods.

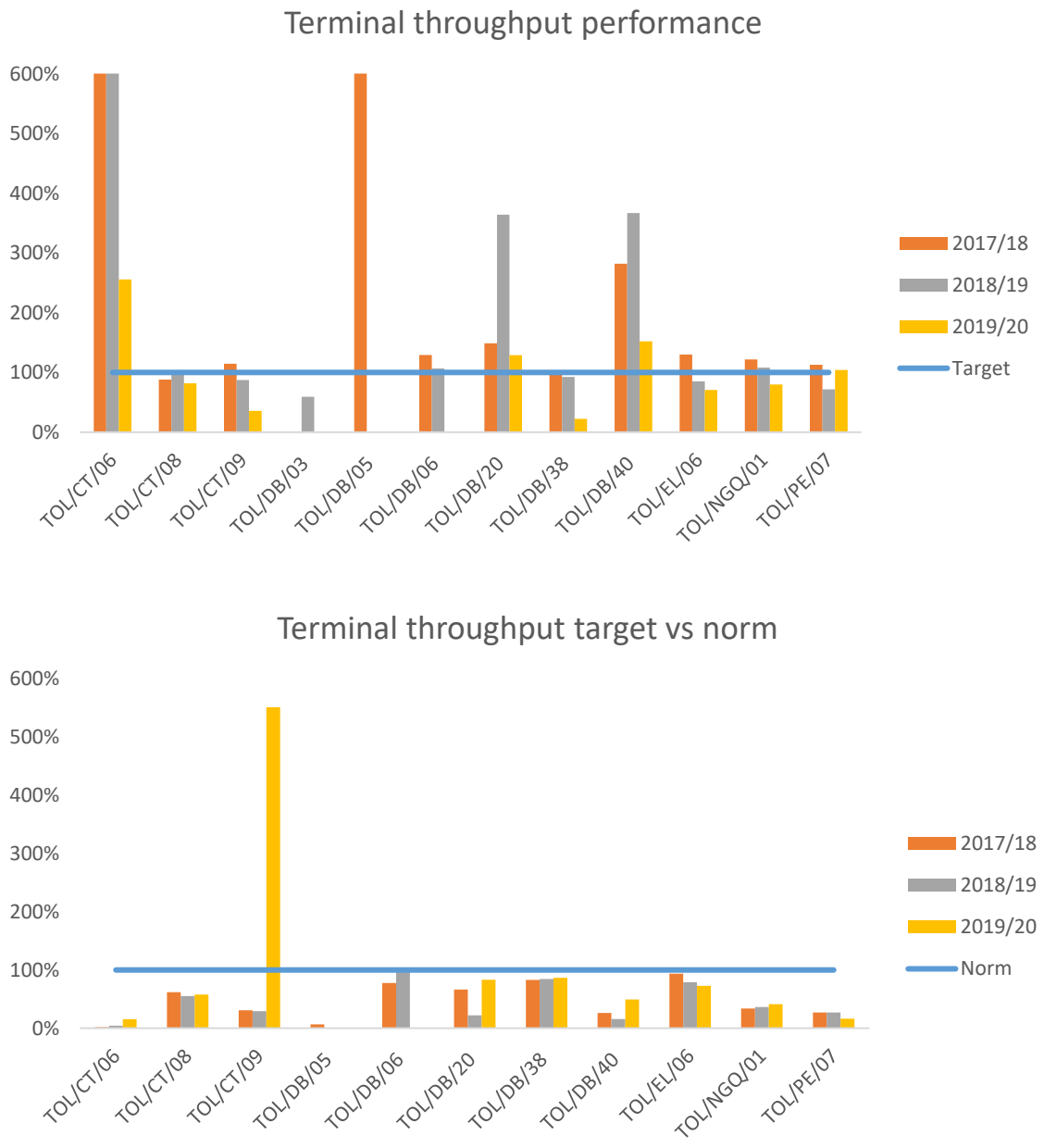
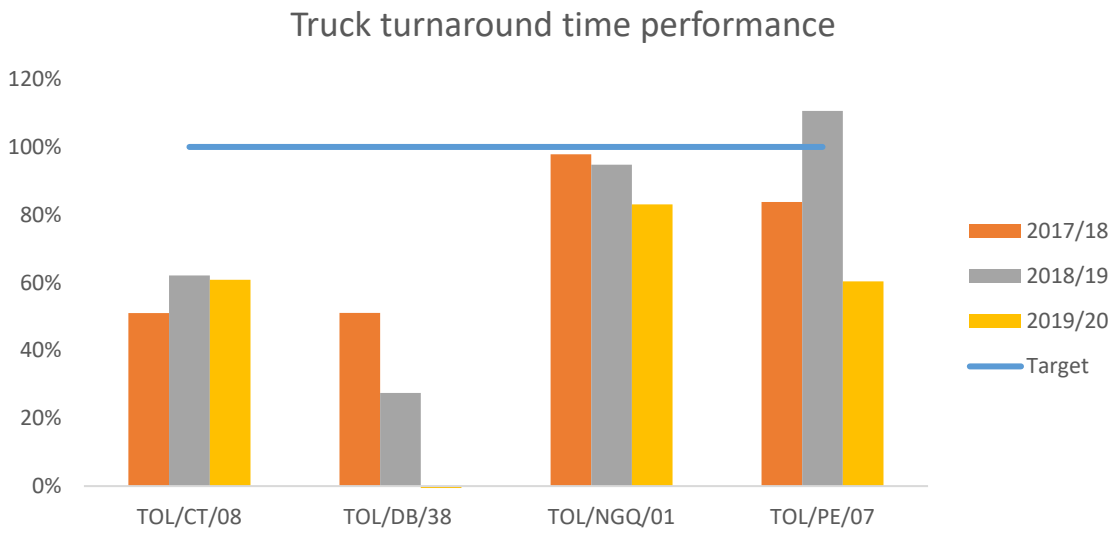


Figure 6: Containers - Terminal throughput performance & targets vs norms

Total volume throughputs are mainly below the performance target. While other terminal operators could reach their targets in year 7, it is still a challenge for other terminal operators to achieve their volume throughput standard. Targets are also set below the norm, and there are no improvements over the three years.



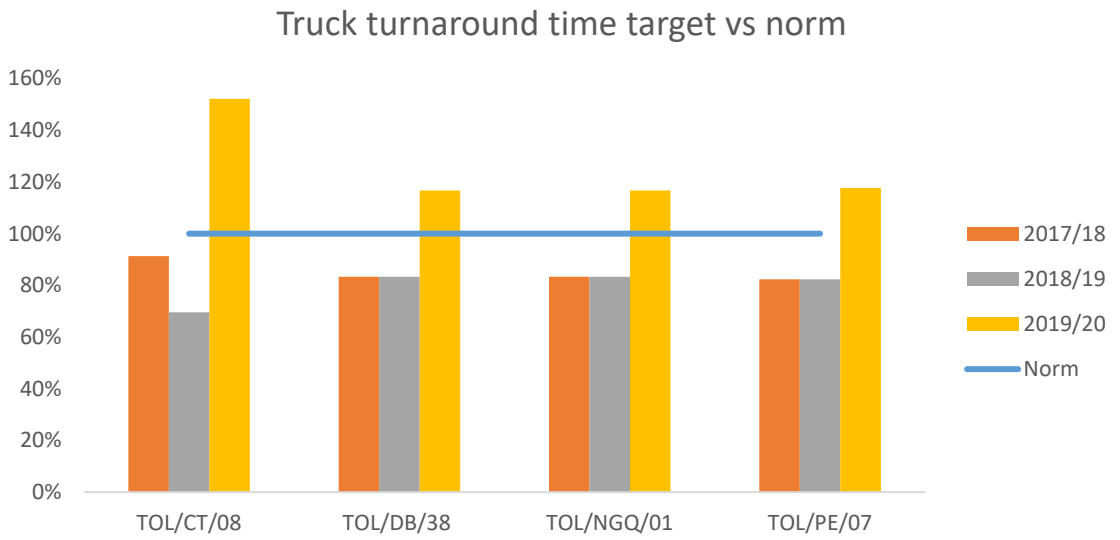


Figure 7: Containers - Truck turnaround time performance & targets vs norms

Terminals are mainly struggling to reach their targets on this indicator. In year 7 all the terminals performed below target. Impressively, target settings have improved in year 7 and are set above the installed norm.

2.2. Automotive

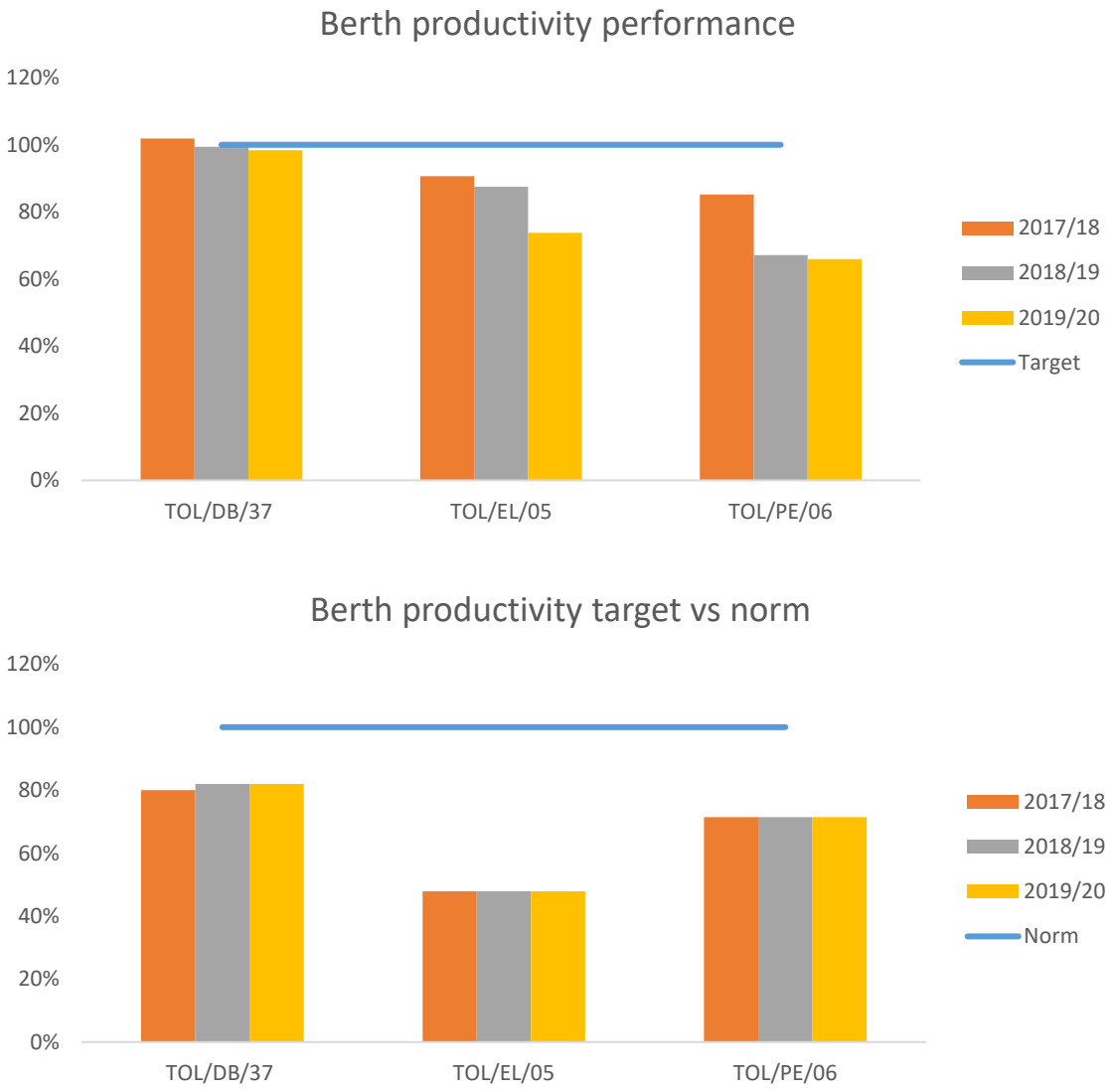
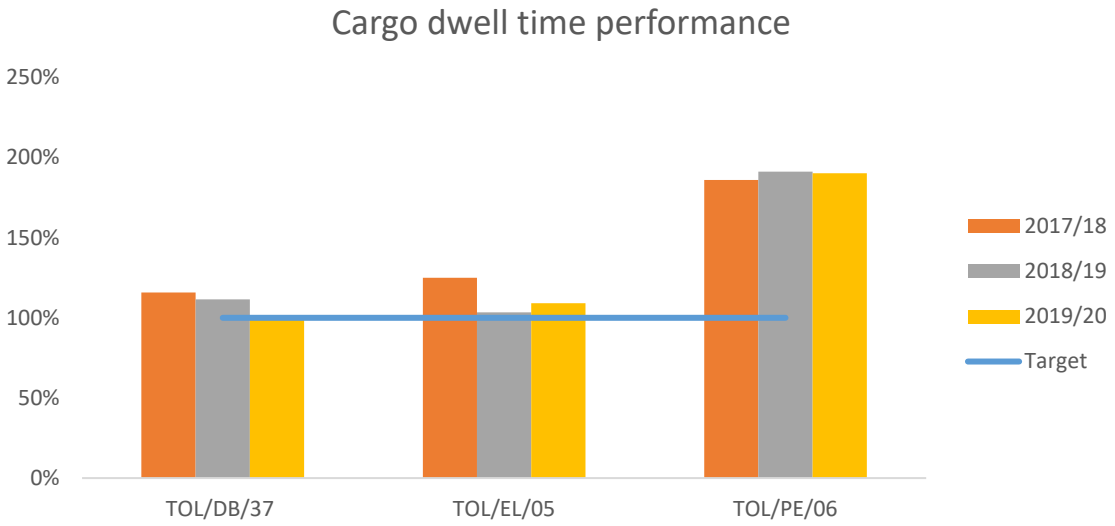


Figure 8: Automotive - Berth productivity performance & targets vs norms

Terminals are generally performing below the targets. The targets are set below the installed norms and there are no recorded improvements over the review period.



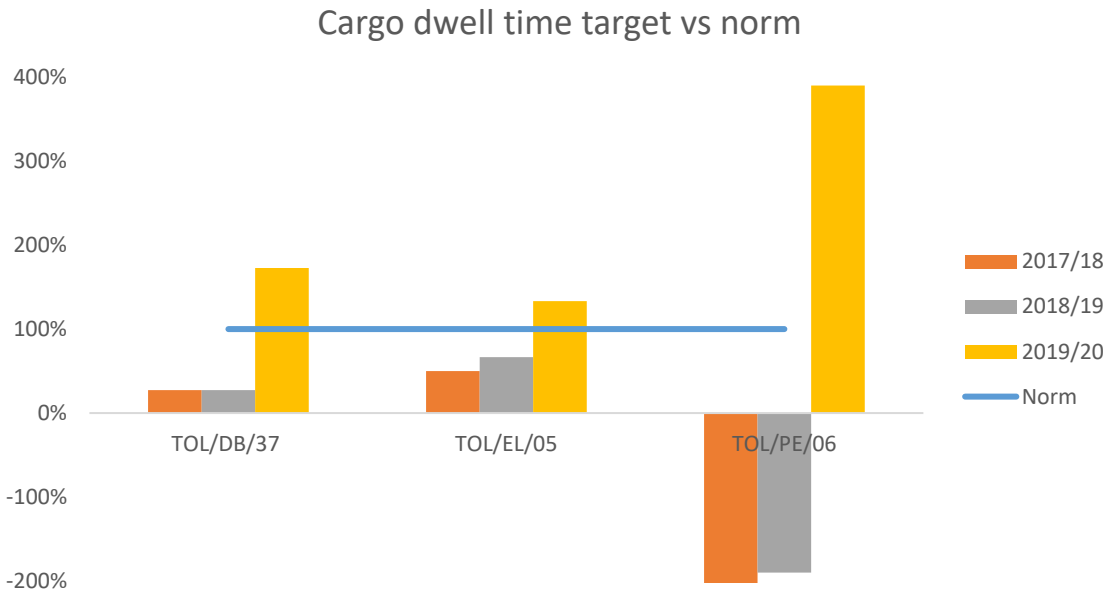


Figure 9: Automotive - Cargo dwell time performance & targets vs norms

Terminals are performing well on this indicator. Also, the target setting has been set above the installed norm.

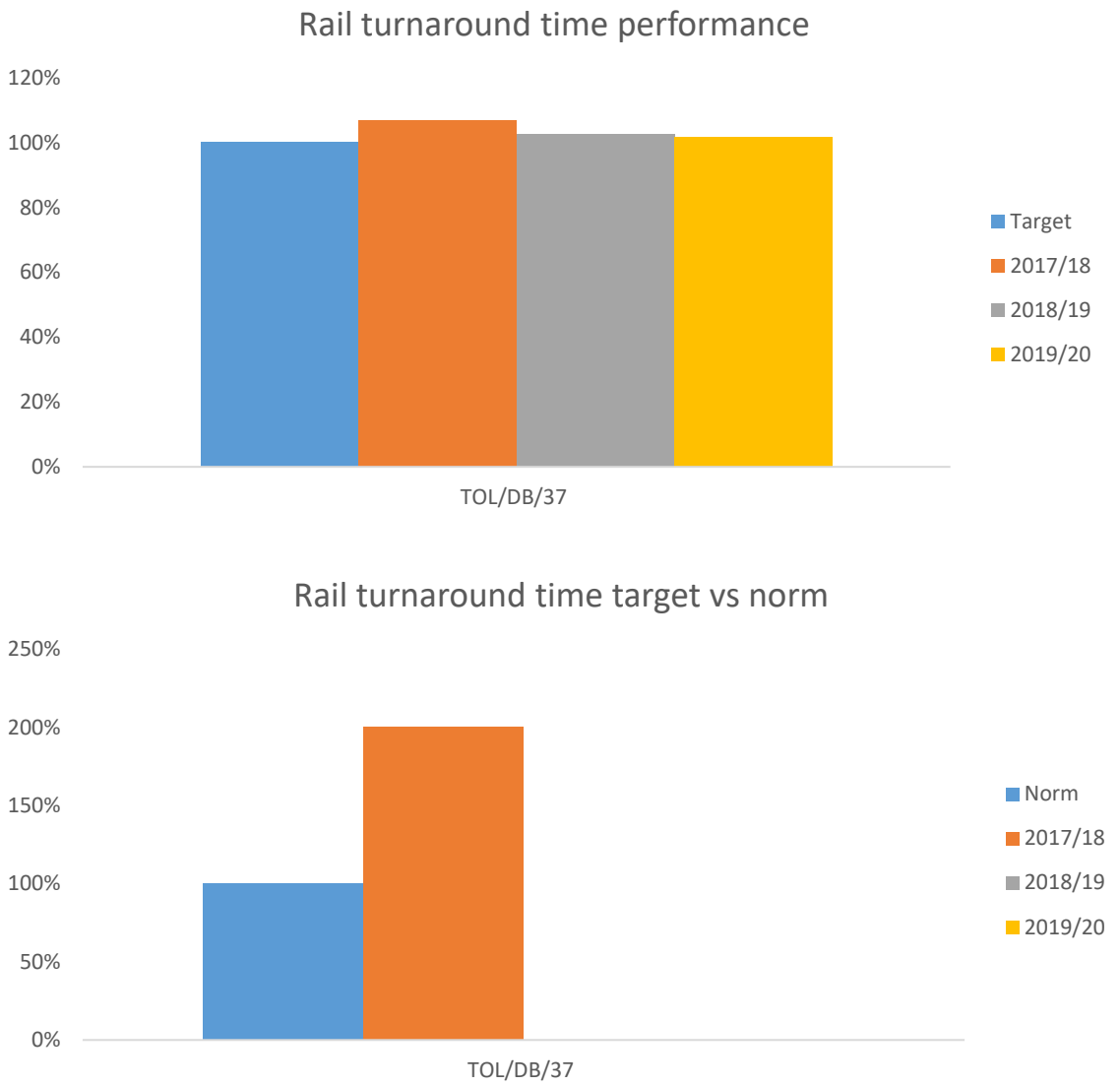


Figure 10: Automotive - Rail turnaround time performance & targets vs norms

The terminal managed to reach its rail turnaround time target for all years, and the target is set above the norm.

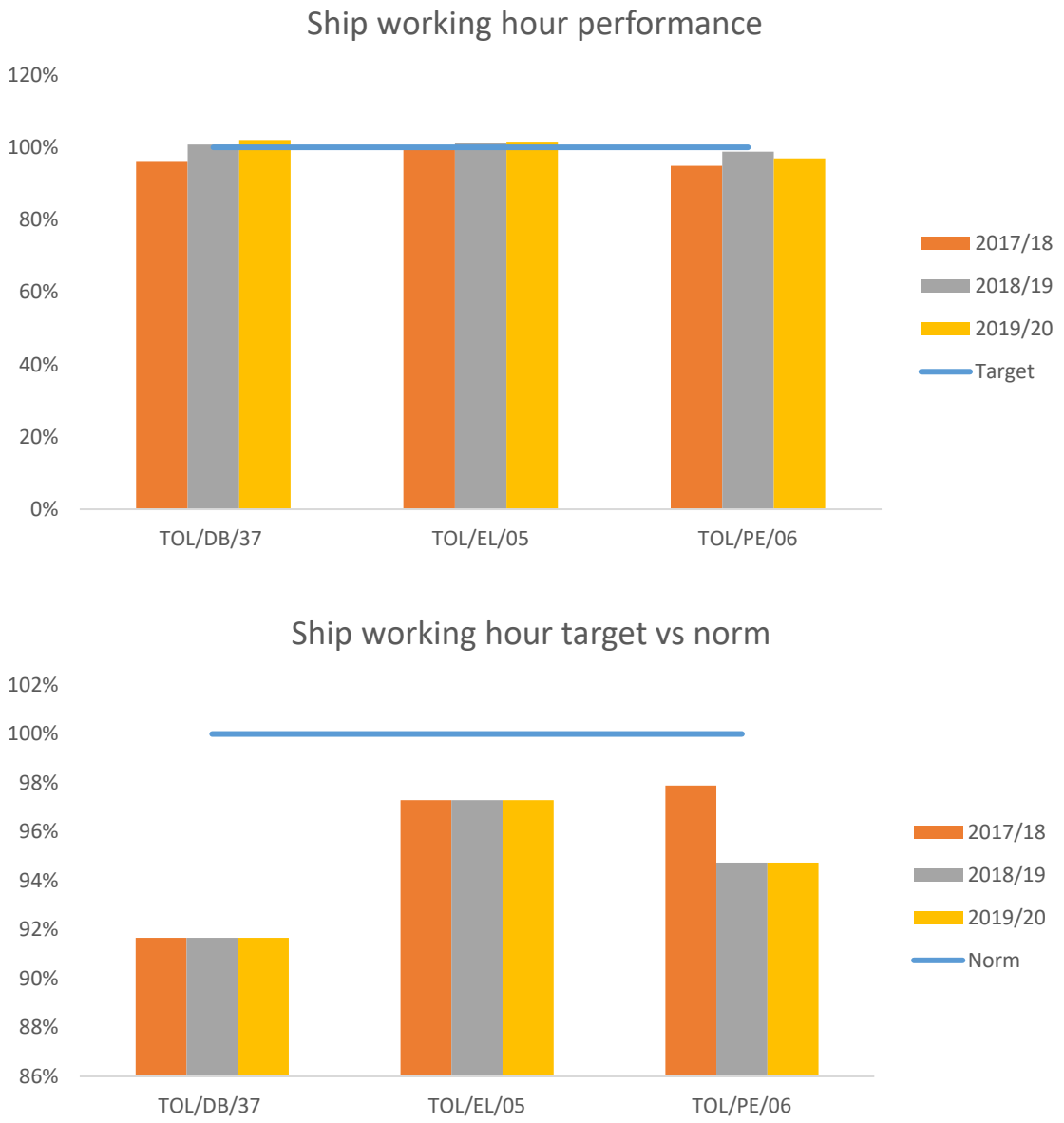


Figure 11: Automotive - Ship working hour performance & targets vs norms

The terminal's performance is generally on par with the target in the year 7. However, the targets are still set below the installed norm.

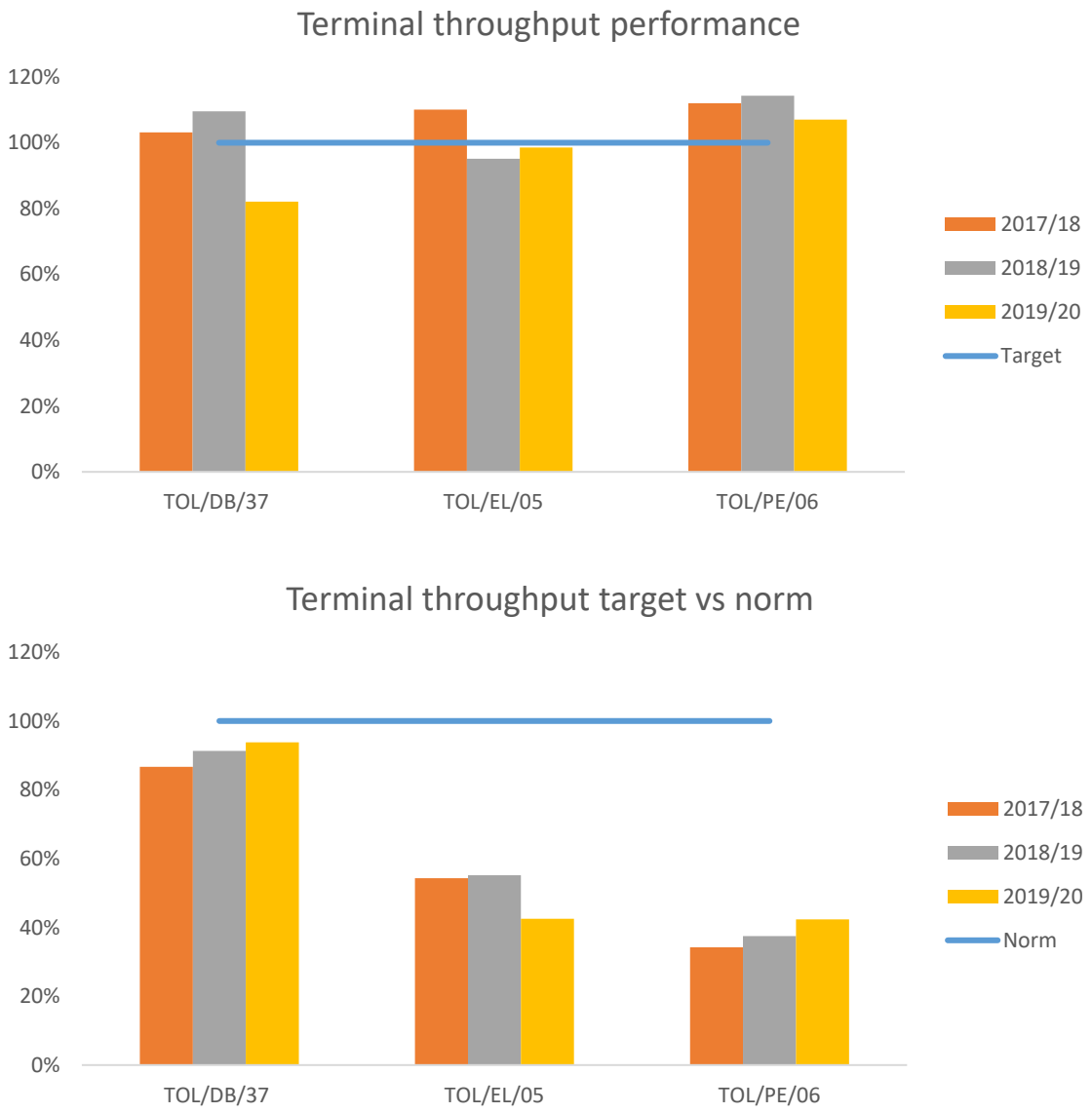
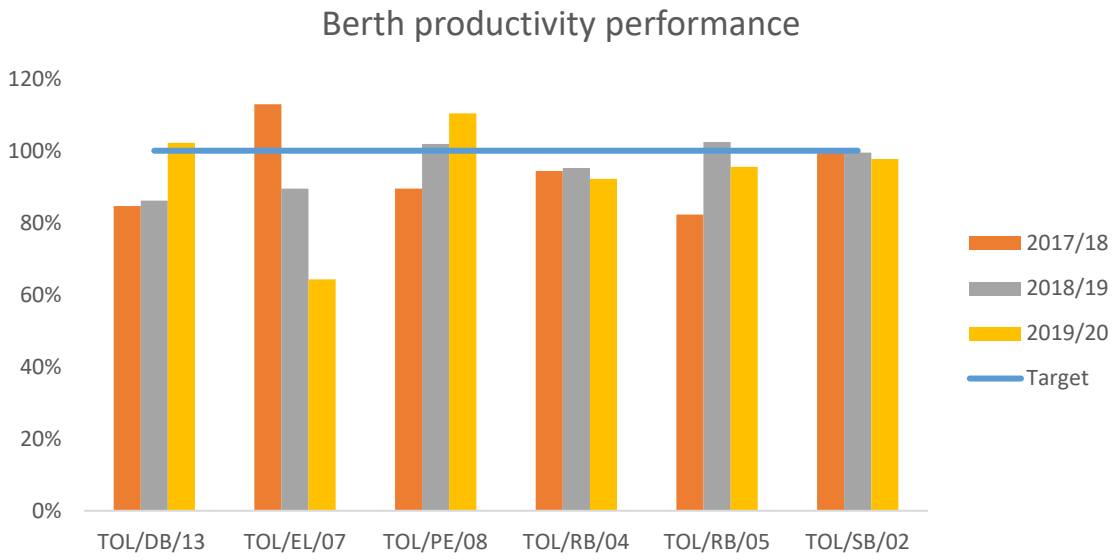


Figure 12: Automotive - Terminal throughput performance & targets vs norms

One of the three automotive terminals performed well on throughput except East London and Durban that performed just below the target in year 7. Targets are, however, set below the norm, but they marginally improved in year 7.

2.3. Dry bulk

The following results below outline how the dry bulk terminal operators performed on the various TOPS Key performance indicators against the targets and targets against the terminal capabilities.



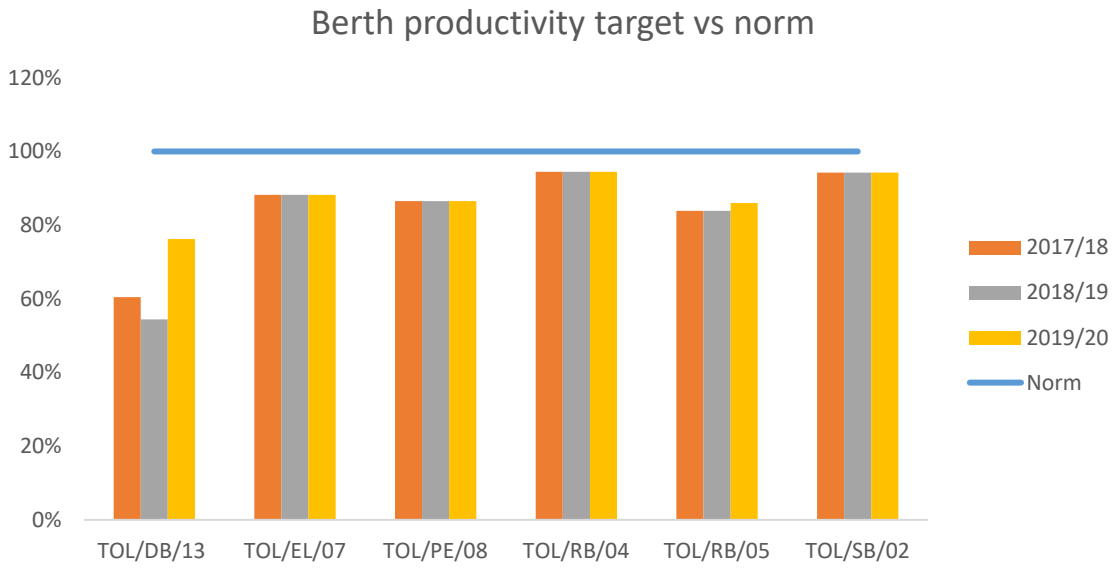


Figure 13: Dry Bulk - Berth productivity performance & targets vs norms

Berth productivity performance for dry bulk terminals in 2019/20 saw 2 terminals achieve their targets, 3 terminals coming close and just one failing very short of its target. Target setting continues to be below the installed norms as it has been the case in previous years.

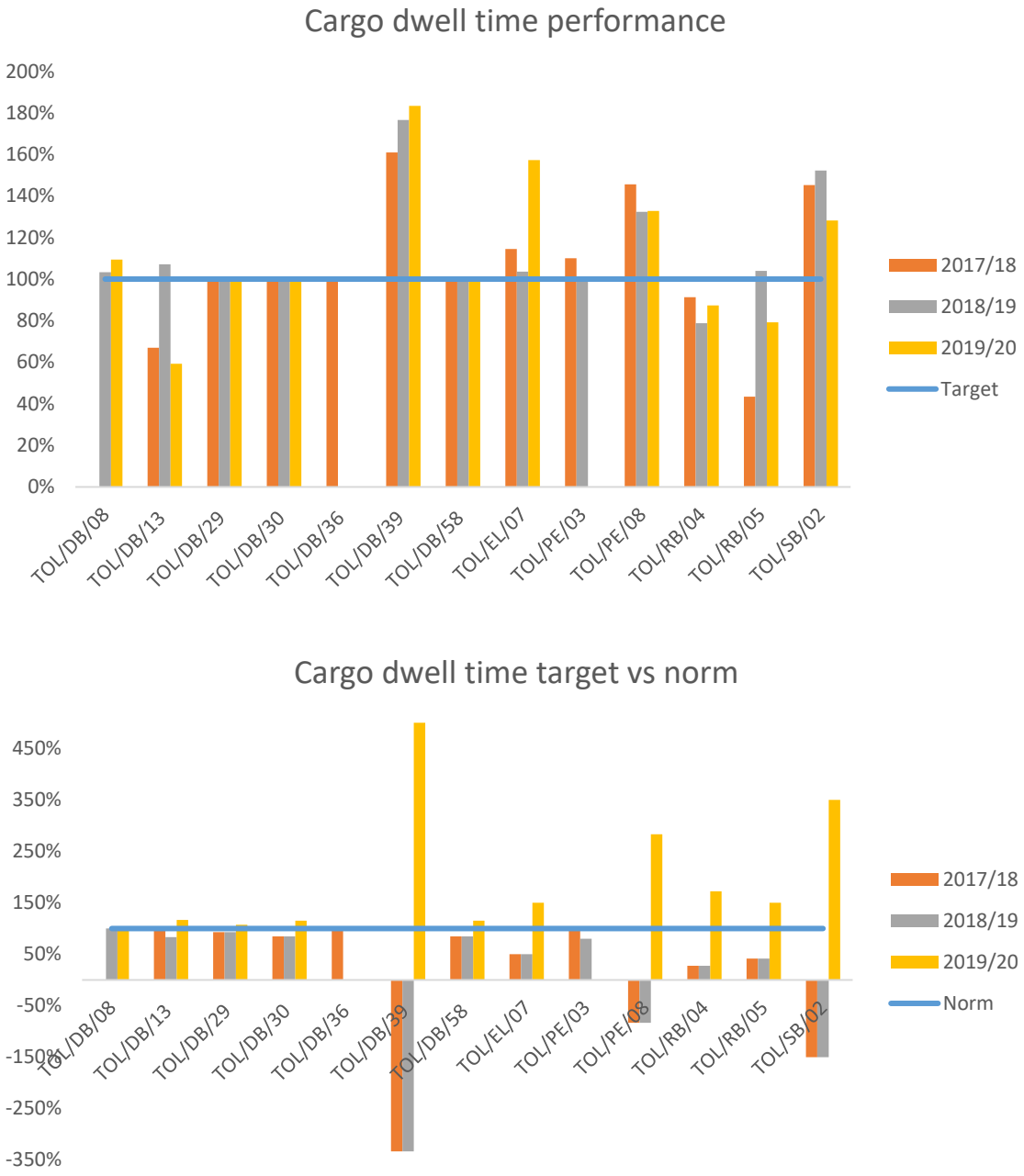


Figure 14: Dry Bulk - Cargo dwell time performance & targets vs norms

Cargo dwell time performance in 2019/20 is relatively good as most terminals were able to achieve their targets just as they have done in the past years. Cargo dwell time target setting for dry bulk terminals has significantly improved, terminals have set target times at the norm and well within the installed norm times.

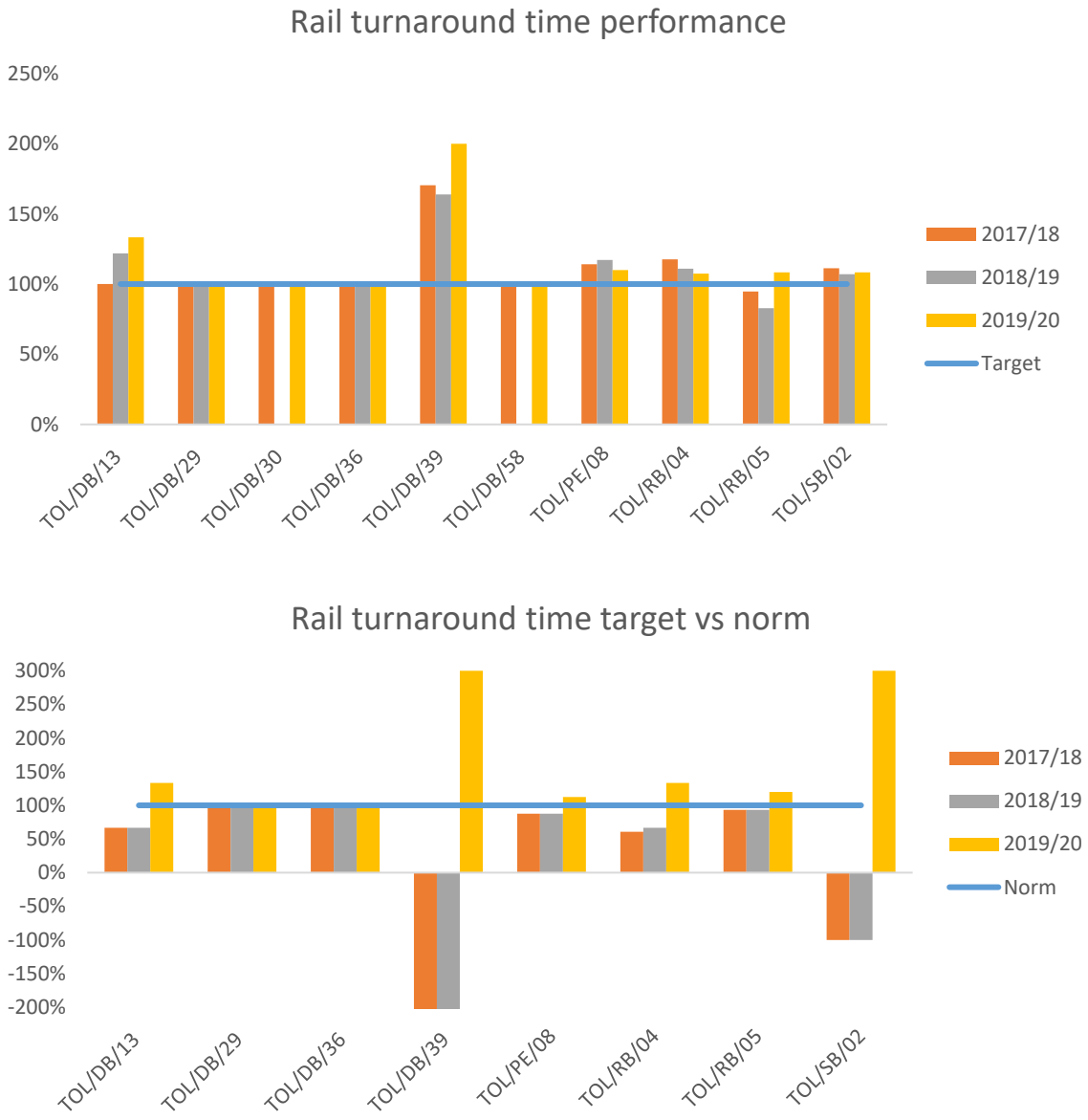


Figure 15: Dry Bulk - Rail turnaround time performance & targets vs norms

Rail turnaround performance continues to be good just as it has been in the previous years, in 2019/20 all the dry bulk terminals kept within the targeted turnaround times. Target setting has significantly improved in 2019/20 as all the terminals set their targets equal to or below the norm times.

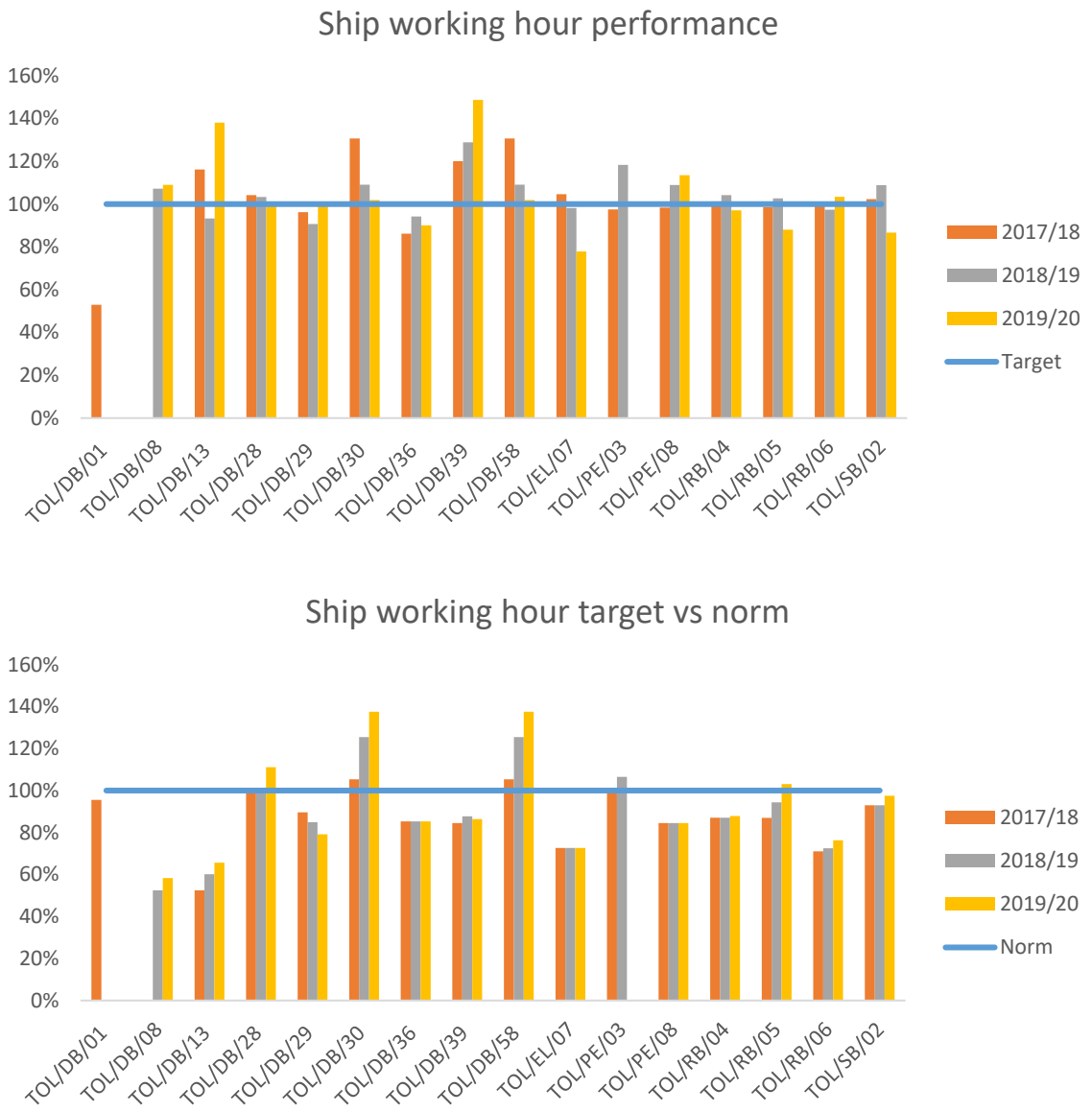


Figure 16: Dry Bulk - Ship working hour performance & targets vs norms

Ship working hour performance results continue to be good just as they have been in the previous years, in 2019/20 only one terminal had poor ship working hour performance results out of the 14 terminals. Target setting for most terminals continue to be below the norm figures notwithstanding a few improvements in 2019/20.

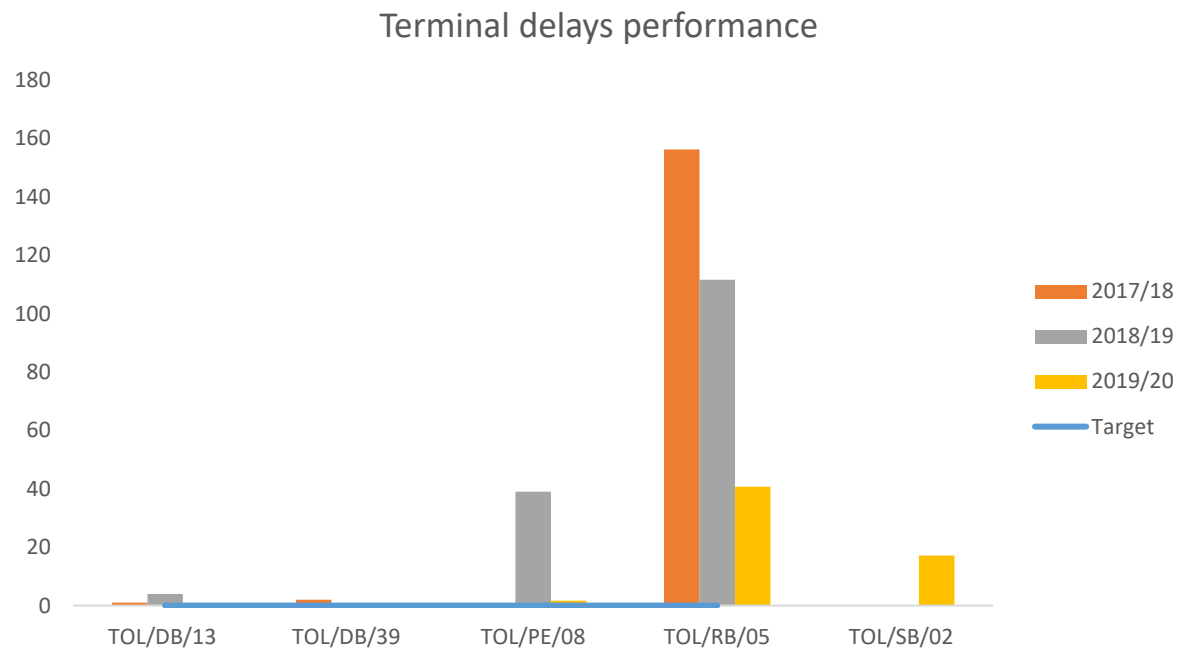
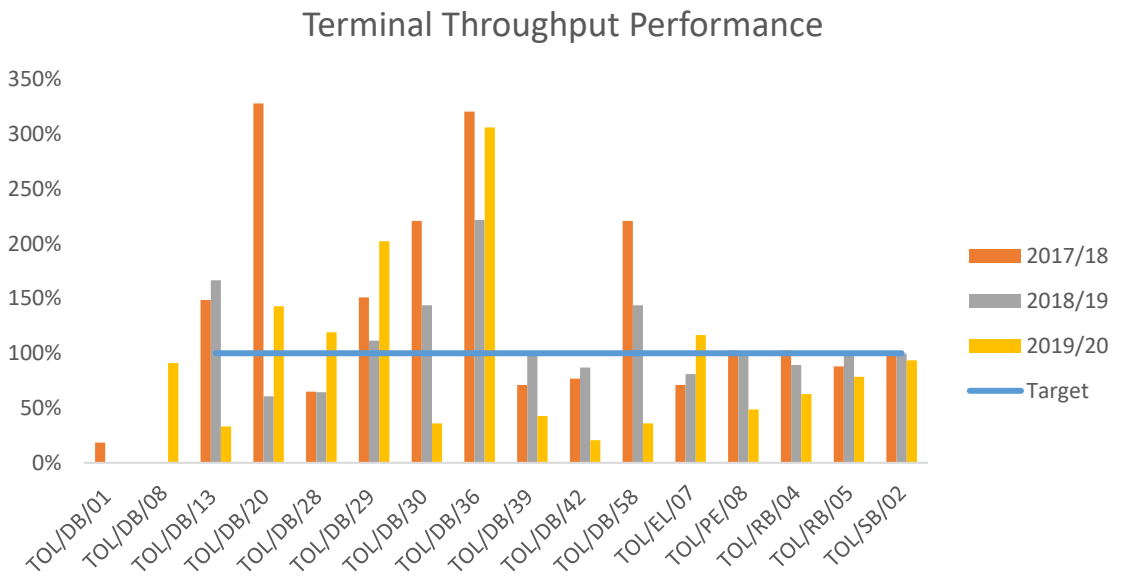


Figure 17: Dry Bulk - Terminal delays performance

There were delays on two dry bulk terminals in 2019/20, one with a 40,7 hours delay and the other with a 17,2 hours delay. This however, is an improvement from the previous years, particularly in Richards Bay as shown above.



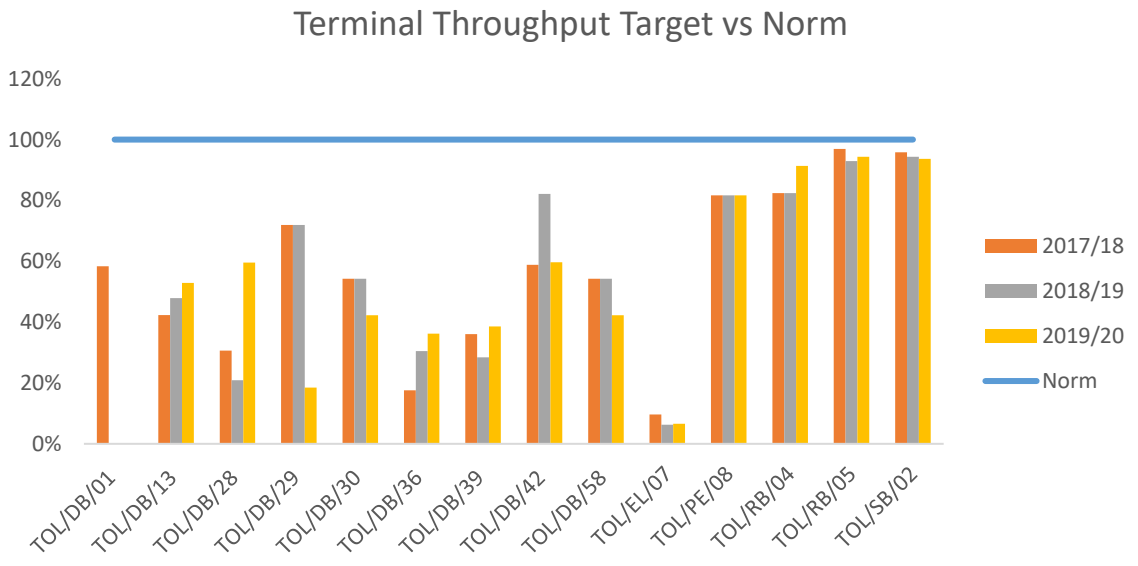


Figure 18: Dry Bulk - Terminal throughput performance & targets vs norms

Throughput performance results in 2019/20 is somewhat of a mixed bag of results with 7 good performances, 7 poor performances and one satisfactory result. However, this is a decline in performance from results that have been seen in previous years. Throughput target setting in 2019/20 continues to be below the installed norms across all dry bulk terminals just as in the past years.

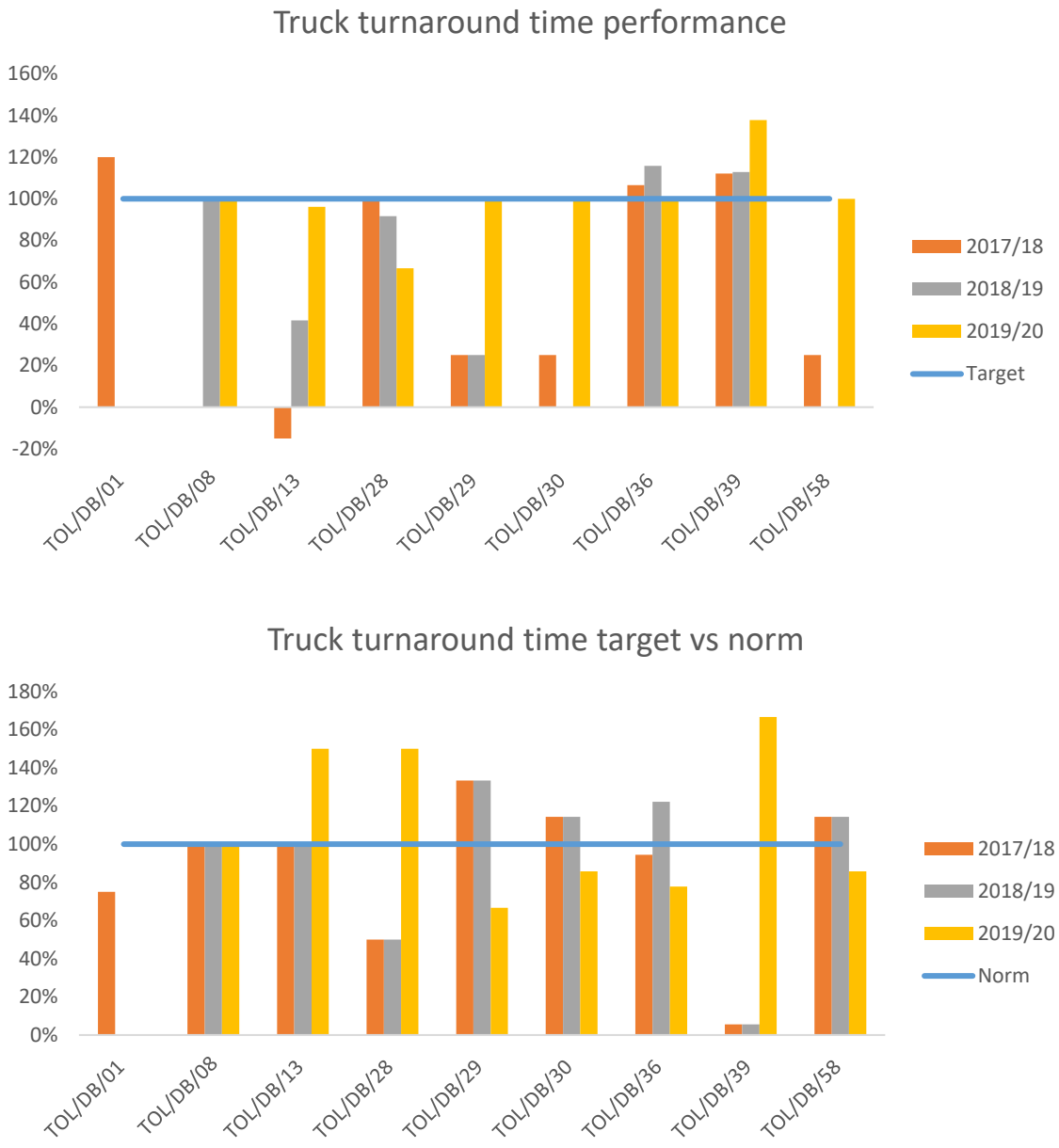


Figure 19: Dry Bulk - Truck turnaround time performance & targets vs norms

Truck turnaround time performance in 2019/20 has improved when compared to the previous years, only one terminal had truck turnaround time performance result being poor. However, there has been a decline in target setting in 2019/20, notwithstanding a few improvements.

2.4. Liquid bulk

The following results below outline how the liquid bulk terminal operators performed on the various TOPS Key performance indicators against the targets and targets against the terminal capabilities.

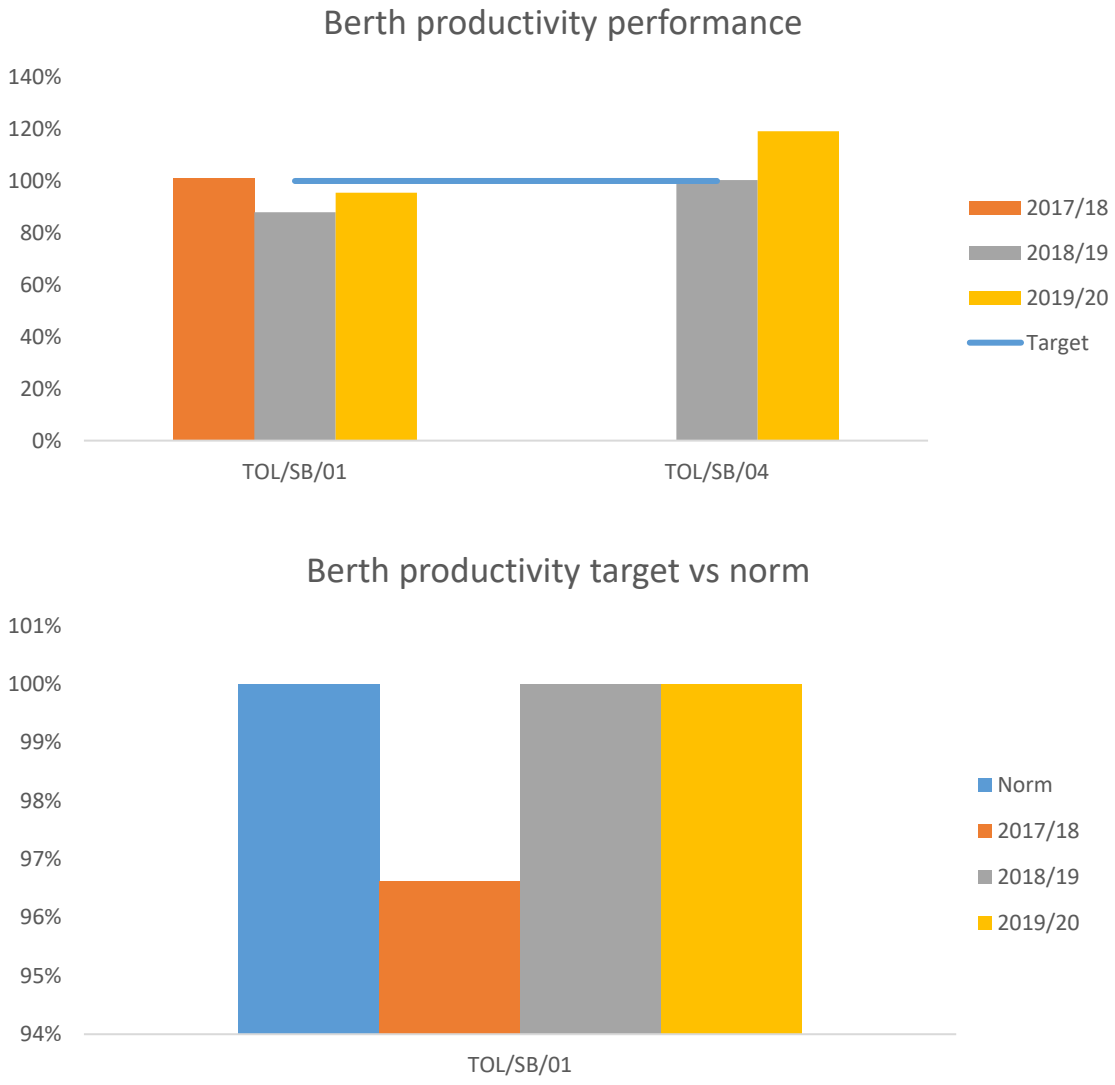


Figure 20: Liquid Bulk - Berth productivity performance & targets vs norms

The berth productivity performance of one of the Saldanha Bay terminals experience a slight below target in year 7, while the other new terminal reached its target. The target setting has improved over the years and reached the installed norm in year 7.

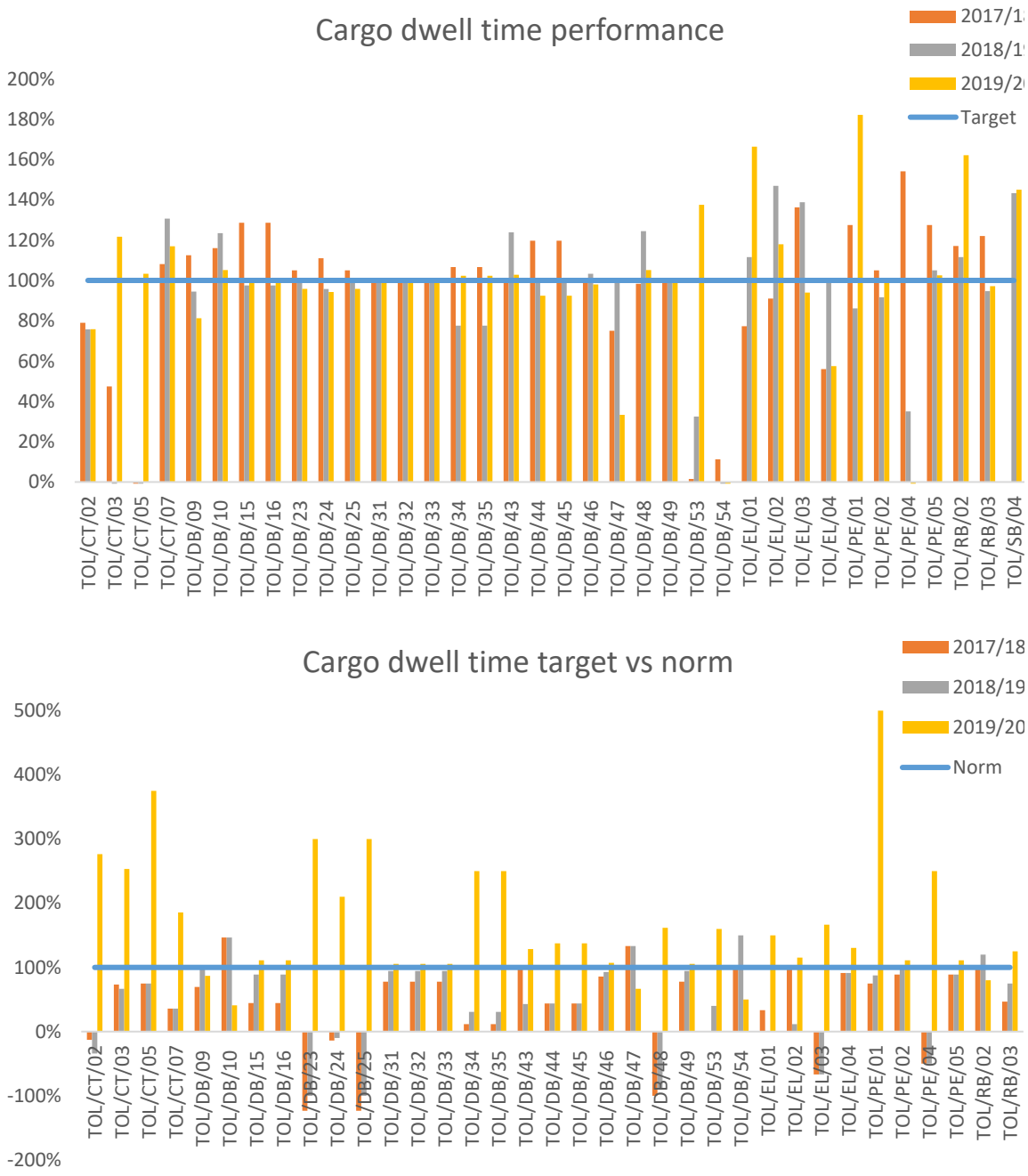


Figure 21: Liquid Bulk - Cargo dwell time performance & targets vs norms

The terminals' overall performance on cargo dwell time shows several terminals are doing well. A couple of terminals are still keeping cargo at the terminal for more extended periods than anticipated. The majority of terminals are setting their targets above the installed norms.

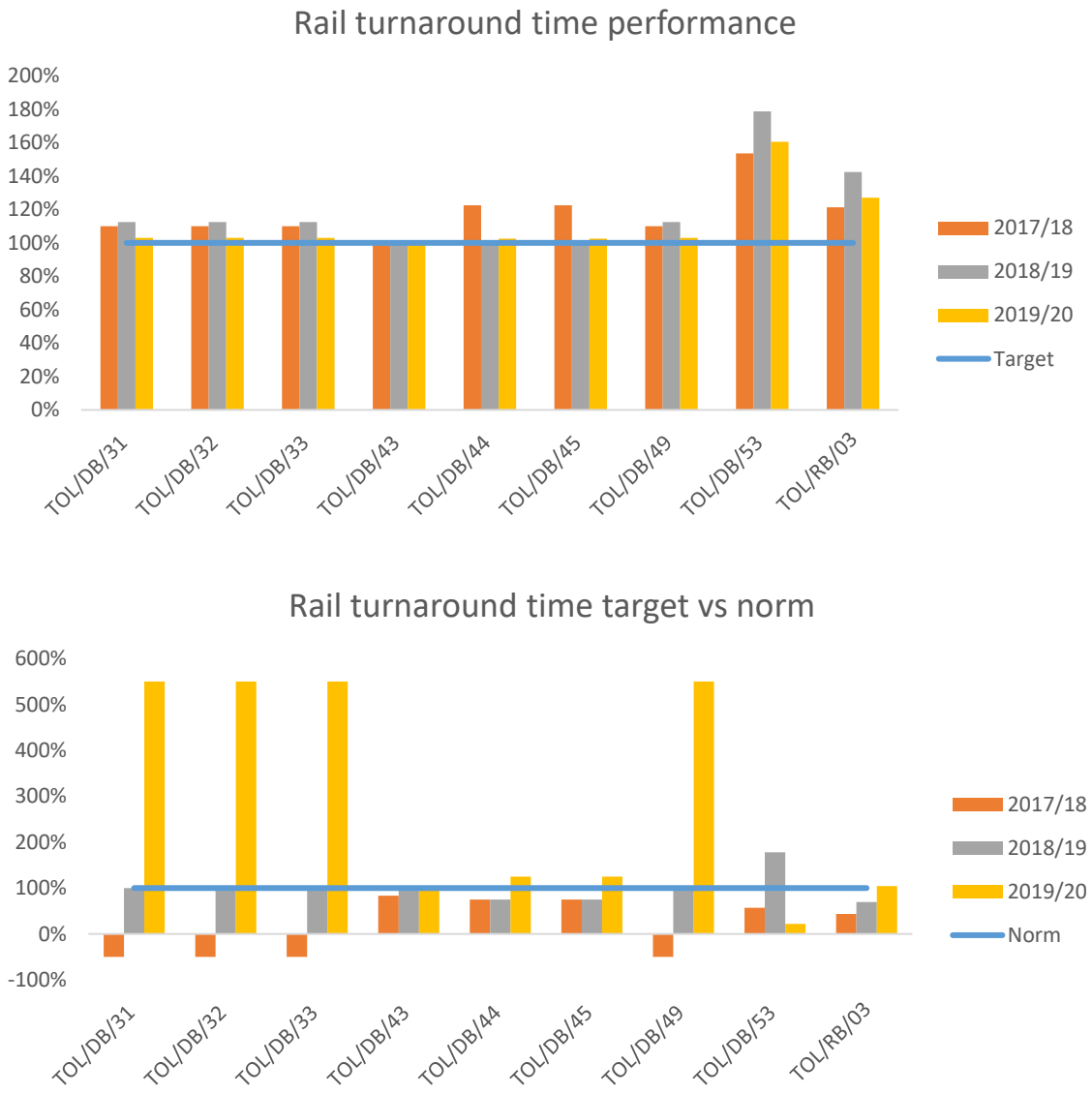


Figure 22: Liquid Bulk - Rail turnaround time performance & targets vs norms

All the terminals with rail access performed well in all the years. Generally, targets for rail turnaround has improved and is closer and above the installed norms.

Figure 23: Liquid Bulk - Ship working hour performance & targets vs norms

The performance of terminal operators on ship working hour is satisfactory. The results indicate that, on average, some terminal operators reached their ship working hour target. The target setting has remained mainly above the installed norm in year 7.

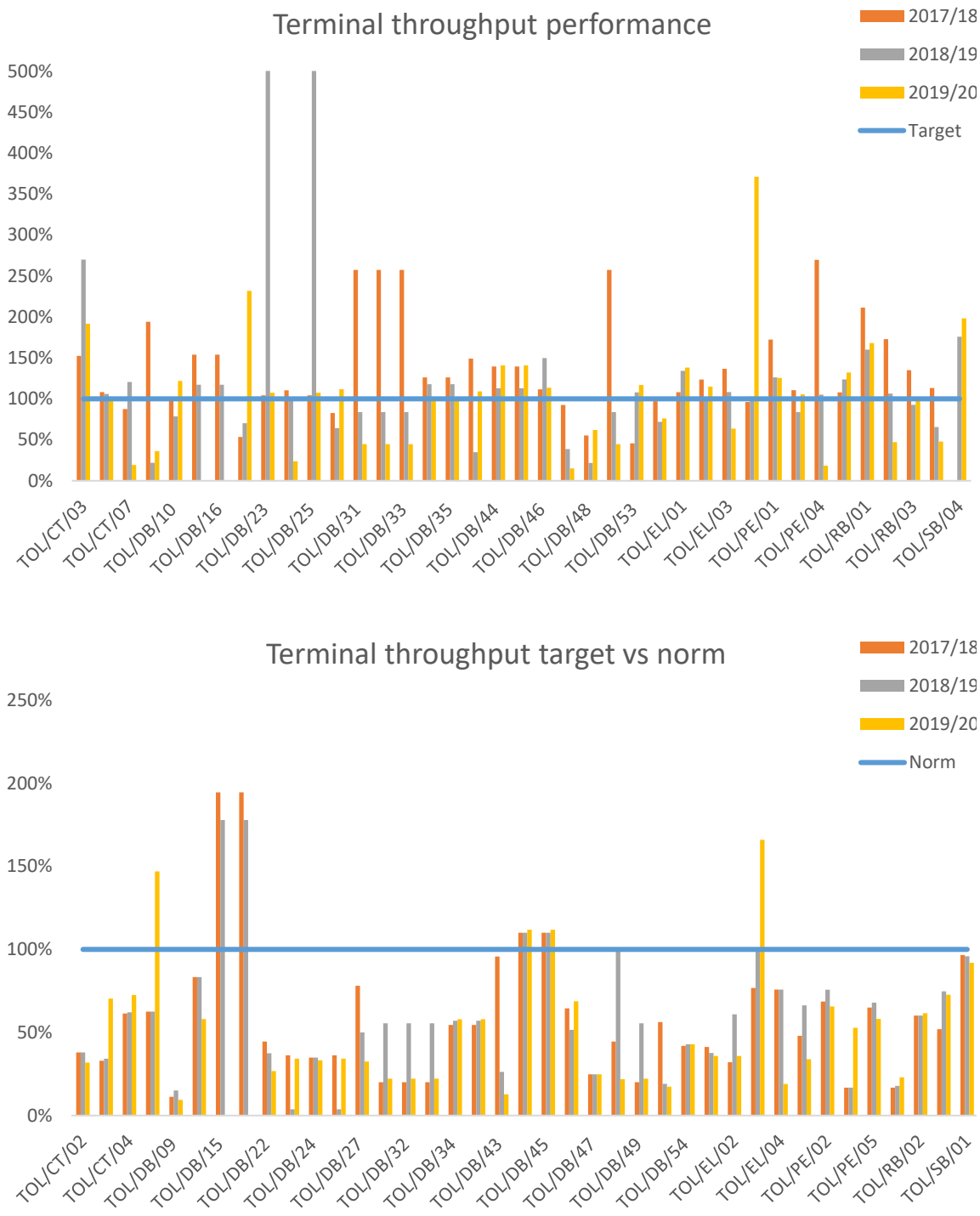


Figure 24: Liquid Bulk - Terminal throughput performance & targets vs norms

The terminal operator's performance on volume throughput is satisfactory, and some terminals experienced a decline and an increase in year 7. The target setting over the period was mostly below the installed norms.

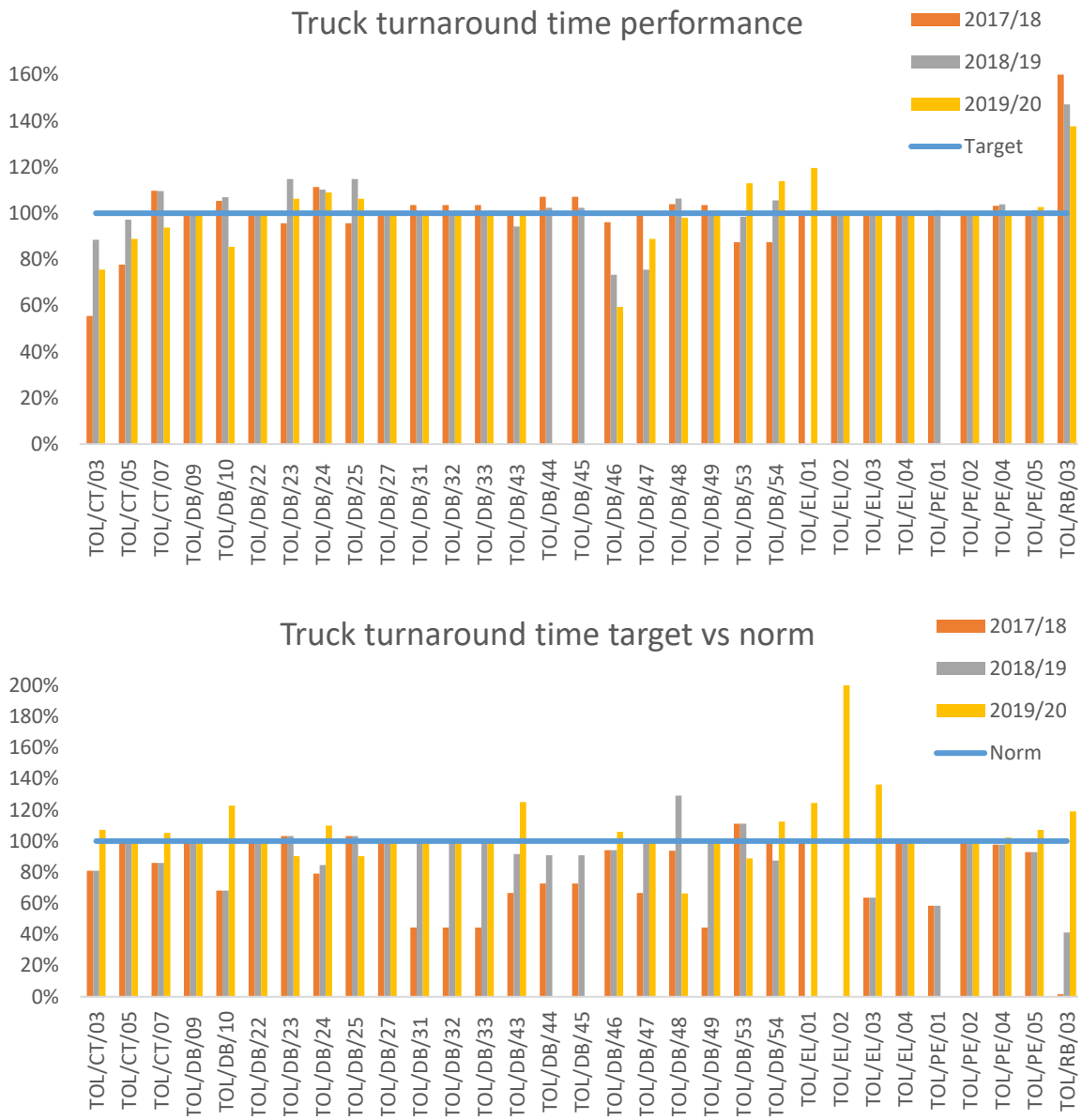
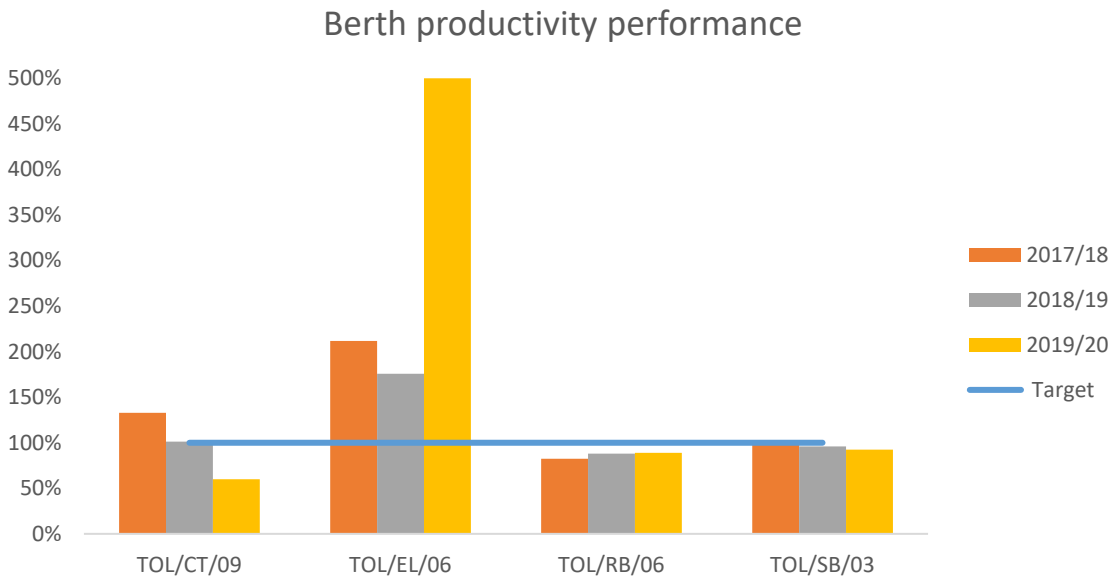


Figure 25: Liquid Bulk - Truck turnaround time performance & targets vs norms

The truck turnaround time performance is mostly good. Terminal operators seem to achieve their targets on this indicator. Most targets have improved and above the installed norm.

2.5. Break bulk

The following results below outline how the break bulk terminal operators performed on the various TOPS Key performance indicators against the targets and targets against the terminal capabilities.



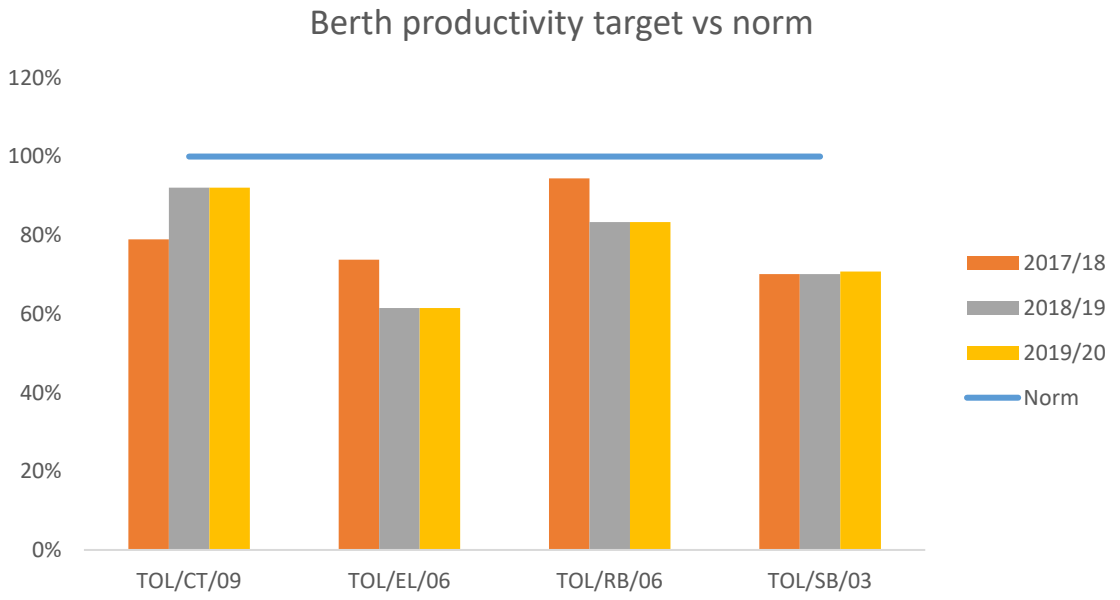
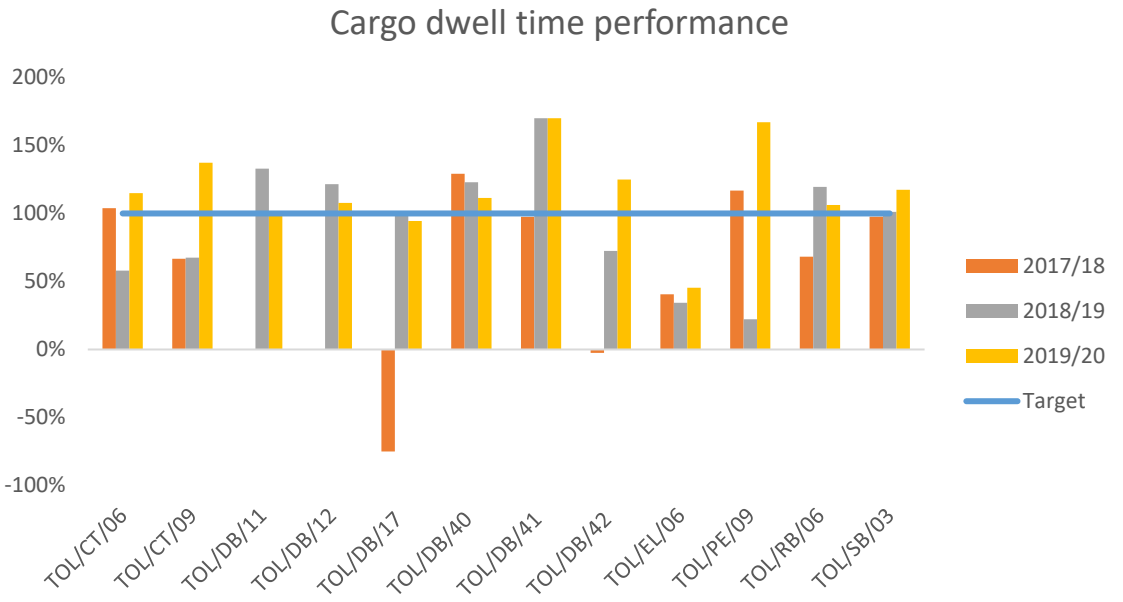


Figure 26: Break bulk - Berth productivity performance & targets vs norms

Berth productivity performance in 2019/20 saw one out of the four terminals perform poorly achieving 60% of the target while 2 teminals achieved satifactory result and one doing really well achieving over 600% of its target. Target setting has been unchanged in 2019/20 compared to the 2018/19 figures which were all below the norm.



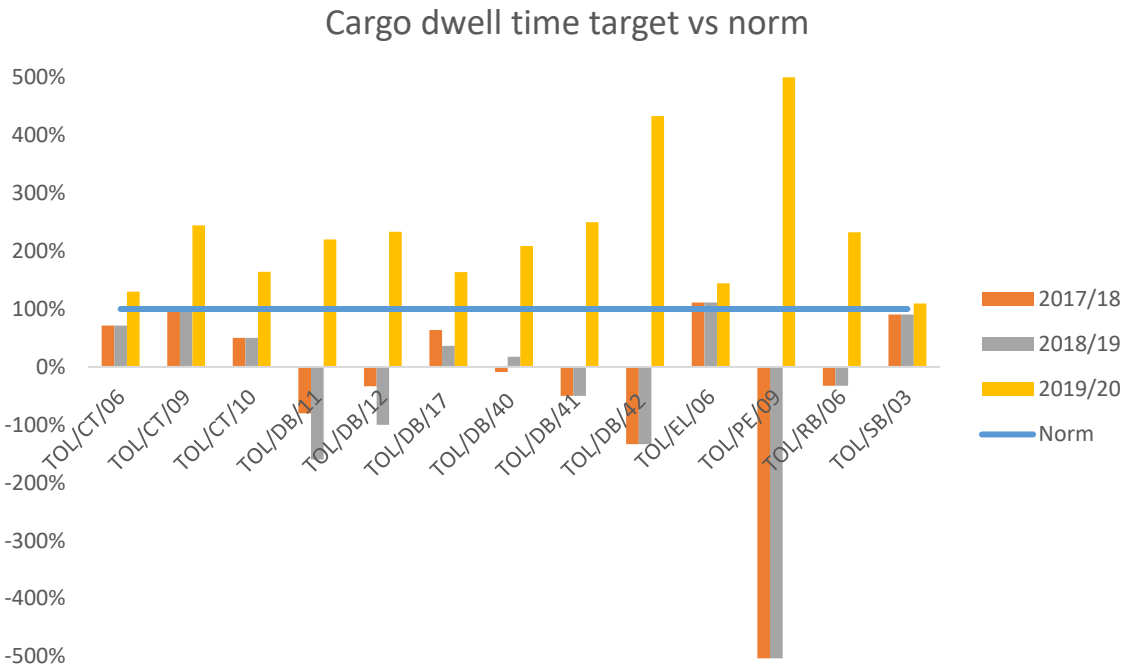


Figure 27: Break bulk - Cargo dwell time performance & targets vs norms

Cargo dwell time performance in 2019/20 was mostly good as only two terminal failed to keep within the set cargo dwell times. One of these terminals achieved a result of 45% of what was targeted and the other went slightly above the targeted time achieving a result of 94%. Compared to previous years, cargo dwell time performances have generally improved. This also goes for cargo dwell time target setting as all the set targets for 2019/20 were above the norms.

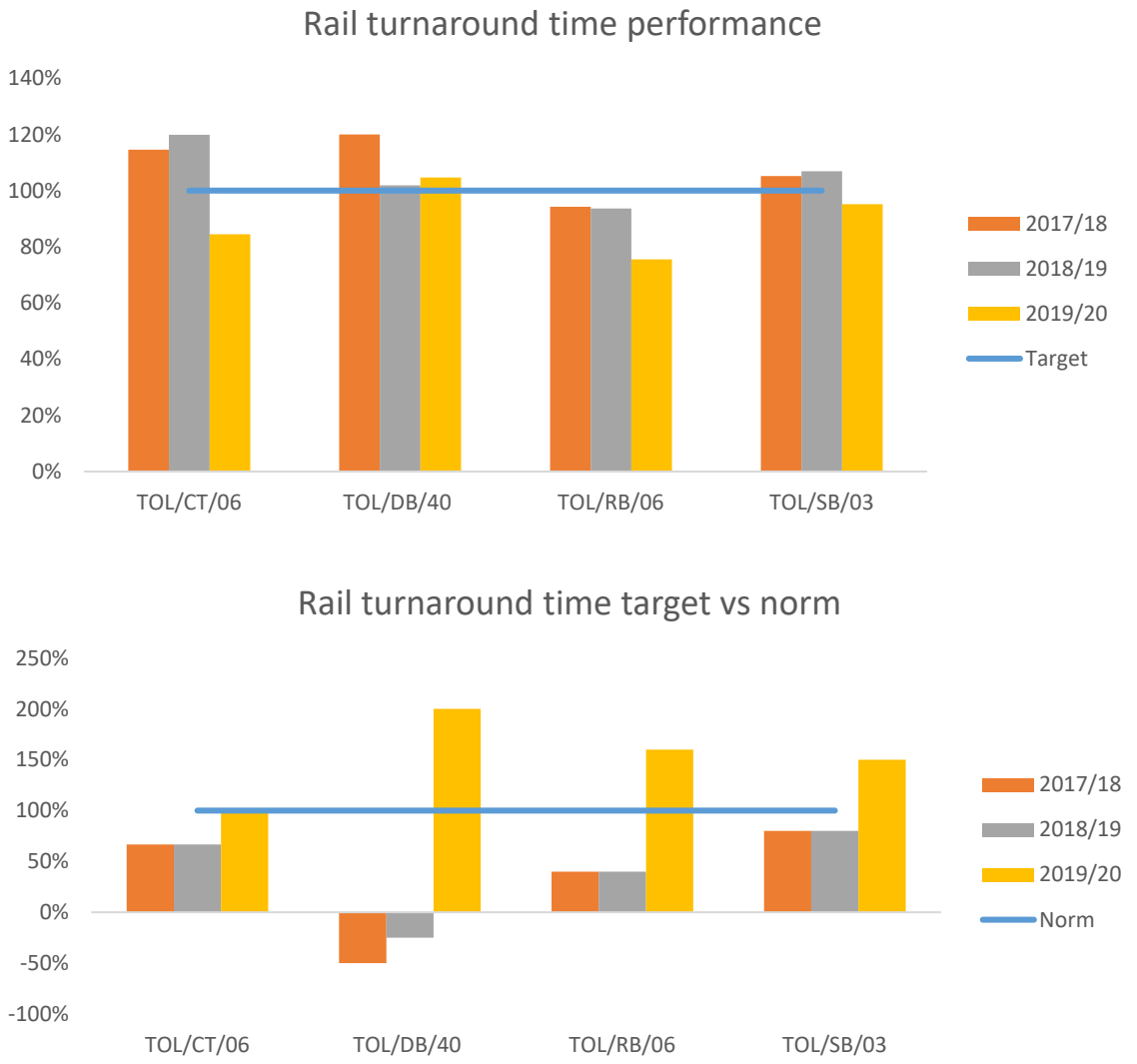


Figure 28: Break bulk - Rail turnaround time performance & targets vs norms

Rail turnaround time performance in 2019/20 saw only one out of the four terminals keep to within the targeted time, two had satisfactory results and one had a poor result achieving 76%. The results have generally declined from the previous years. Target setting has improved compared to previous years, all targets have been set within the norms.

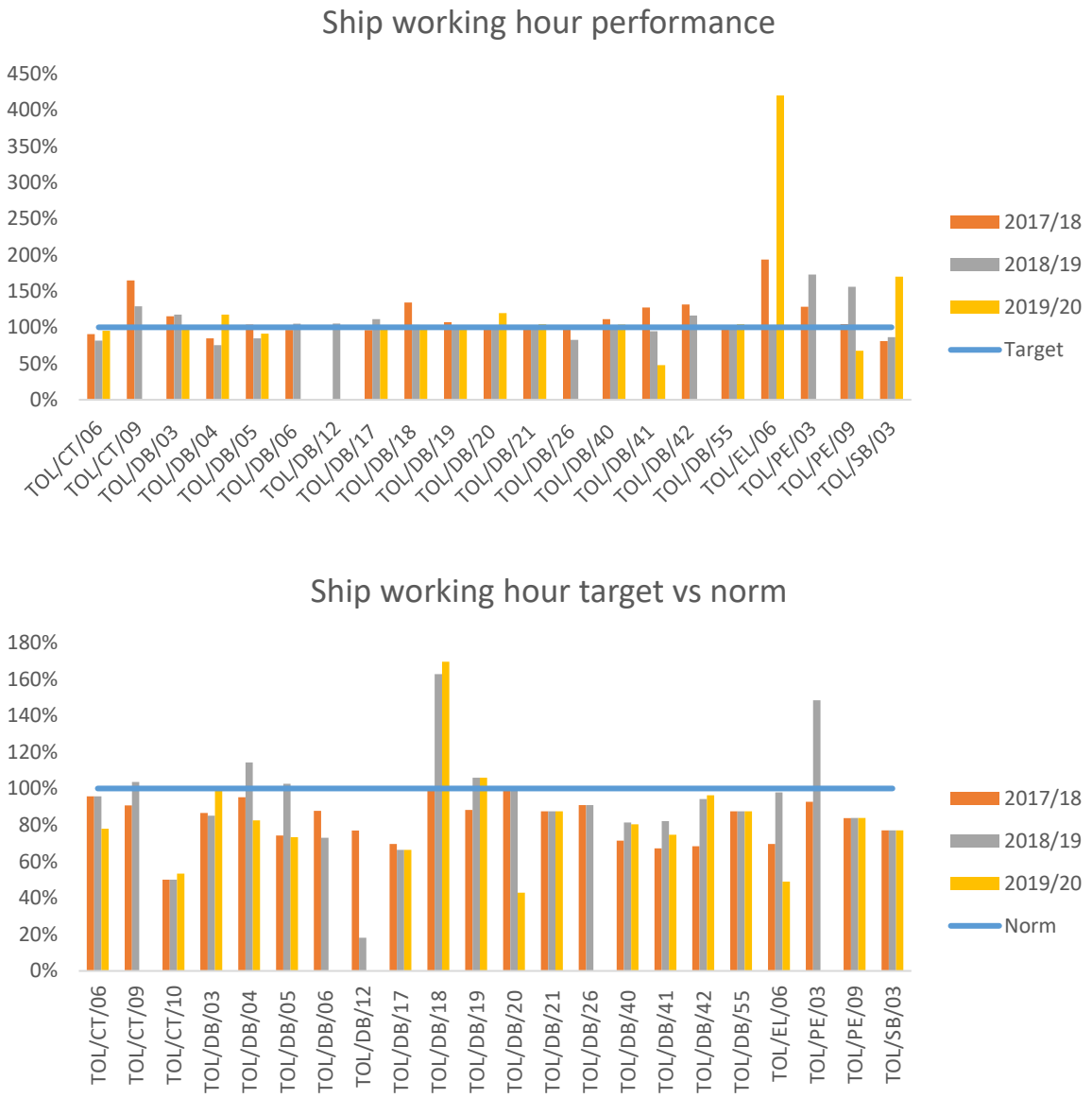


Figure 29: Break bulk - Ship working hour performance & targets vs norms

The ship working hour performance results indicate that 9 out of the 16 terminals had good results, that is met the targeted rates, 5 terminals came close to the targets and 2 terminals had poor performance in 2019/20. Ship working hour target setting for most breakbulk terminals continue to be under the norms.

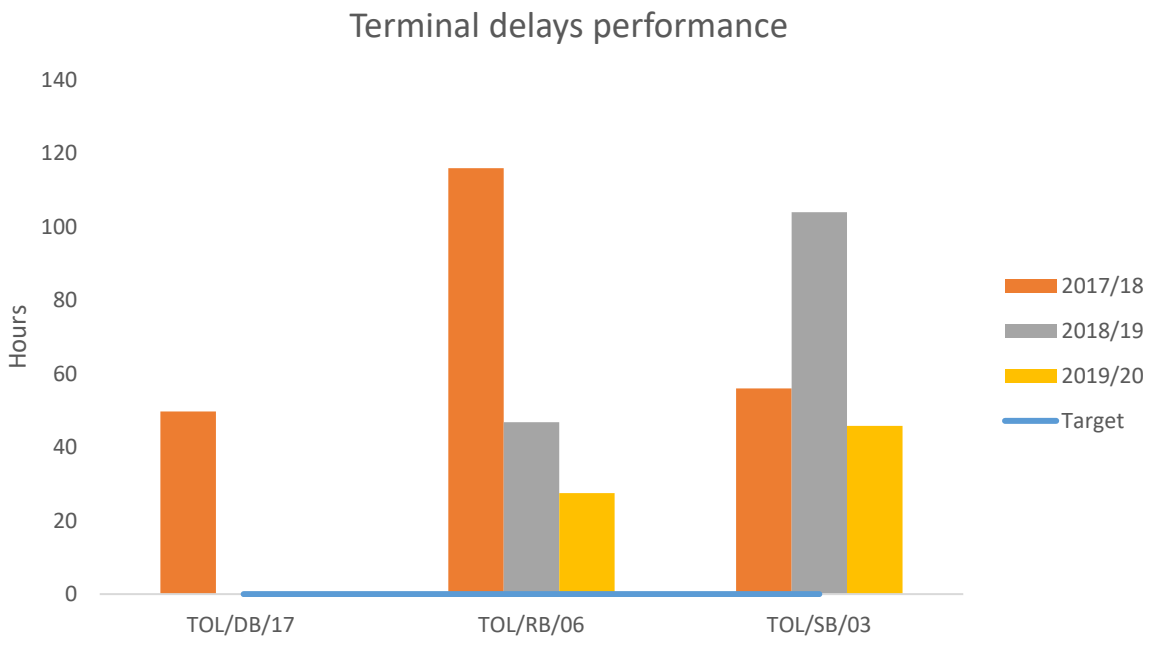


Figure 30: Break bulk - Terminal delays performance

There were delays on two breakbulk terminals in 2019/20, one with a 27,5 hours delay and the other with a 45,8 hours delay. This however, is an improvement from the previous years as shown in Figure 30 above.

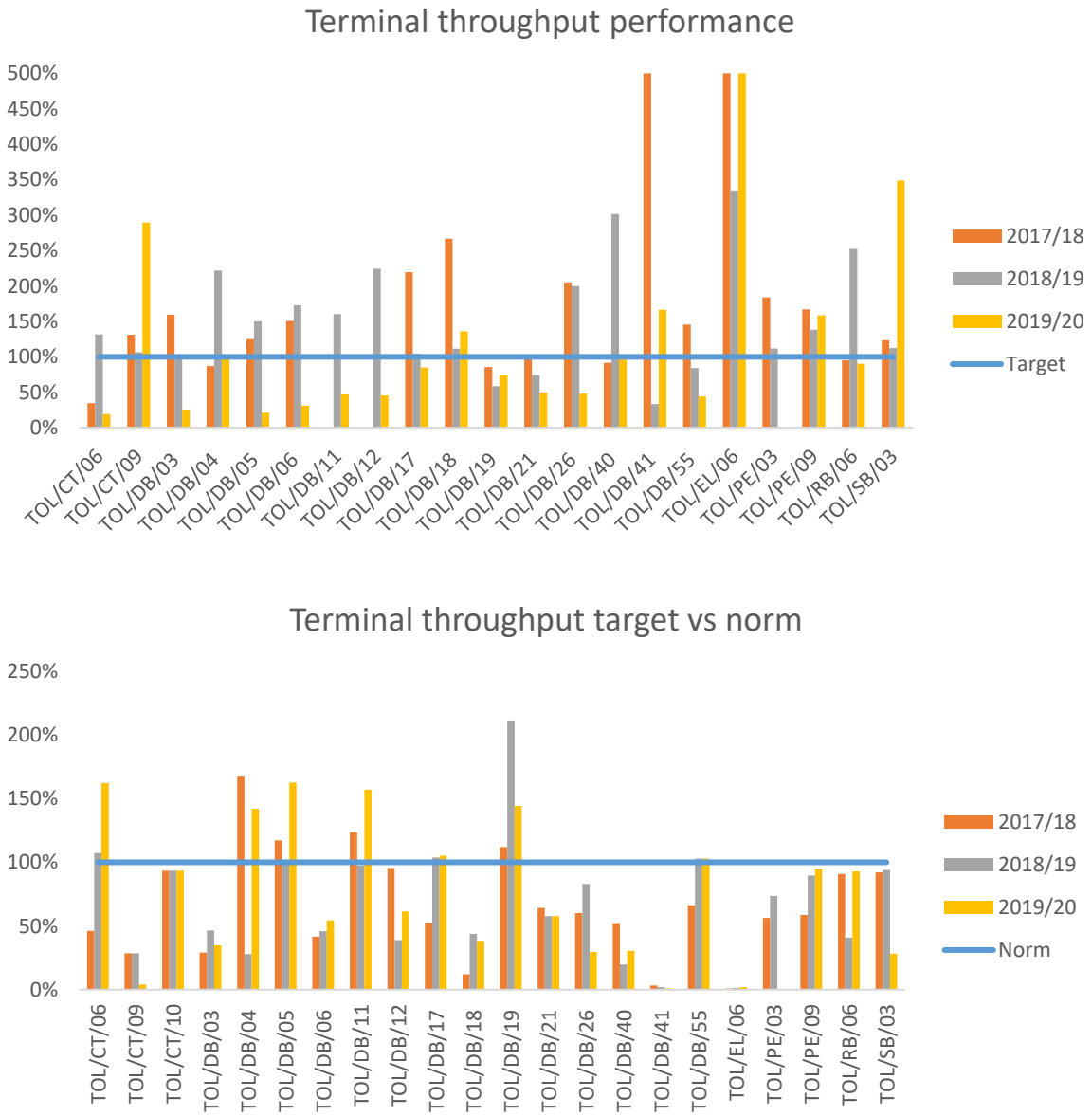


Figure 31: Break bulk - Terminal throughput performance & targets vs norms

Terminal throughput performance in 2019/20 show that 9 out of the 21 terminals achieved their targets, 3 terminals had satisfactory results and the other 9 terminals performed poorly. Throughput target setting continues to be below the installed norms for most terminals with a handful setting targets above the norms.

Figure 32: Break bulk - Truck turnaround time performance & targets vs norms

Much like the previous years, terminals were able to keep within their targeted truck turnaround times in 2019/20, except for 3 terminals which had poor results. Truck turnaround times target setting has improved across most terminals in 2019/20. Most targets were set well within the norms for breakbulk terminals.

3. Summaries and Recommendations

3.1. Overall Performance on KPIs and Target Settings

Terminal operator performance results were categorised using the following rating scale:

Table 1: Categorisation of results

KPI	Good	Satisfactory	Poor
Berth Productivity	>= 100%	>= 85%	< 85%
Ship Working Hour	>= 100%	>= 85%	< 85%
Terminal Throughput	>= 85%	>= 65%	< 65%
Cargo Dwell Time	>= 100%	>= 85%	< 85%
Rail Turnaround Time	>= 100%	>= 85%	< 85%
Truck Turnaround Time	>= 100%	>= 85%	< 85%

Note that a different scoring scale was used for terminal throughput due to the fact that volumes are a function of a number of factors that are often beyond the control of terminal operators. As a result, a more lenient rating scale was used as reflected in the table above.

Table 2: Number of observations

KPI	Measure	Year 5	Year 6	Year 7
Berth Productivity	Performance	20	21	21
	Target Setting	20	20	20
Cargo Dwell Time	Performance	66	69	68
	Target Setting	68	68	68
Rail Turnaround Time	Performance	29	27	29
	Target Setting	27	27	28
Ship Working Hour	Performance	87	88	78
	Target Setting	89	89	79
Terminal Throughput	Performance	89	91	87
	Target Setting	89	89	87
Truck Turnaround Time	Performance	65	65	62
	Target Setting	68	65	63

The table indicates the number of terminal operator licenses measured for the above KPIs, and that had sufficient information to conduct the analysis. As reflected in the table above, the number of licenses may vary slightly over the two periods as new licenses get issued or cancelled or when the lease period expires.

The following section provides an overview of how terminal operators performed on each KPI against the agreed target in the port system by categorizing the results using the rating scale, good, satisfactory, and poor. Further, it provides an overall summary of how targets have been set in the port system related to their installed norms.

3.1.1. Terminal Throughput

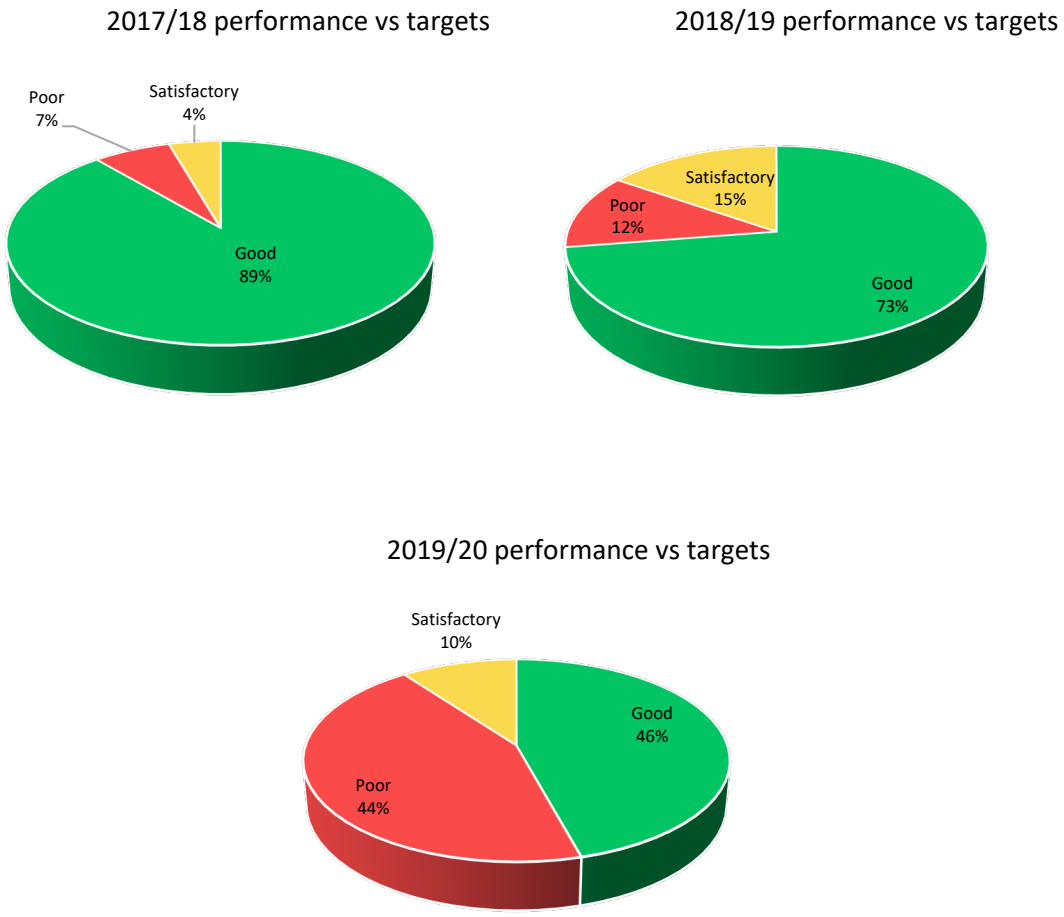


Figure 33: Terminal throughput performance vs targets

Throughput performance across the port system regressed from 73% to 46% between the two years.

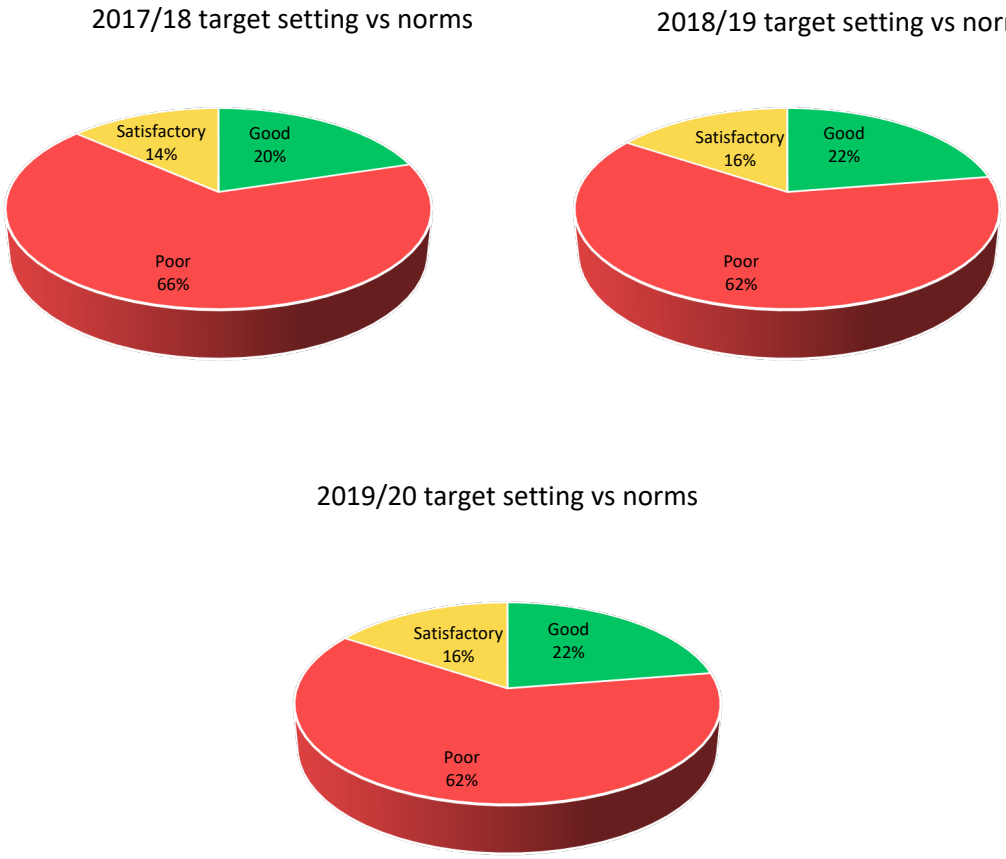


Figure 34: Terminal throughput targets vs norms

There seem to be no improvement in terminal throughput target setting over the three periods. The majority of targets are still set below the installed norm.

3.1.2. Ship Working Hour

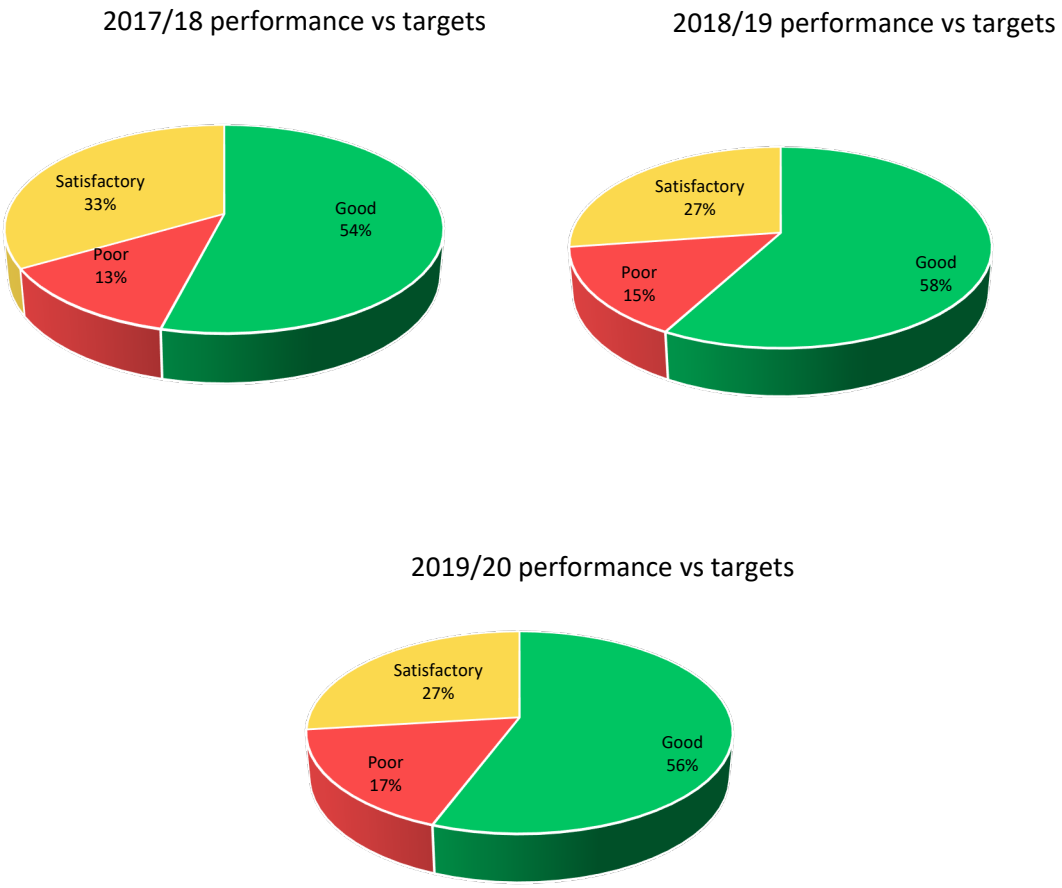


Figure 35: Ship working hour performance vs targets

There is a slight decline in ship working hour performance between the two years from 58% to 56%.

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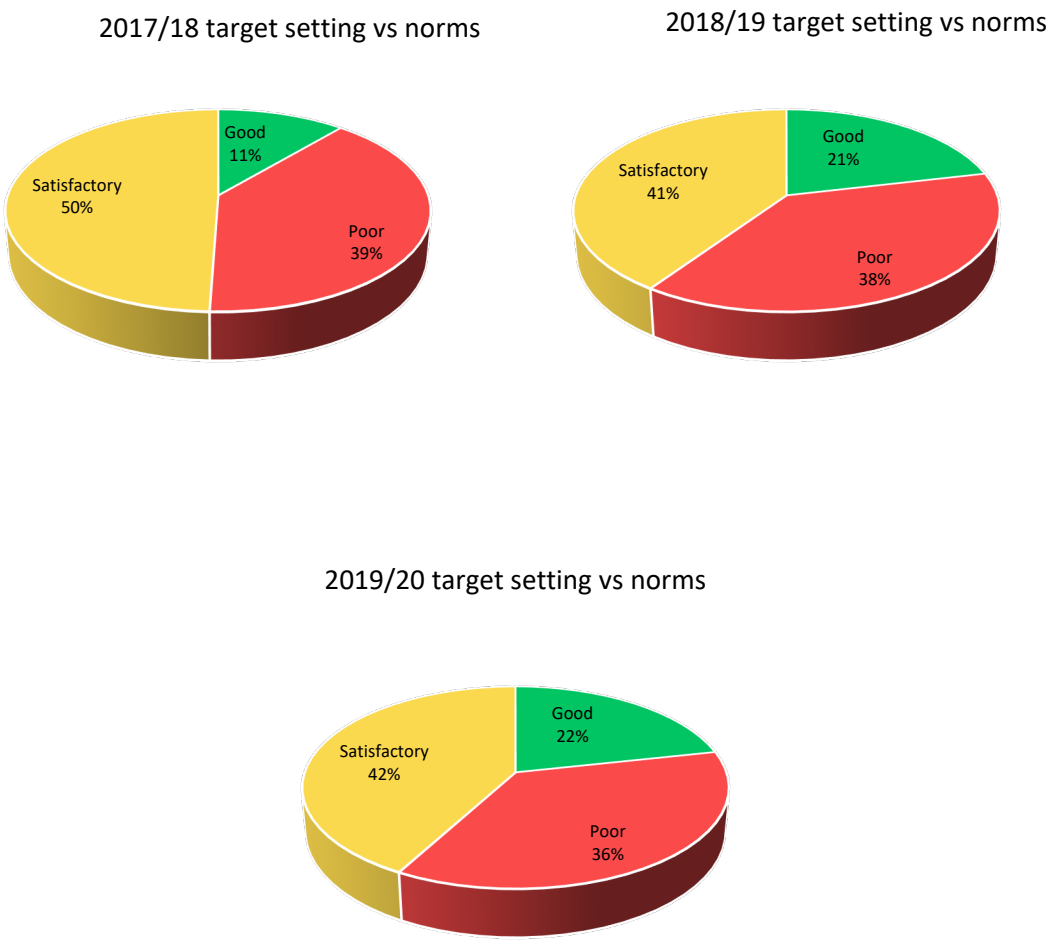


Figure 36: Ship working hour targets vs norms

The ship working hour target settings improved from 11% in year 5 to 22% in year 7. However, a larger proportion of terminals are still setting targets below the installed norm.

3.1.3. Berth Productivity

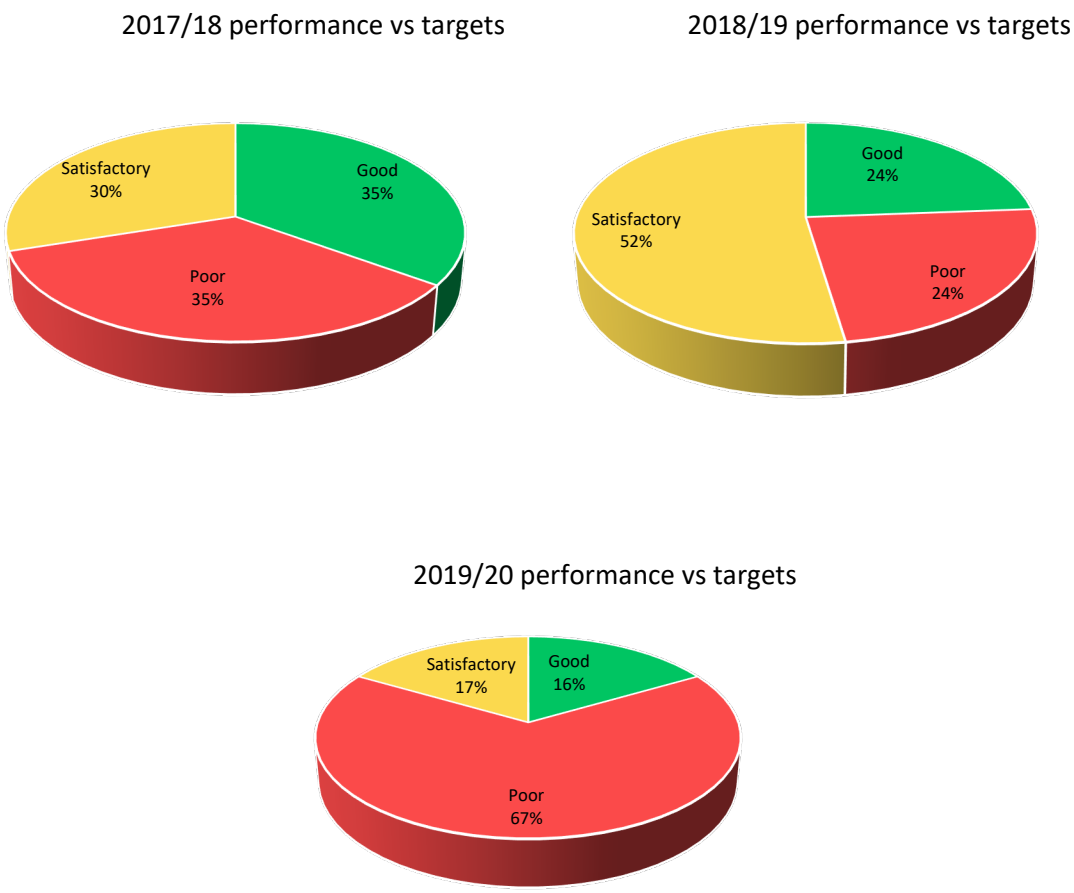


Figure 37: Berth productivity performance vs targets

The terminals' performance in berth productivity has drastically dropped over the three years from 35% to 16% of the terminals that met their targets. The majority of terminals that performed satisfactorily has improved from 30% to 52% between year 5 and year 6 and significantly dropped to 17% in year 7.

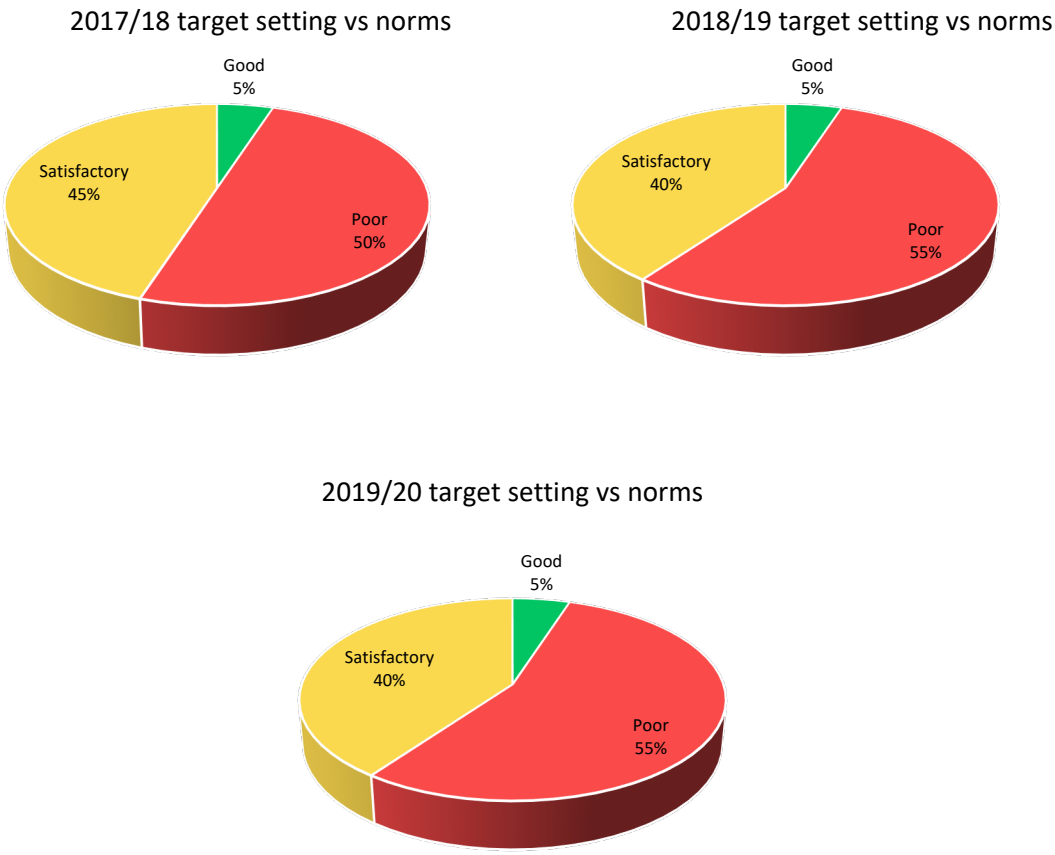


Figure 38: Berth productivity targets vs norms

The low setting of berth productivity targets has been consistent over the three periods. Targets are still set below the terminal capability and there are no improvements.

3.1.4. Truck Turnaround Time

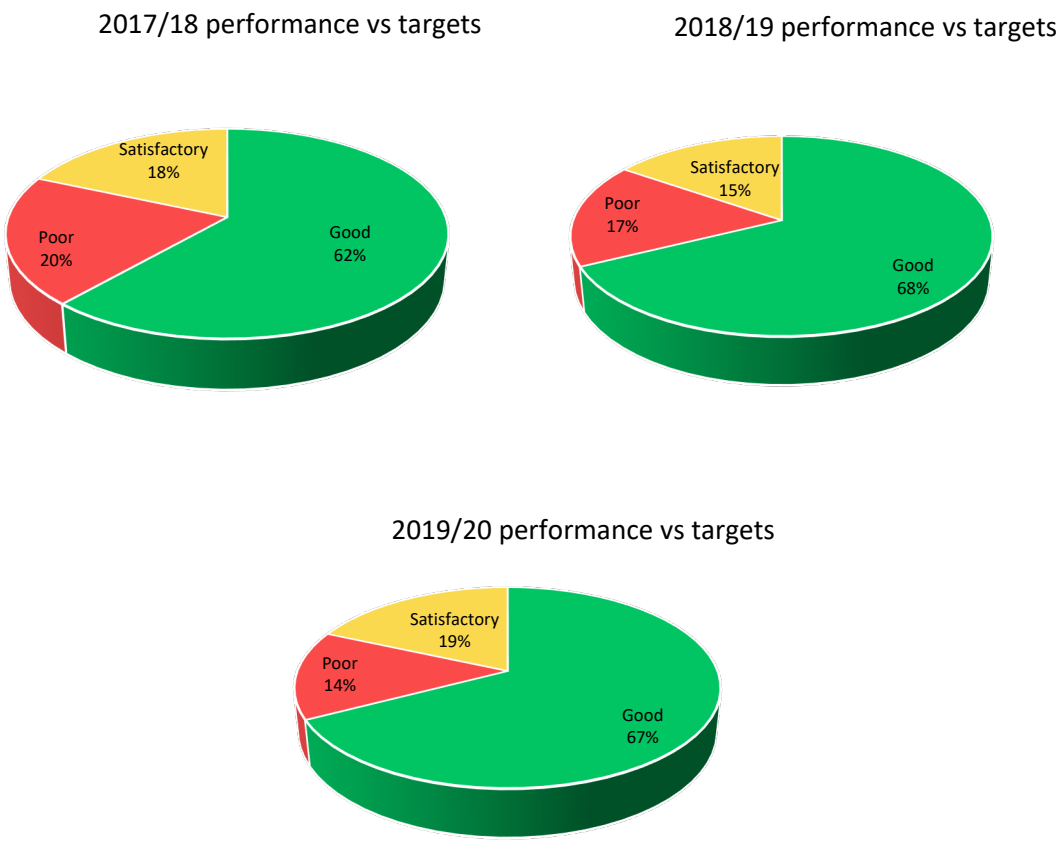


Figure 39: Truck turnaround time performance vs targets

Truck turnaround performance across the terminals recorded a marginal improvement from 62% to 67% of terminals that met their target in year 7.

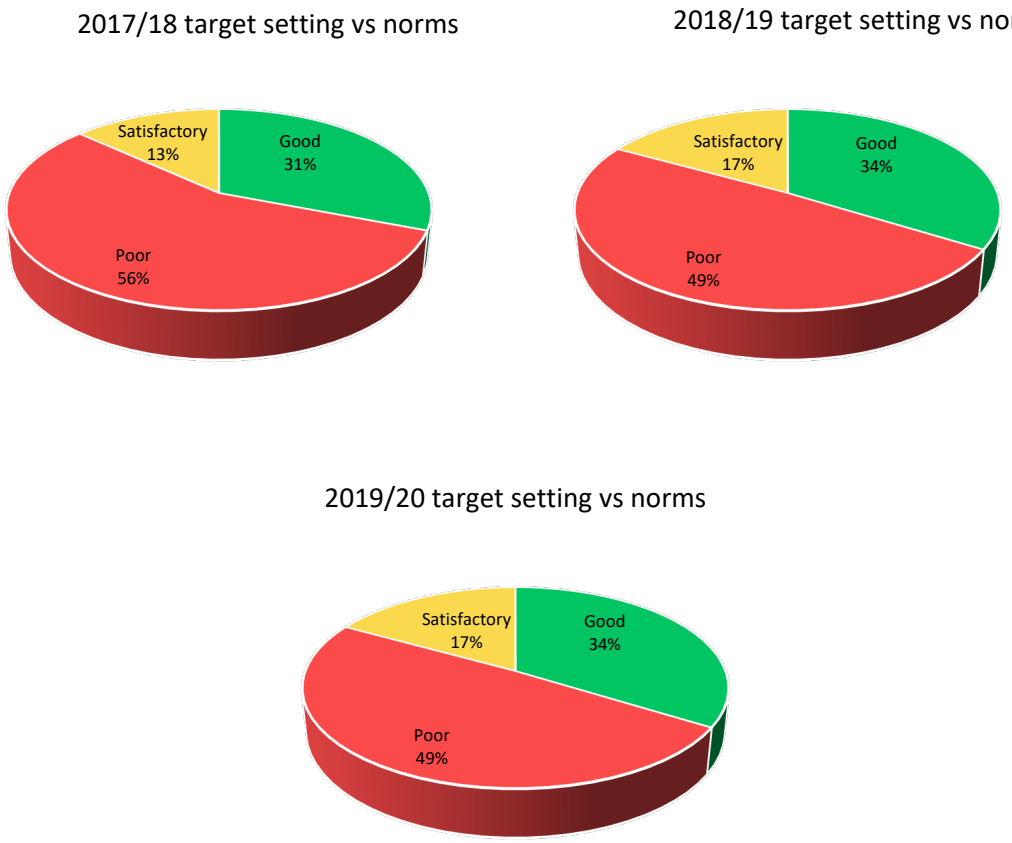


Figure 40: Truck turnaround time targets vs norms

The overall performance has gotten worse since 66% of the terminal truck turnaround time targets in year 7 are set below the installed norm times, and only 34% of the targets are on par with the installed norm.

3.1.5. Rail Turnaround Time

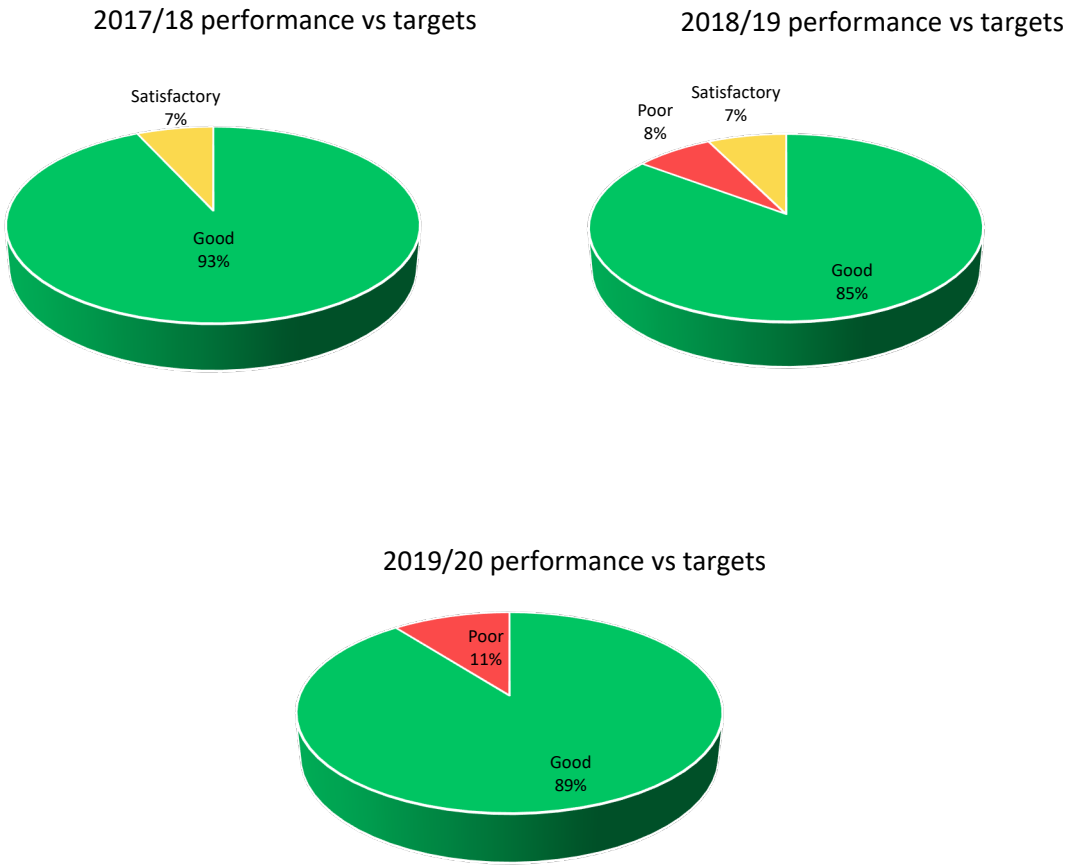


Figure 41: Rail turnaround time performance vs targets

The results show that the majority of terminals with rail access are performing well on this indicator, although terminals that performed increased from 8% in year 6 to 11% in year 7.

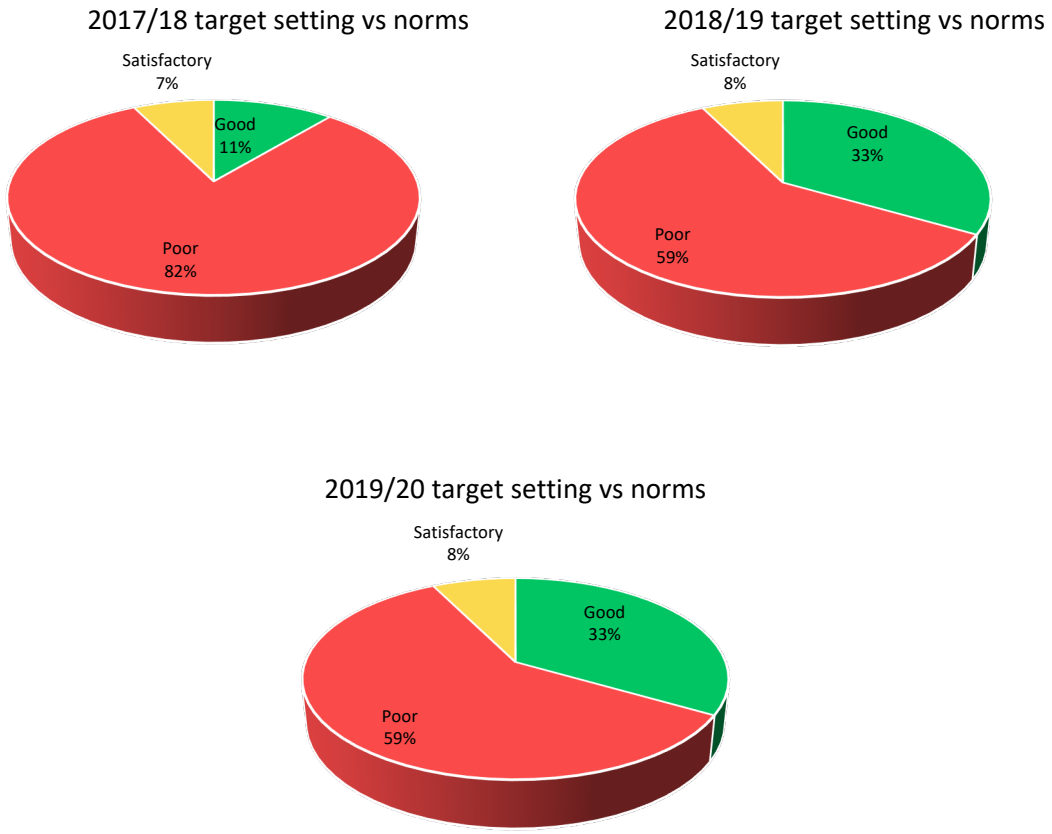


Figure 42: Rail turnaround time targets vs norms

This indicator's target setting has gotten worse. Only 33% of terminals setting targets equal to the installed norm in year 7, suggesting that terminals are easily reaching their performance target since they are placed below the standard.

3.1.6. Cargo Dwell Time

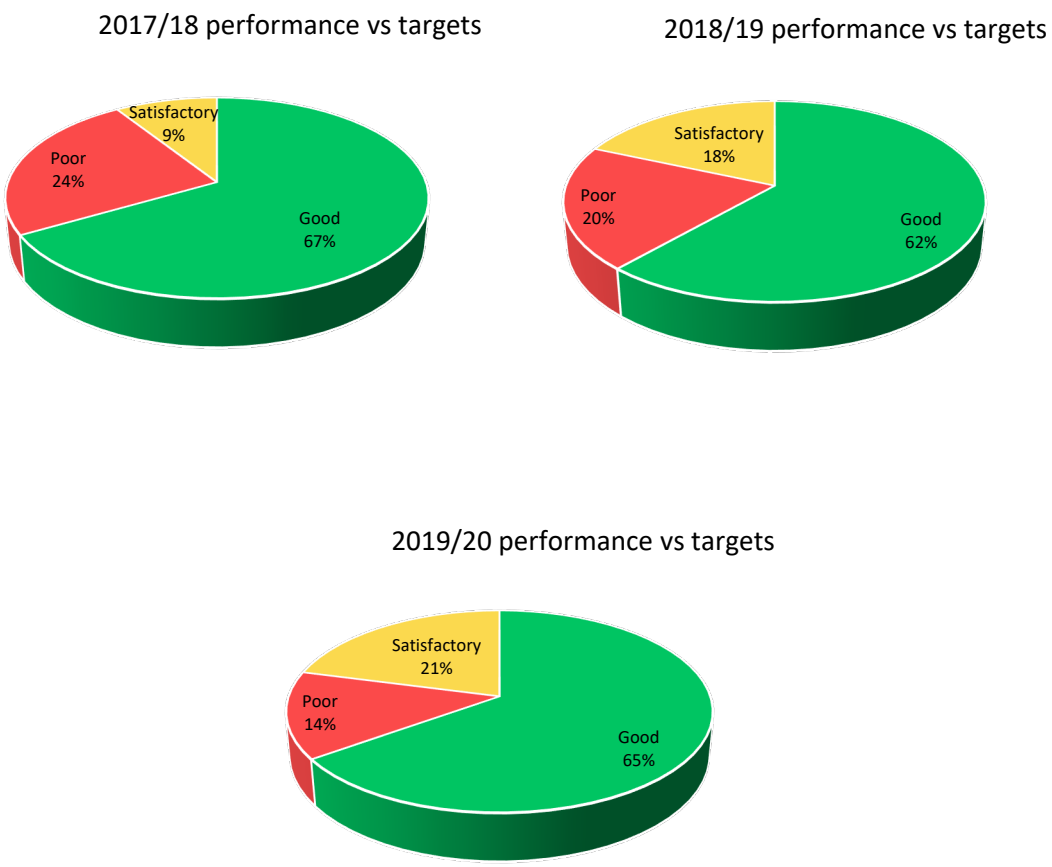


Figure 43: Cargo dwell time performance vs targets

The graph above shows that most terminals are doing quite well to reach their cargo dwell time targets. However, the performance has deteriorated over the three years from 67% to 65% of the terminal operators that meet their targets.

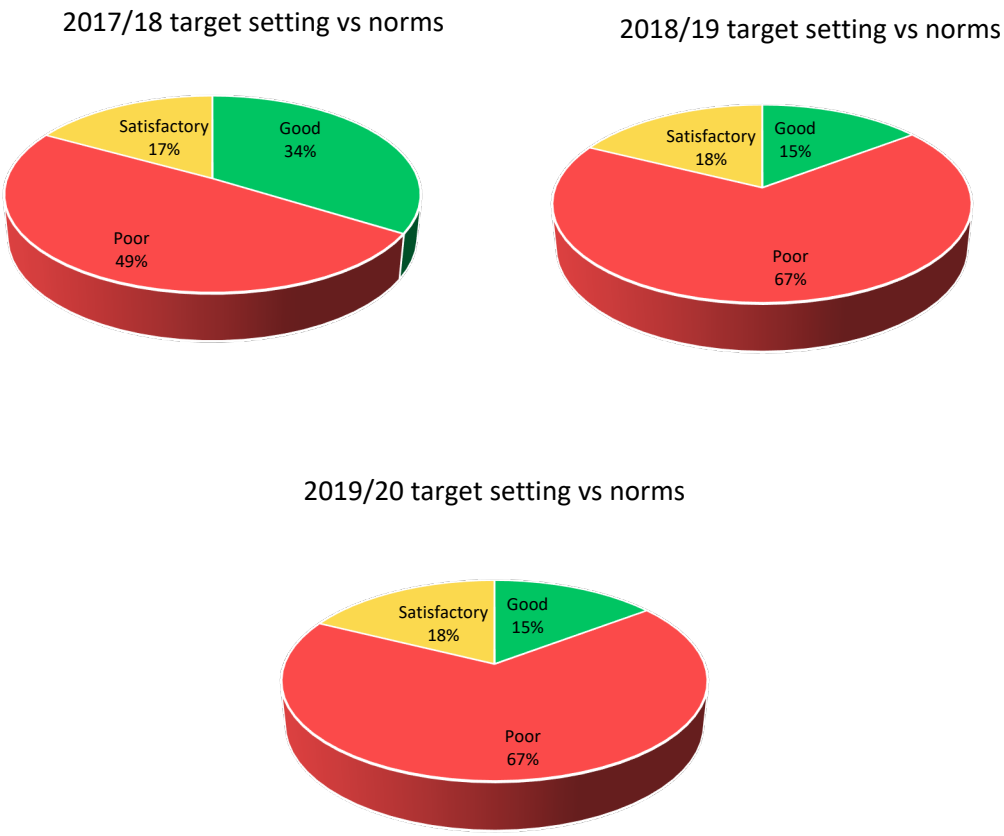


Figure 44: Cargo dwell time targets vs norms

The above charts indicate a worsening in the setting of cargo dwell time targets over the three years since the percentage good drastically dropped and that of poor grew. There is more room for improvement as 85% of the observations showed that cargo dwell times are still being set over the installed norms.

3.2. Conclusion

The following are to be noted in the context of Regulatory performance incentives:

- It is recommended that further analysis of terminal performance against installed and designed norms be carried out and results be used to develop a range that represents optimal targets per KPI.
- It is suggested that installed norm for all the terminal operators be reviewed since the current norms were developed approximately 6 years ago.
- Targets should not be allowed to reduce below what was previously achieved and where this occurs reasons for should be provided rather than just a mere unexplained reduction of targets. The Authority must explain the measures that were changed and reasons they were changed; the operational and installed capacities which were to be determined as part of the simulation study should be confirmed since some of the targets are still set above the norm.
- Terminal throughput performance has significantly declined between year 6 and year 7 from 73% to 46%. This is worrying since 62% of the targets are set below the installed norm.
- The overall rail turnaround performance is good but targets are set way below the installed norms of the terminals.
- Berth's productivity performance has worsened even though the targets are mostly set below the installed norm. Interventions regarding this KPI are required as terminals are struggling to achieve low targets.
- Although 65% of the terminals met their cargo dwell time targets, cargo is still spending more than necessary time in the port since 67% of the targets are set below the installed norm.
- A slight decline in the ship working hour performance and target settings also experienced a minor improvement in year 7. However, there a massive room for improvements since 78% of the terminals are still setting targets below the installed norm.
- Terminal delays remain a considerable challenge in the port system, but there are recorded improvements in year 7. The total terminal delay time decreased by 48% in year 7 from 451 hours to 234 hours.

4. References

Baldwin, R., Cave, M., Lodge, M., (2012) *Understanding Regulation: Theory, Strategy, and Practice*, 2nd Edition, Oxford Univer4sity Press, Oxford, UK.

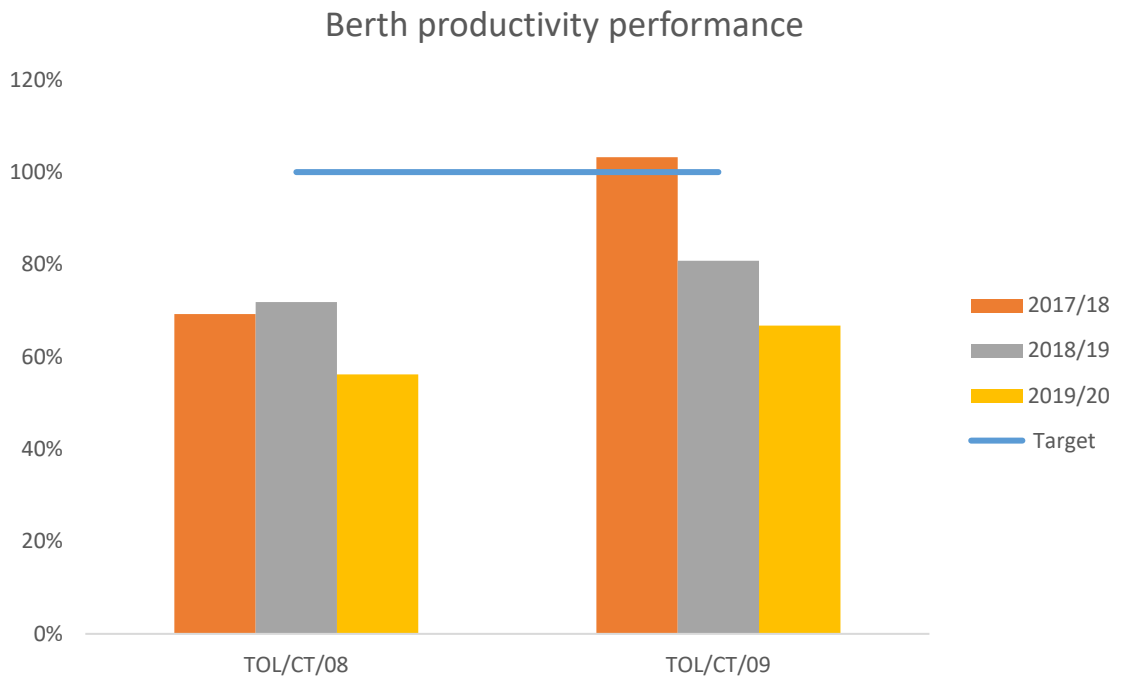
Harrington, H.J., (1991) *Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity and Competitiveness*, McGraw-Hill, New York.

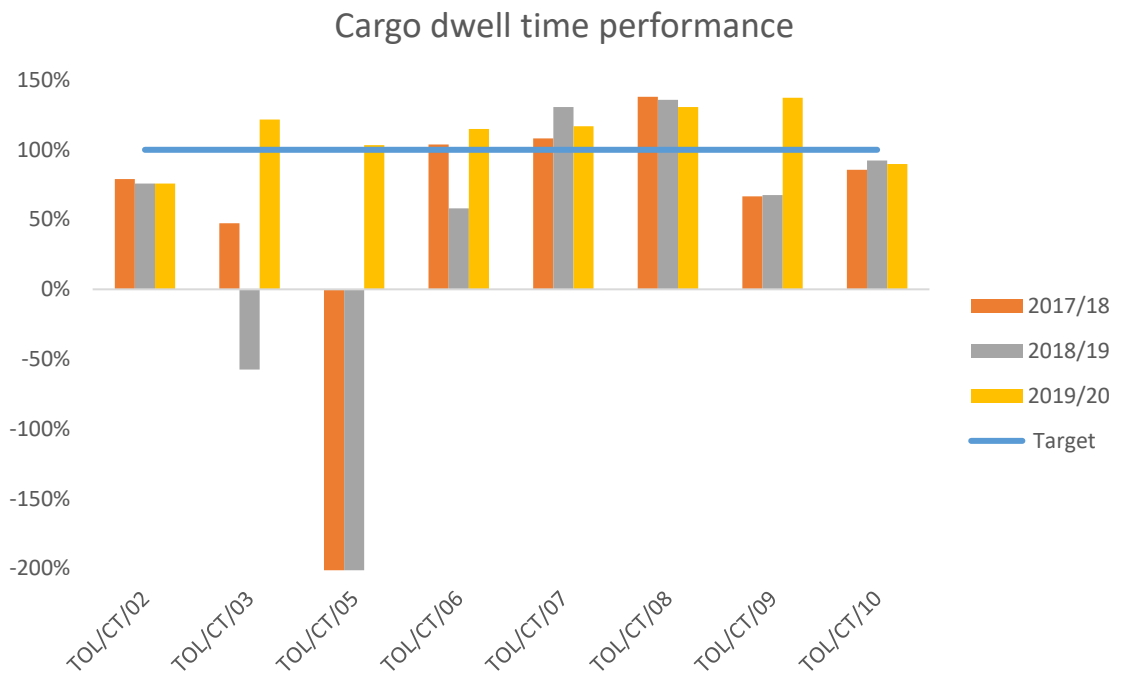
ANNEXURE 1: Port by port analysis

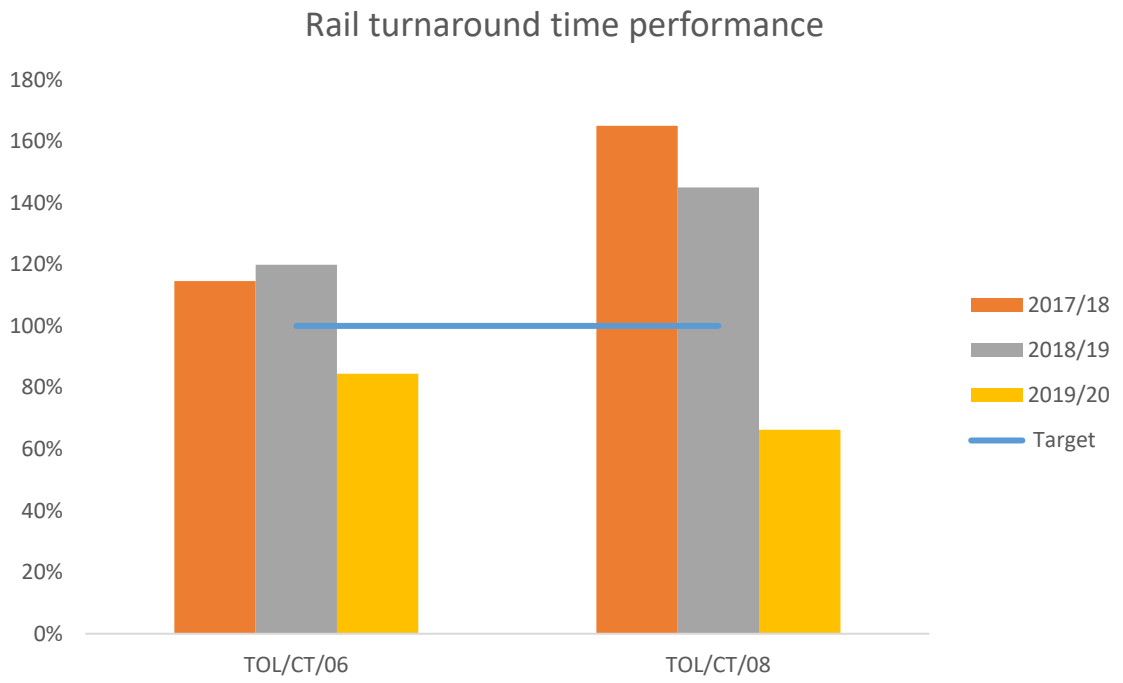
The following consolidates TOPS results for each terminal operator and how it has performed relative to set standards/targets during the 2017/18 to 2019/20 financial years (Year 5 to Year 7). The performance analysis was conducted at a port level per each key performance indicator. Terminals' performance against a particular indicator is presented in a graph to track performance over a period under review.

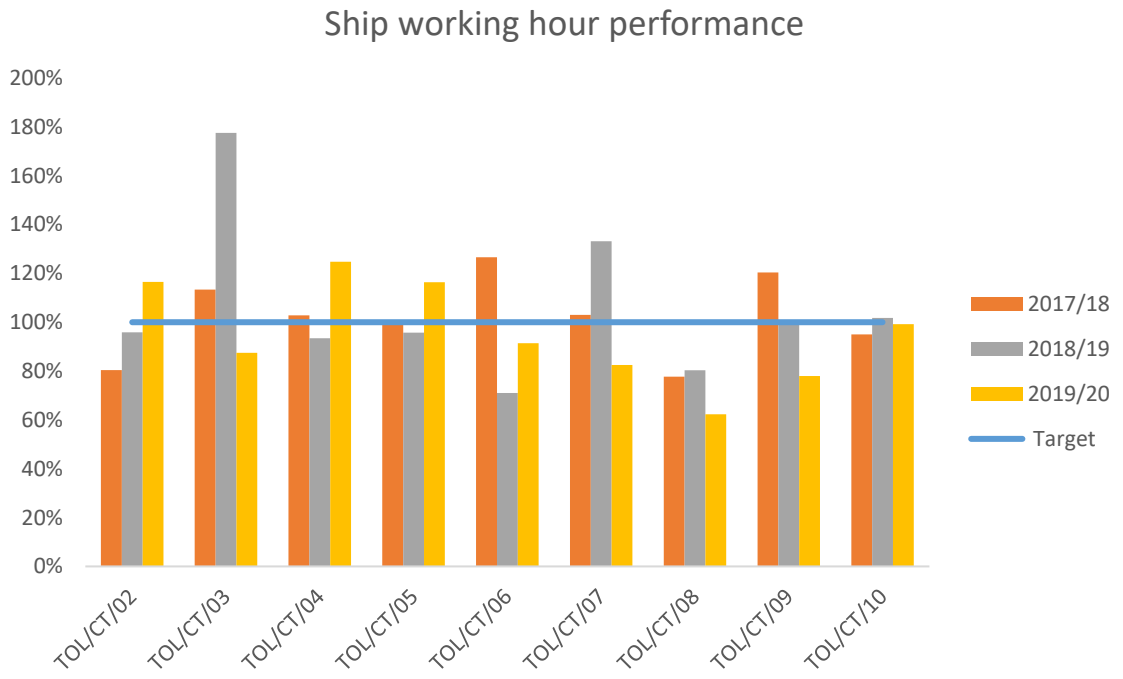
Port of Cape Town

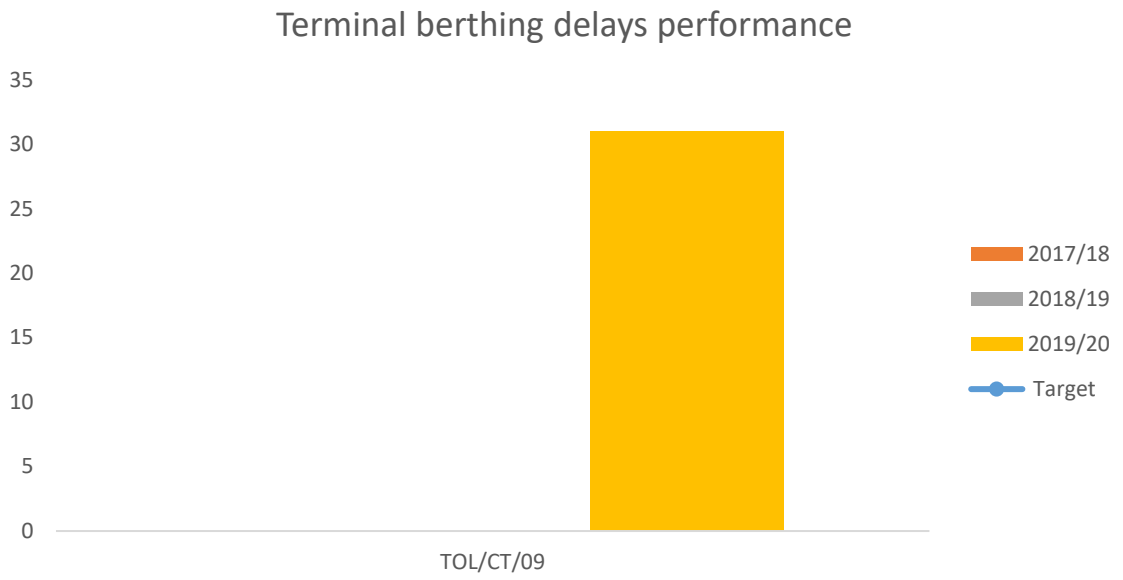
The Port of Cape Town accounts for nine licenses in the port system. The following performance analysis was conducted in the Port of Cape Town:

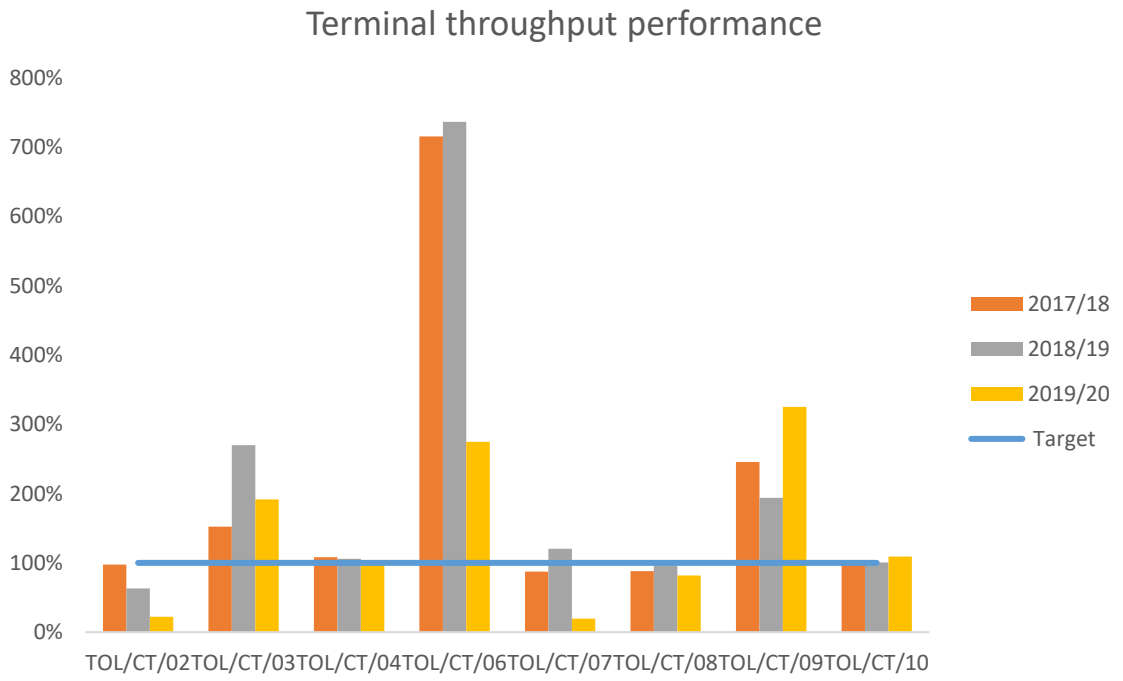


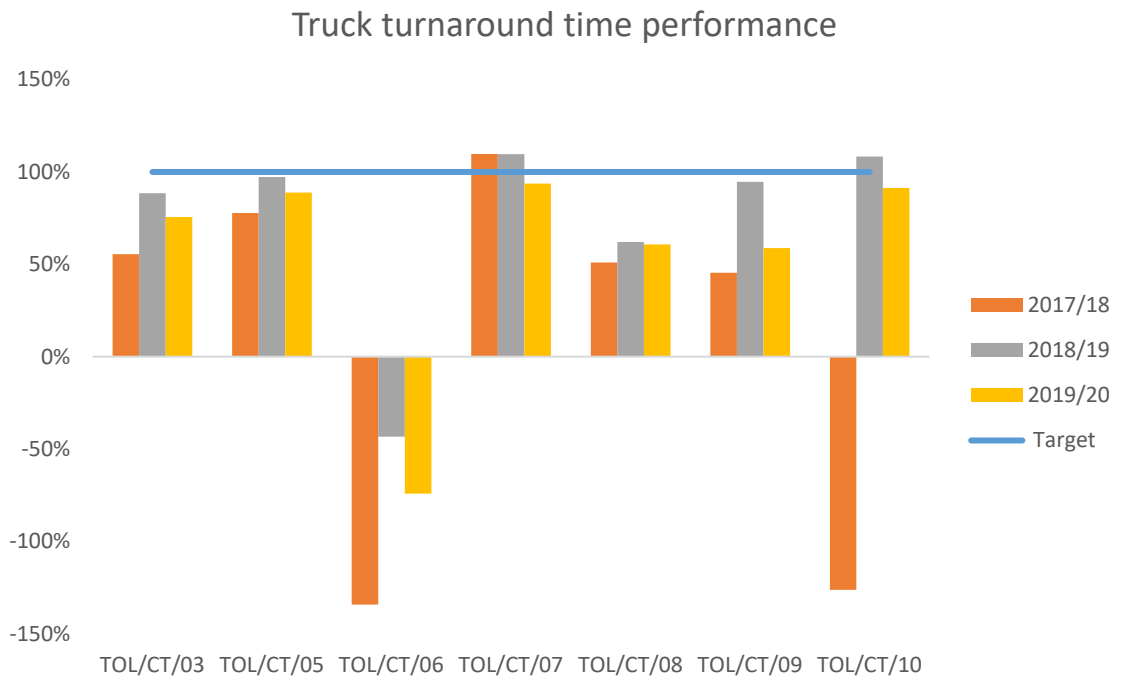

Cargo dwell time performance
150%
100%
50%
0%
-50%
-100%
-150%
-200%
TOL/CT/02
TOL/CT/03
TOL/CT/05
TOL/CT/06
TOL/CT/07
TOL/CT/08
TOL/CT/09
TOL/CT/10
2017/18
2018/19
2019/20
Target


Rail turnaround time performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/CT/06
TOL/CT/08
2017/18
2018/19
2019/20
Target


Ship working hour performance
200%
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/CT/02
TOL/CT/03
TOL/CT/04
TOL/CT/05
TOL/CT/06
TOL/CT/07
TOL/CT/08
TOL/CT/09
TOL/CT/10
2017/18
2018/19
2019/20
Target


Terminal berthing delays performance
35
30
25
20
15
10
5
0
TOL/CT/09
2017/18
2018/19
2019/20
Target

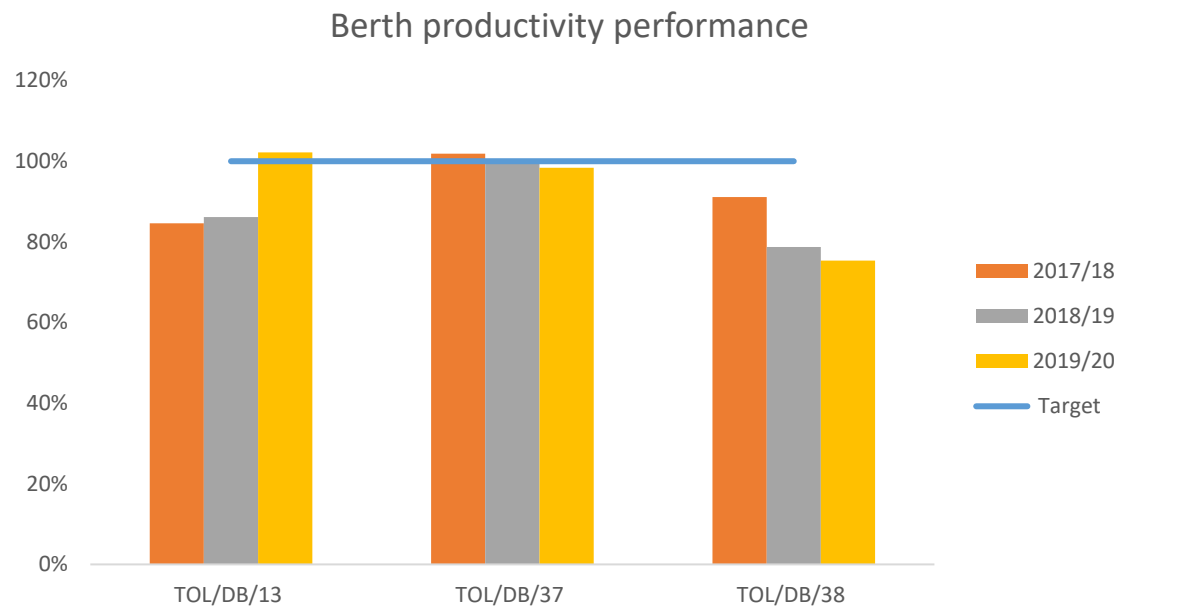

Terminal throughput performance
800%
700%
600%
500%
400%
300%
200%
100%
0%
TOL/CT/02
TOL/CT/03
TOL/CT/04
TOL/CT/06
TOL/CT/07
TOL/CT/08
TOL/CT/09
TOL/CT/10
2017/18
2018/19
2019/20
Target

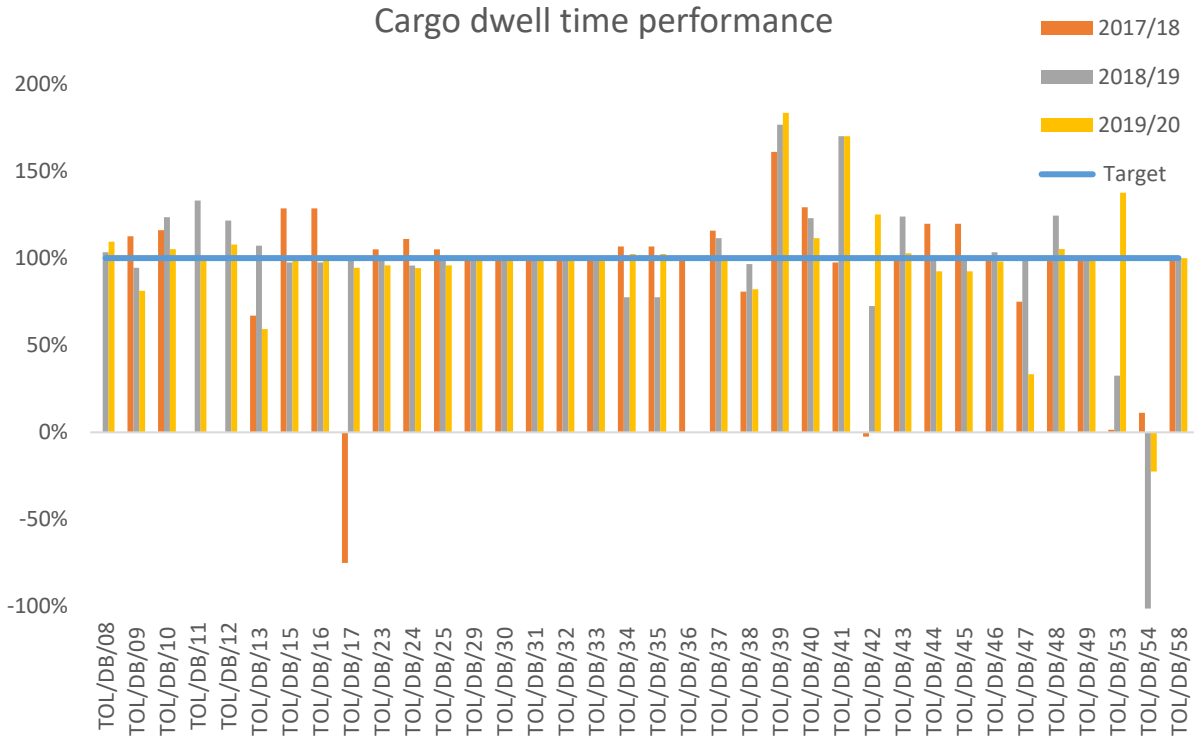

Truck turnaround time performance
150%
100%
50%
0%
-50%
-100%
-150%
TOL/CT/03
TOL/CT/05
TOL/CT/06
TOL/CT/07
TOL/CT/08
TOL/CT/09
TOL/CT/10
2017/18
2018/19
2019/20
Target

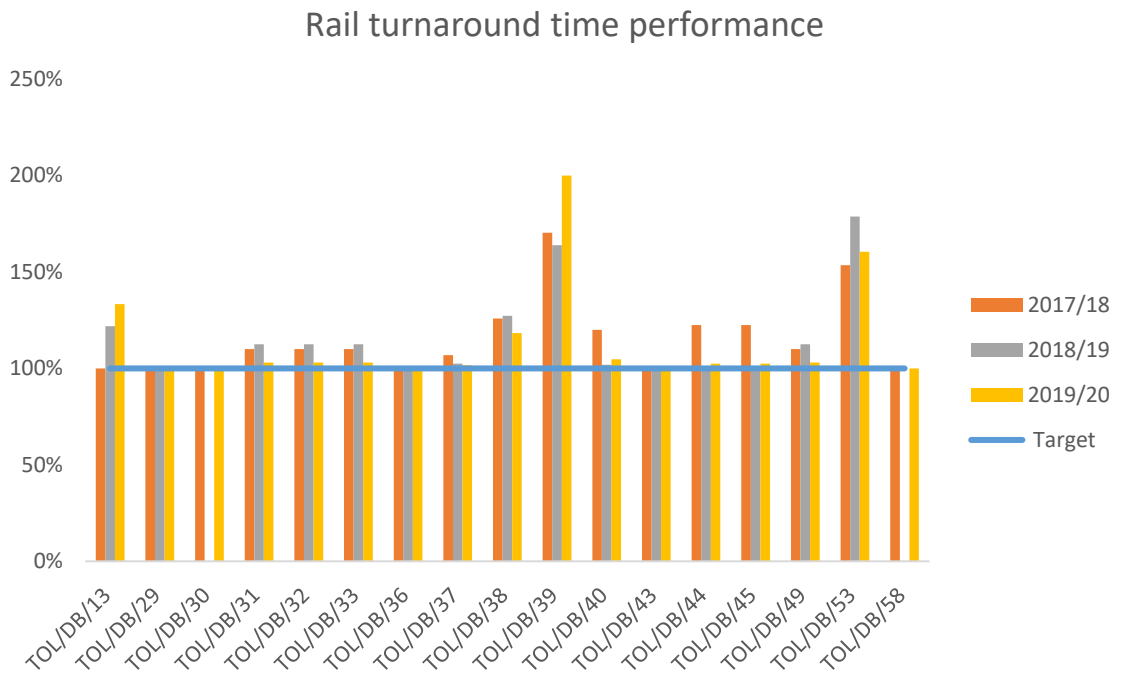
Port of Durban

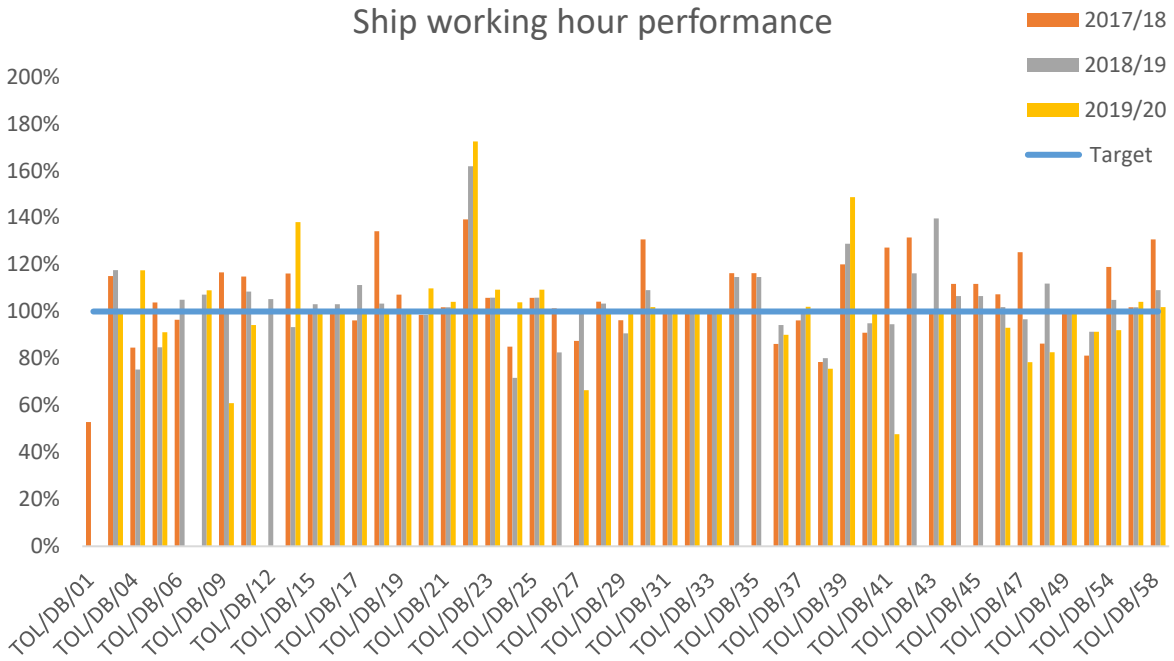
The Port of Durban accounts for the most extensive terminal operator licenses (54) in the port system.

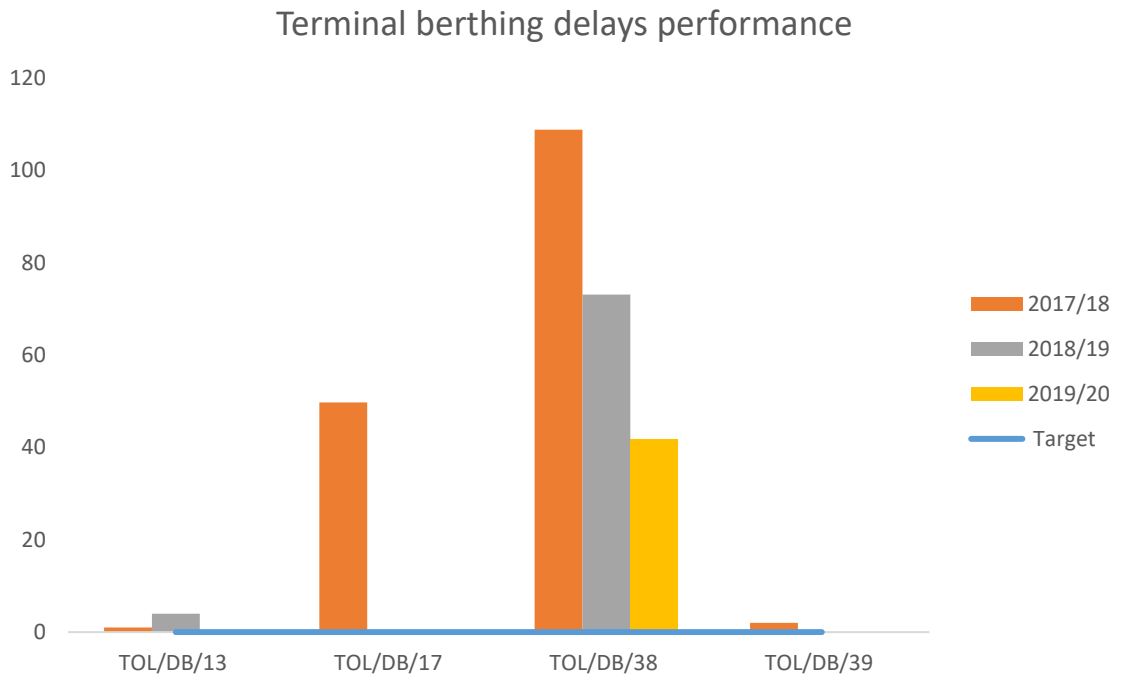
The performance of these licenses on each of the TOPs key performance indicators is reflected below.

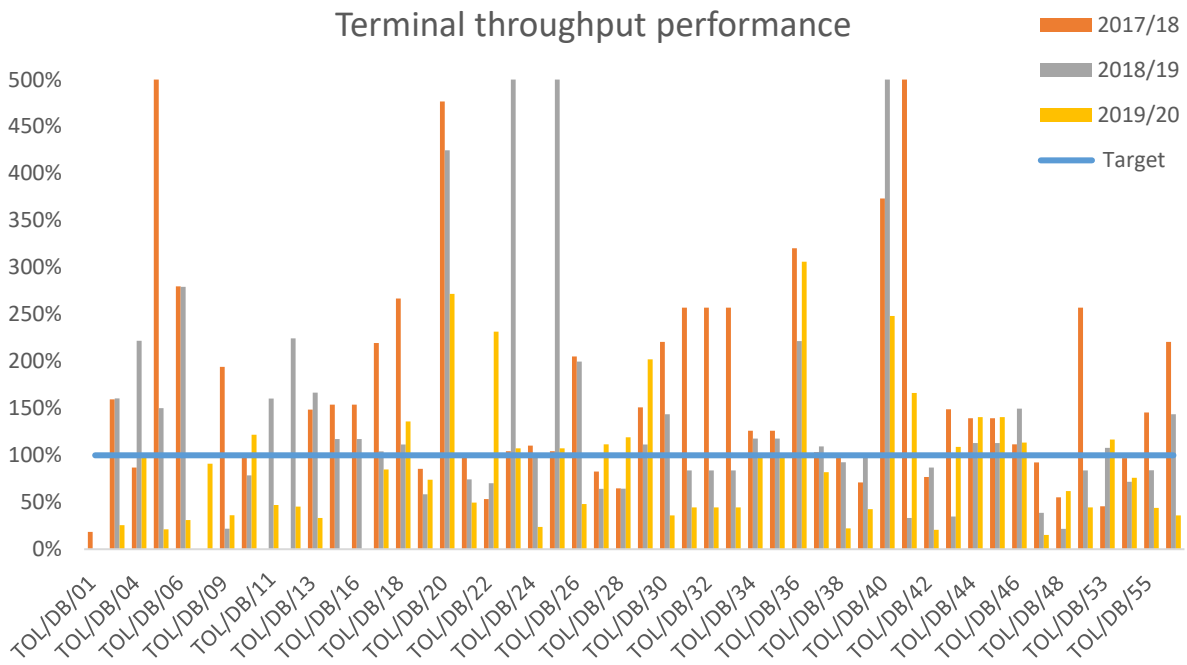


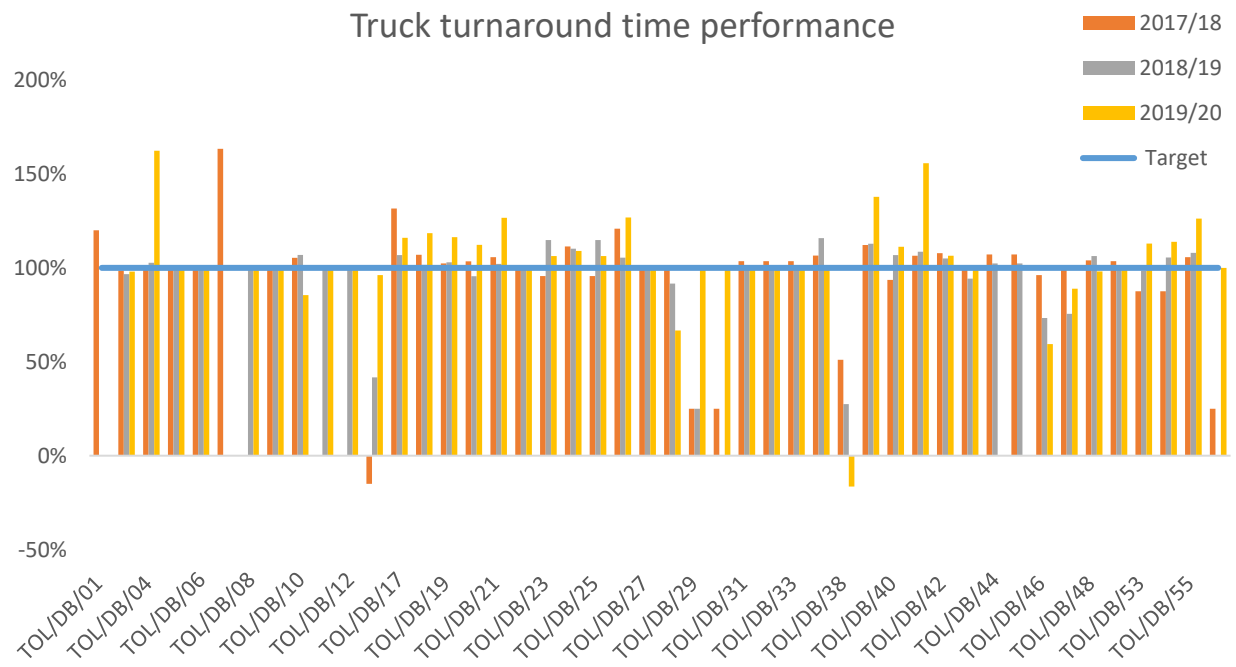



Rail turnaround time performance
250%
200%
150%
100%
50%
0%
TOL/DB/13
TOL/DB/29
TOL/DB/30
TOL/DB/31
TOL/DB/32
TOL/DB/33
TOL/DB/36
TOL/DB/37
TOL/DB/38
TOL/DB/39
TOL/DB/40
TOL/DB/43
TOL/DB/44
TOL/DB/45
TOL/DB/49
TOL/DB/53
TOL/DB/58
2017/18
2018/19
2019/20
Target


Ship working hour performance
200%
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/DB/01
TOL/DB/04
TOL/DB/06
TOL/DB/09
TOL/DB/12
TOL/DB/15
TOL/DB/17
TOL/DB/19
TOL/DB/21
TOL/DB/23
TOL/DB/25
TOL/DB/27
TOL/DB/29
TOL/DB/31
TOL/DB/33
TOL/DB/35
TOL/DB/37
TOL/DB/39
TOL/DB/41
TOL/DB/43
TOL/DB/45
TOL/DB/47
TOL/DB/49
TOL/DB/54
TOL/DB/58
2017/18
2018/19
2019/20
Target

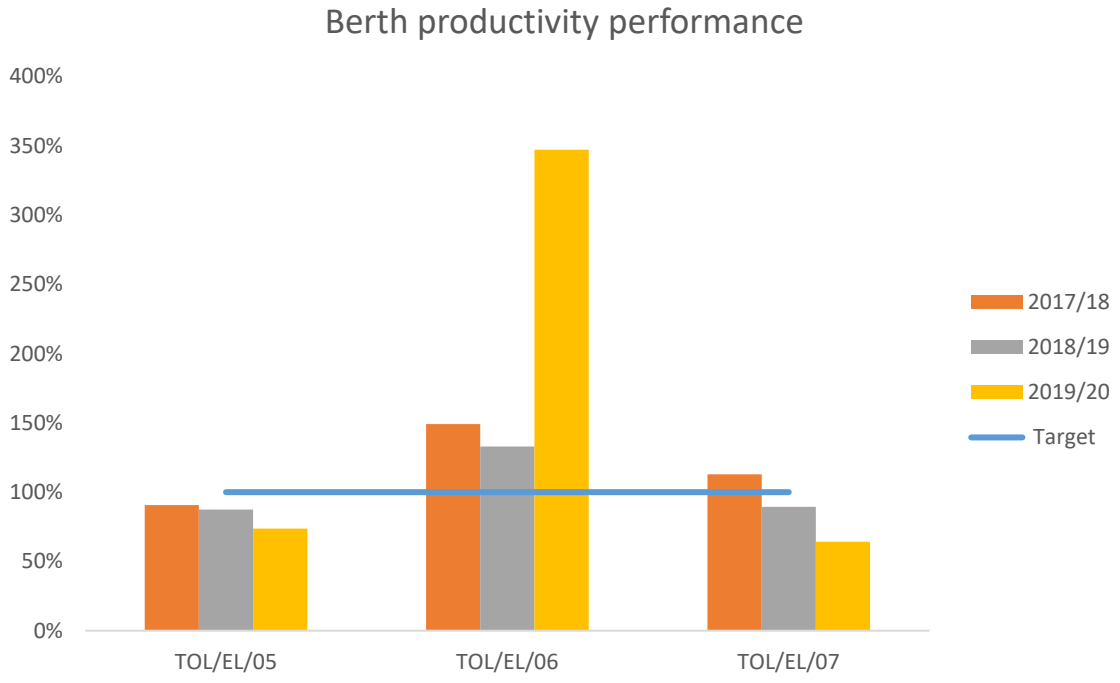

Terminal berthing delays performance
120
100
80
60
40
20
0
TOL/DB/13
TOL/DB/17
TOL/DB/38
TOL/DB/39
2017/18
2018/19
2019/20
Target

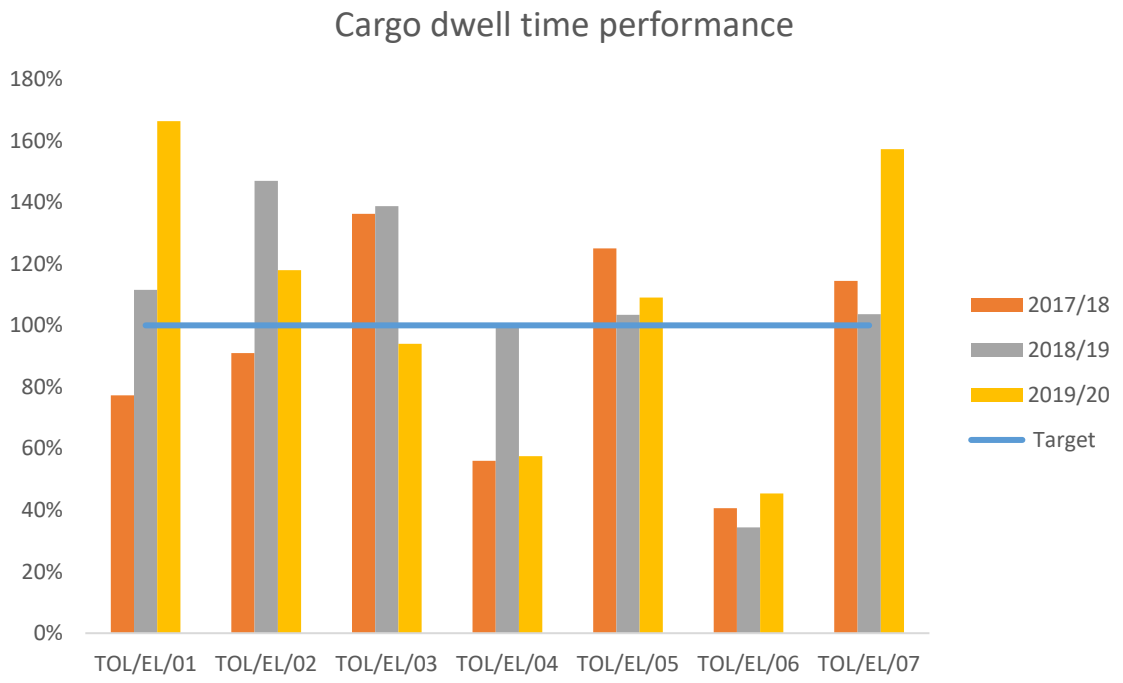

Terminal throughput performance
500%
450%
400%
350%
300%
250%
200%
150%
100%
50%
0%
TOL/DB/01
TOL/DB/04
TOL/DB/06
TOL/DB/09
TOL/DB/11
TOL/DB/13
TOL/DB/16
TOL/DB/18
TOL/DB/20
TOL/DB/22
TOL/DB/24
TOL/DB/26
TOL/DB/28
TOL/DB/30
TOL/DB/32
TOL/DB/34
TOL/DB/36
TOL/DB/38
TOL/DB/40
TOL/DB/42
TOL/DB/44
TOL/DB/46
TOL/DB/48
TOL/DB/53
TOL/DB/55
2017/18
2018/19
2019/20
Target

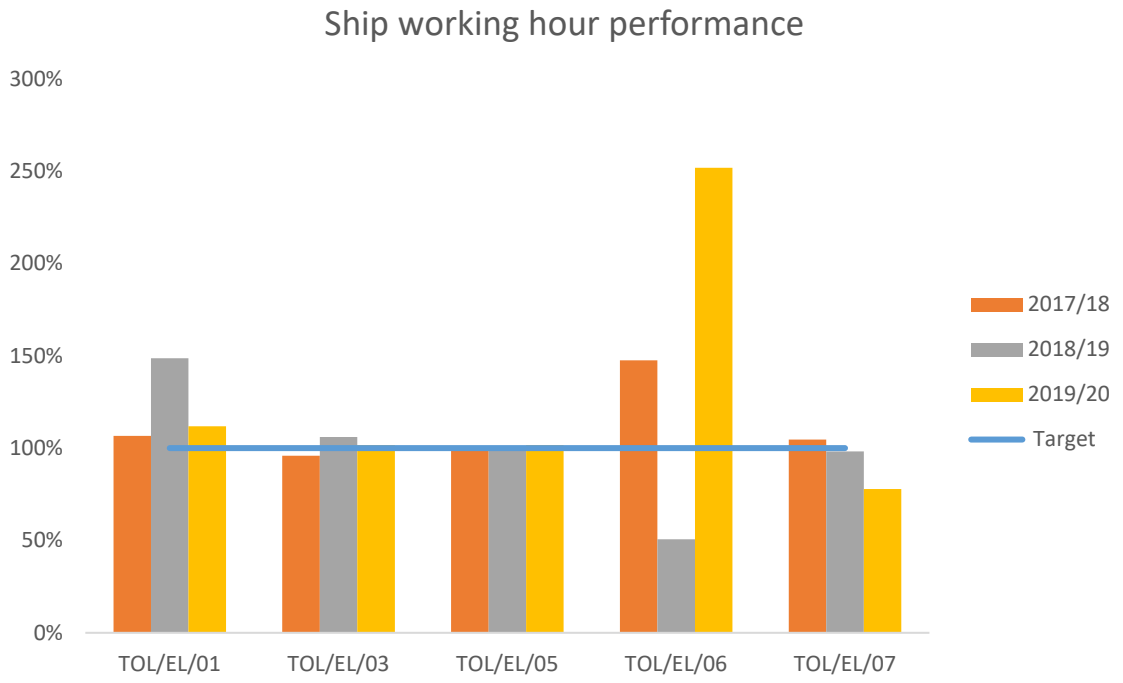


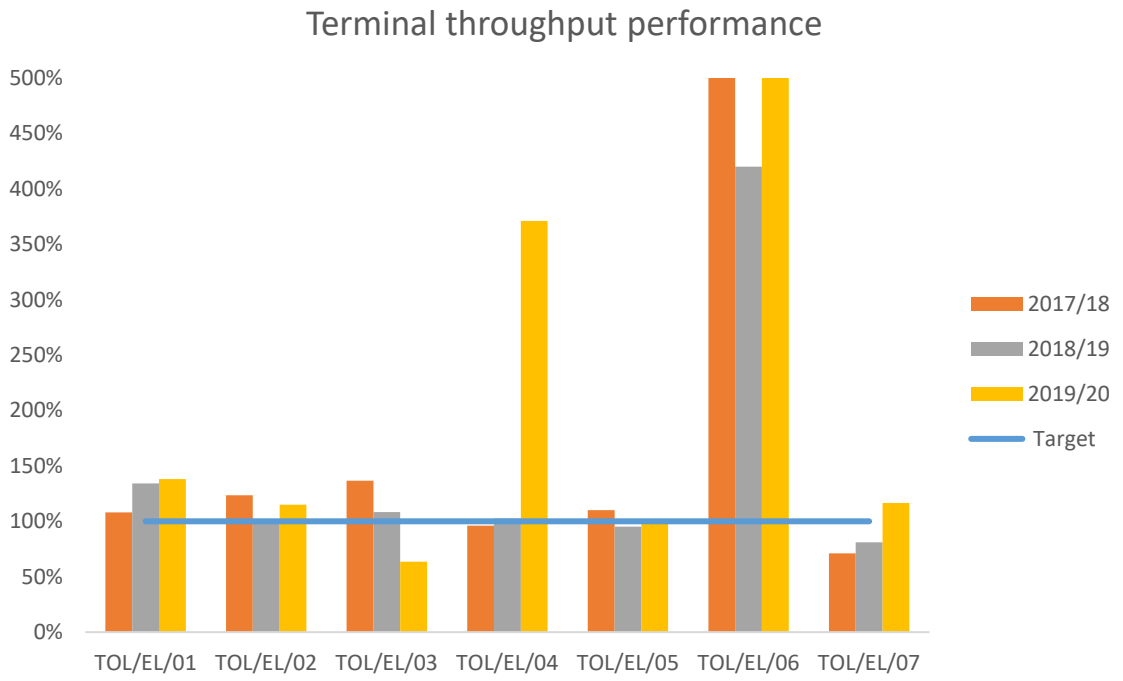
Port of East London

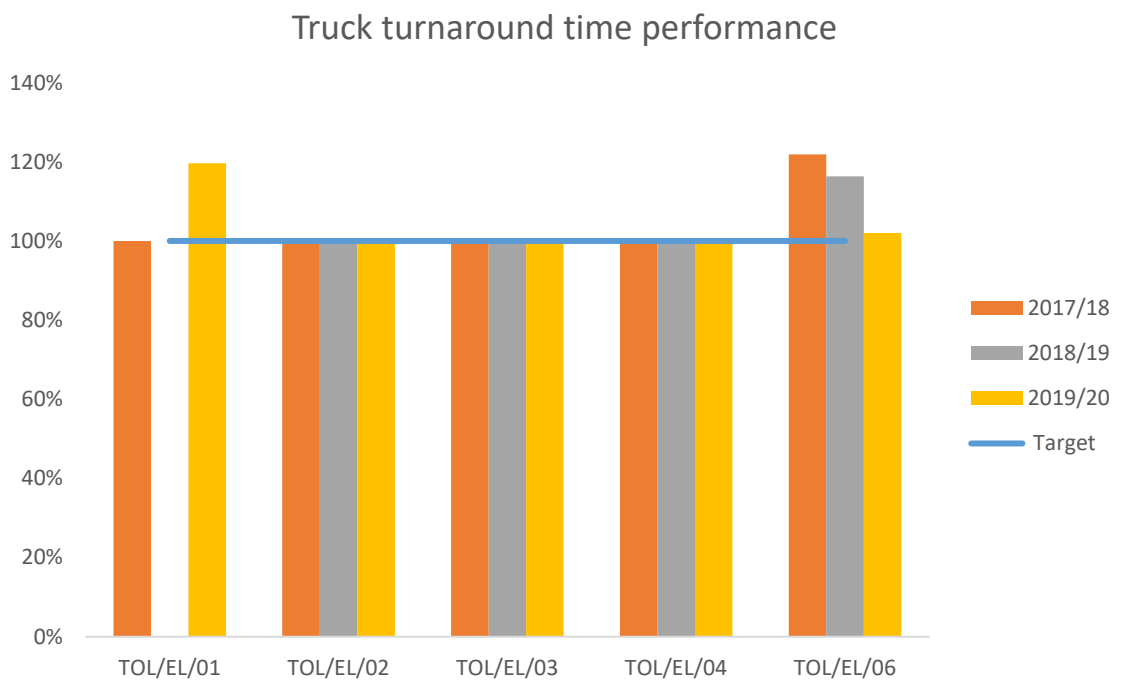
In the Port of East London, performance analysis was evaluated based on the reported TOPS results as follows:




Cargo dwell time performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/EL/01
TOL/EL/02
TOL/EL/03
TOL/EL/04
TOL/EL/05
TOL/EL/06
TOL/EL/07
2017/18
2018/19
2019/20
Target

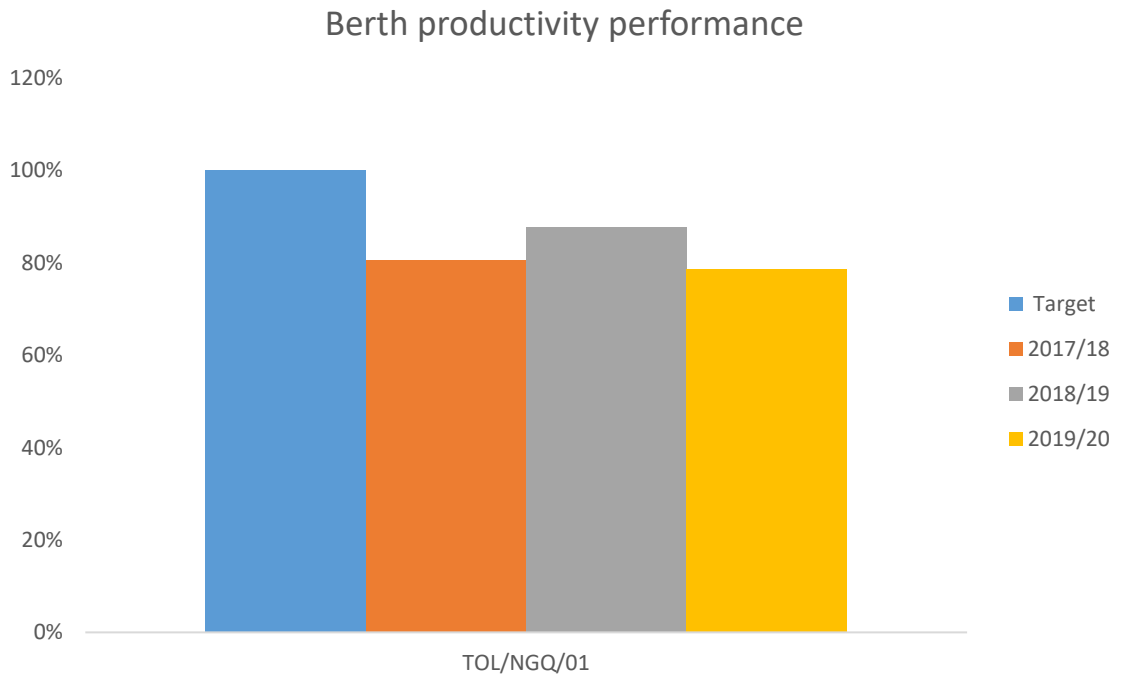

Ship working hour performance
300%
250%
200%
150%
100%
50%
0%
TOL/EL/01
TOL/EL/03
TOL/EL/05
TOL/EL/06
TOL/EL/07
2017/18
2018/19
2019/20
Target

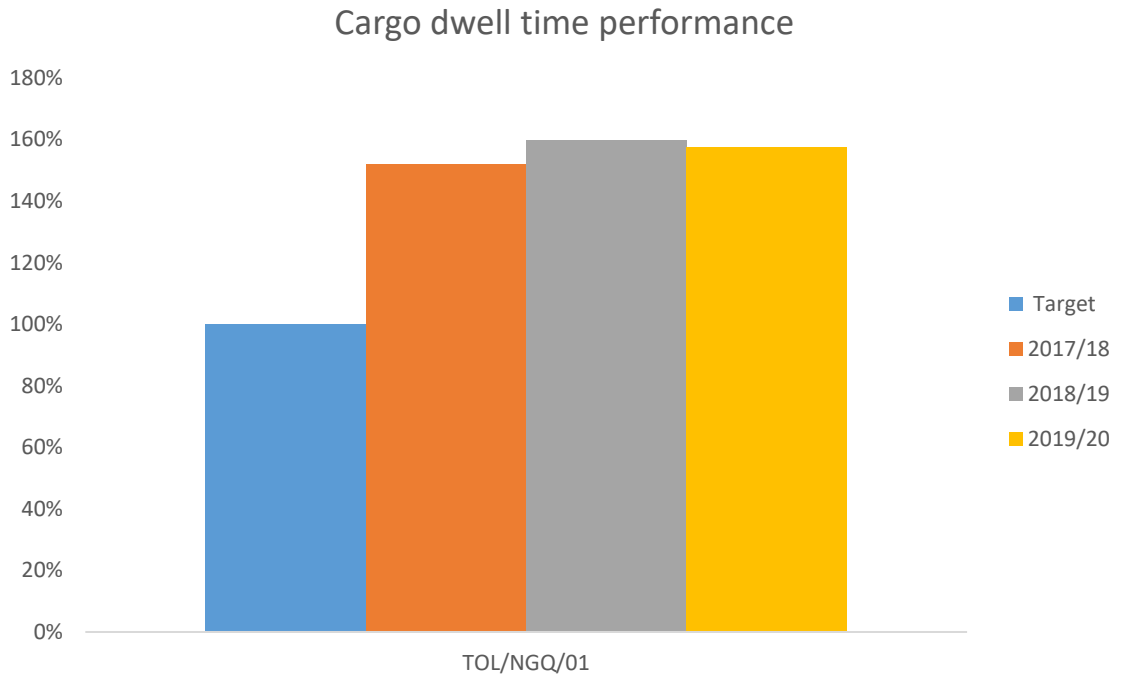

Terminal throughput performance
500%
450%
400%
350%
300%
250%
200%
150%
100%
50%
0%
TOL/EL/01
TOL/EL/02
TOL/EL/03
TOL/EL/04
TOL/EL/05
TOL/EL/06
TOL/EL/07
2017/18
2018/19
2019/20
Target

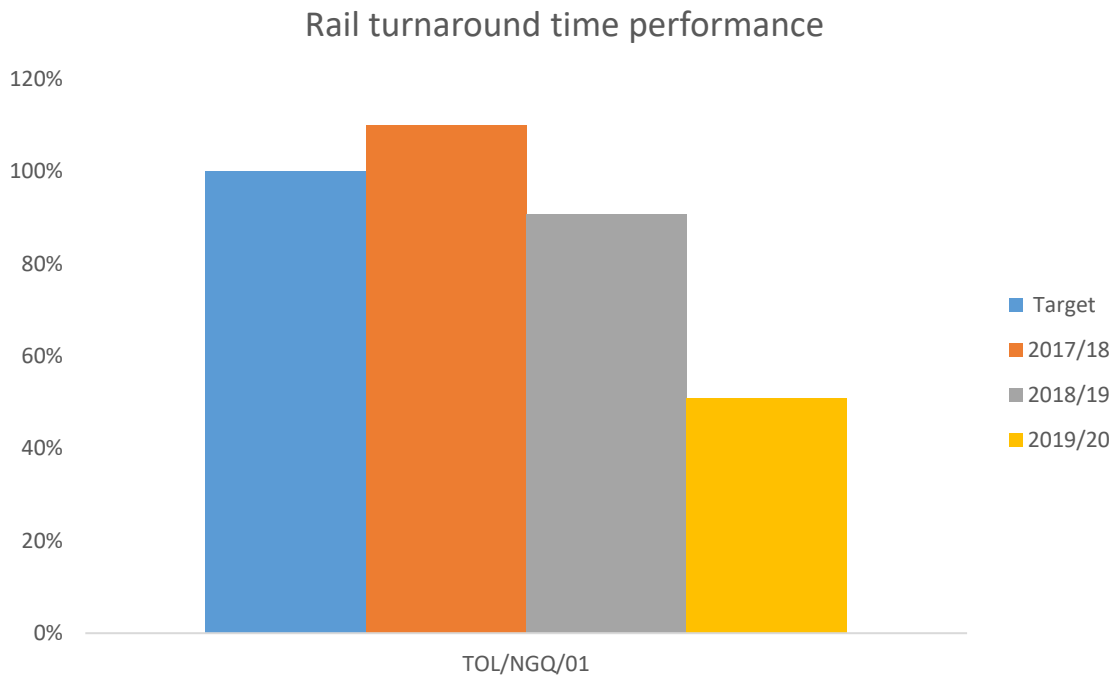

Truck turnaround time performance
140%
120%
100%
80%
60%
40%
20%
0%
TOL/EL/01
TOL/EL/02
TOL/EL/03
TOL/EL/04
TOL/EL/06
2017/18
2018/19
2019/20
Target

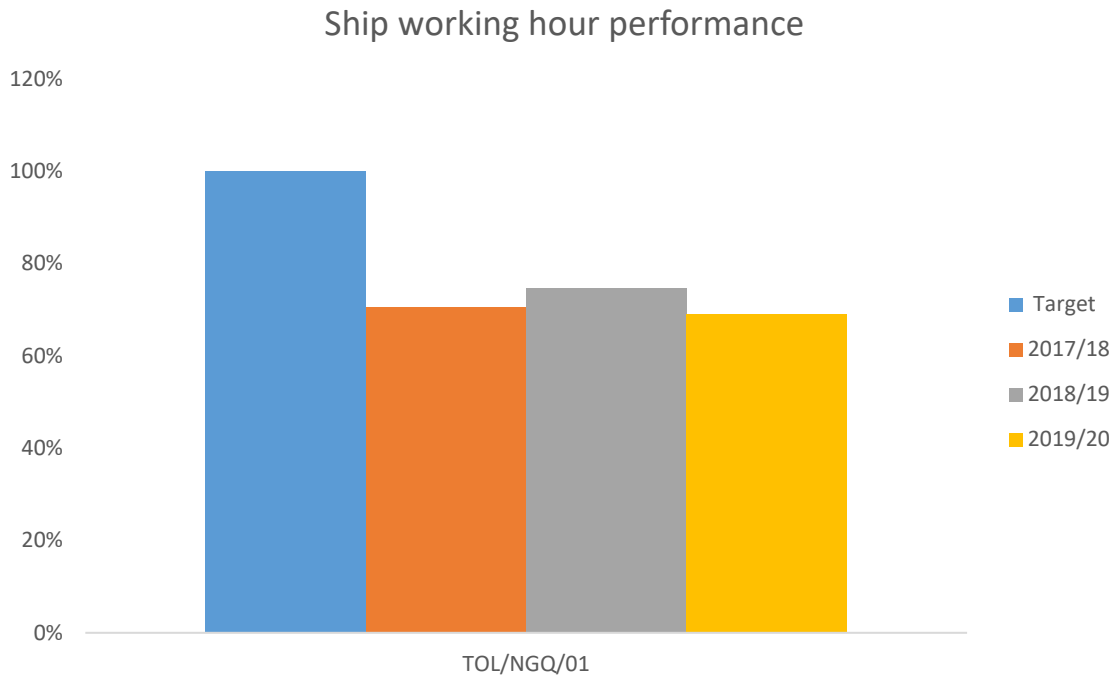
Port of Ngqura

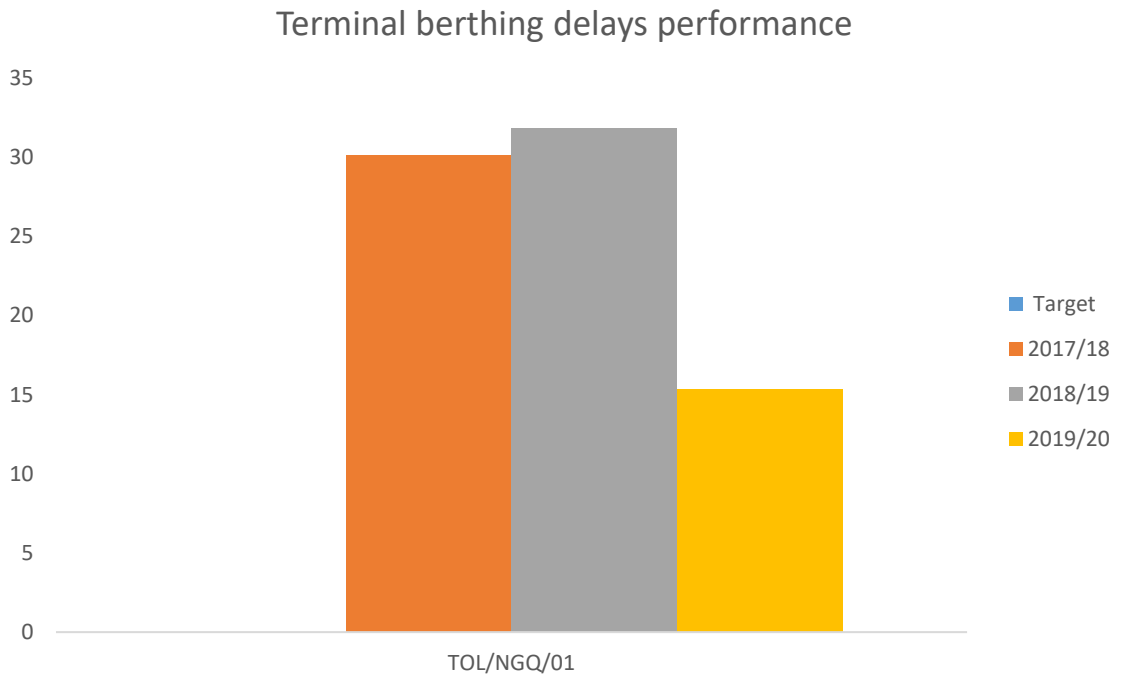
The Port of Ngqura has one terminal, Transnet Port Terminals. The performance analysis was evaluated based on the following reported TOPS results:

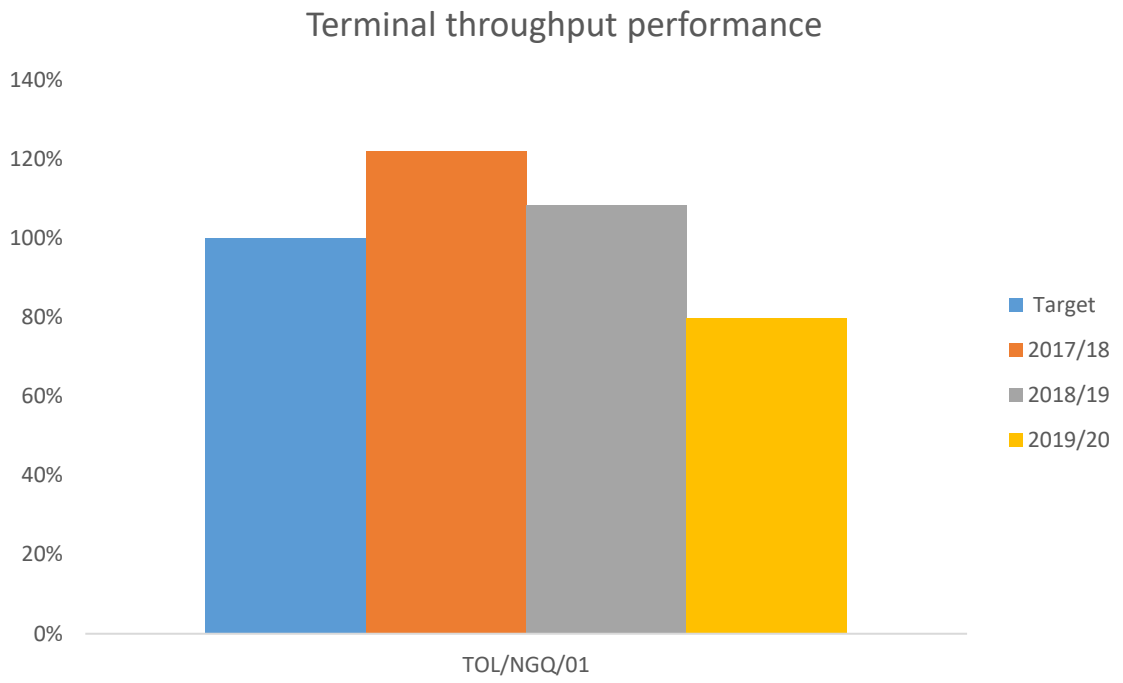


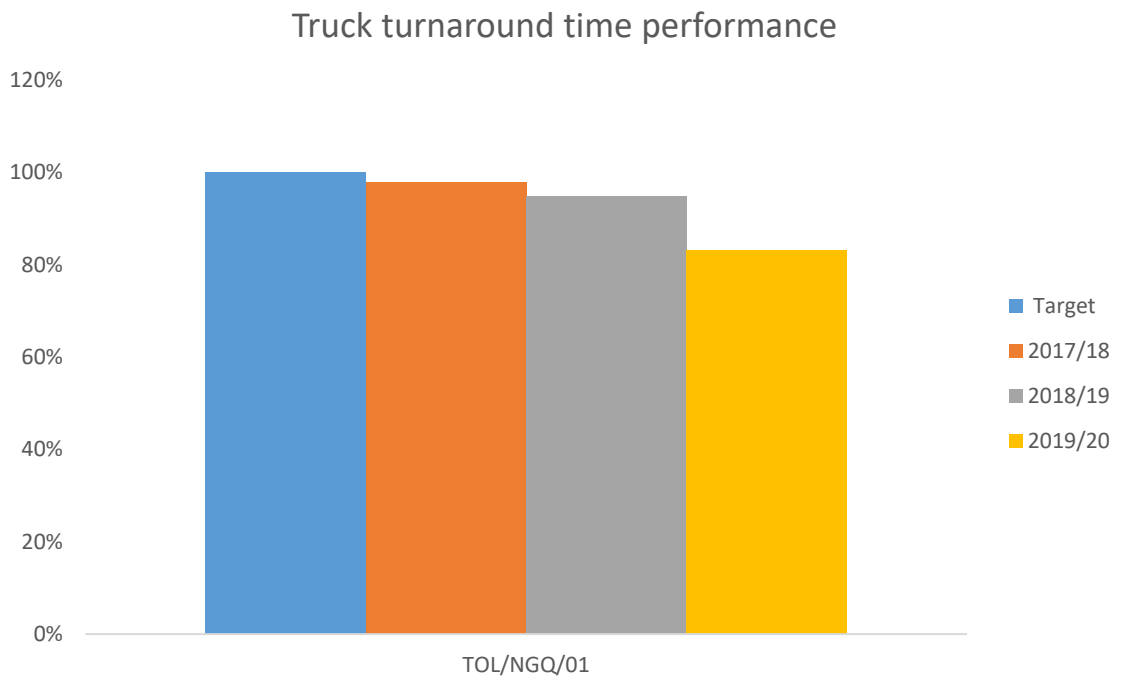



Rail turnaround time performance
120%
100%
80%
60%
40%
20%
0%
TOL/NGQ/01
Target
2017/18
2018/19
2019/20


Ship working hour performance
120%
100%
80%
60%
40%
20%
0%
TOL/NGQ/01
Target
2017/18
2018/19
2019/20

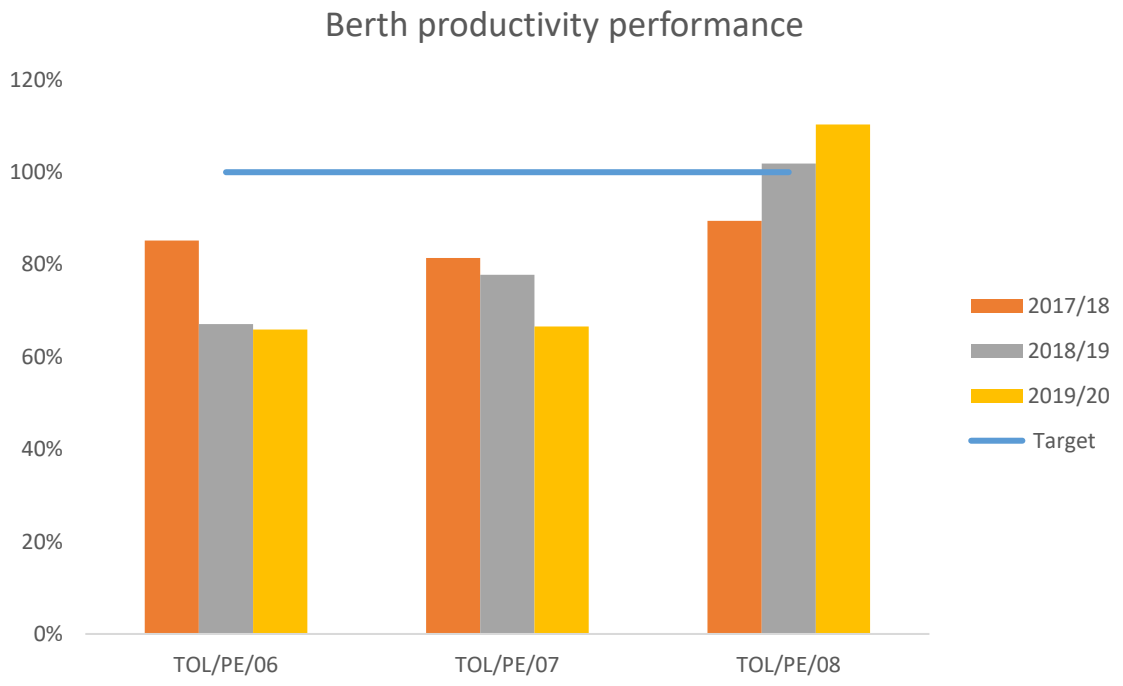

Terminal berthing delays performance
35
30
25
20
15
10
5
0
TOL/NGQ/01
Target
2017/18
2018/19
2019/20

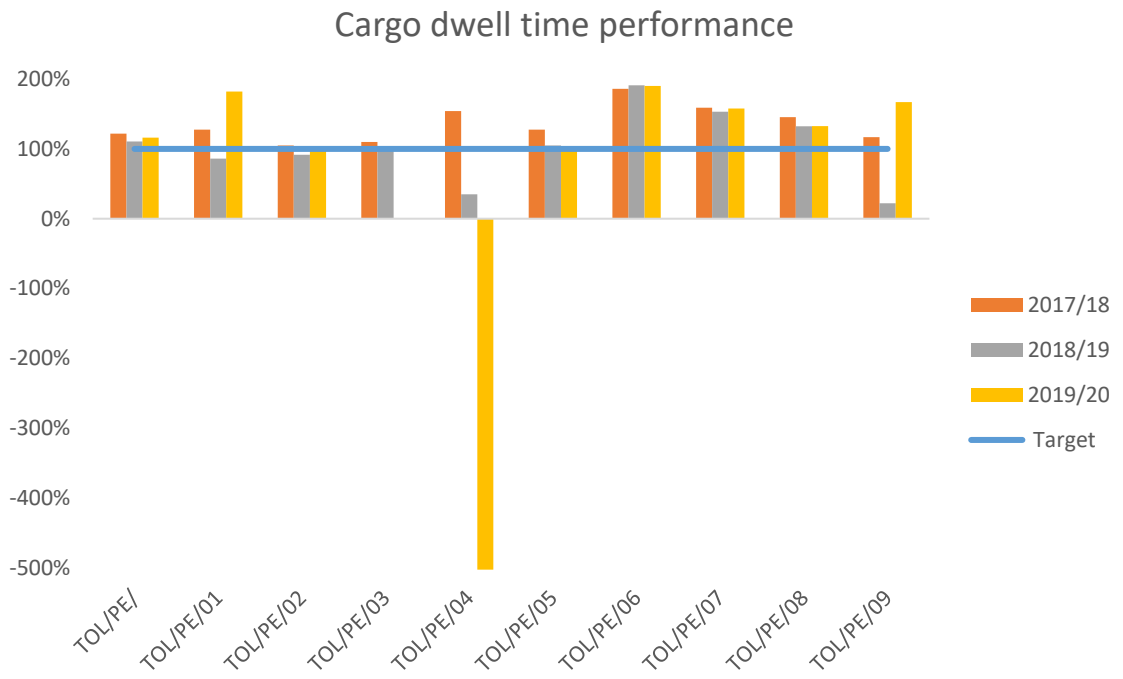

Terminal throughput performance
140%
120%
100%
80%
60%
40%
20%
0%
TOL/NGQ/01
Target
2017/18
2018/19
2019/20

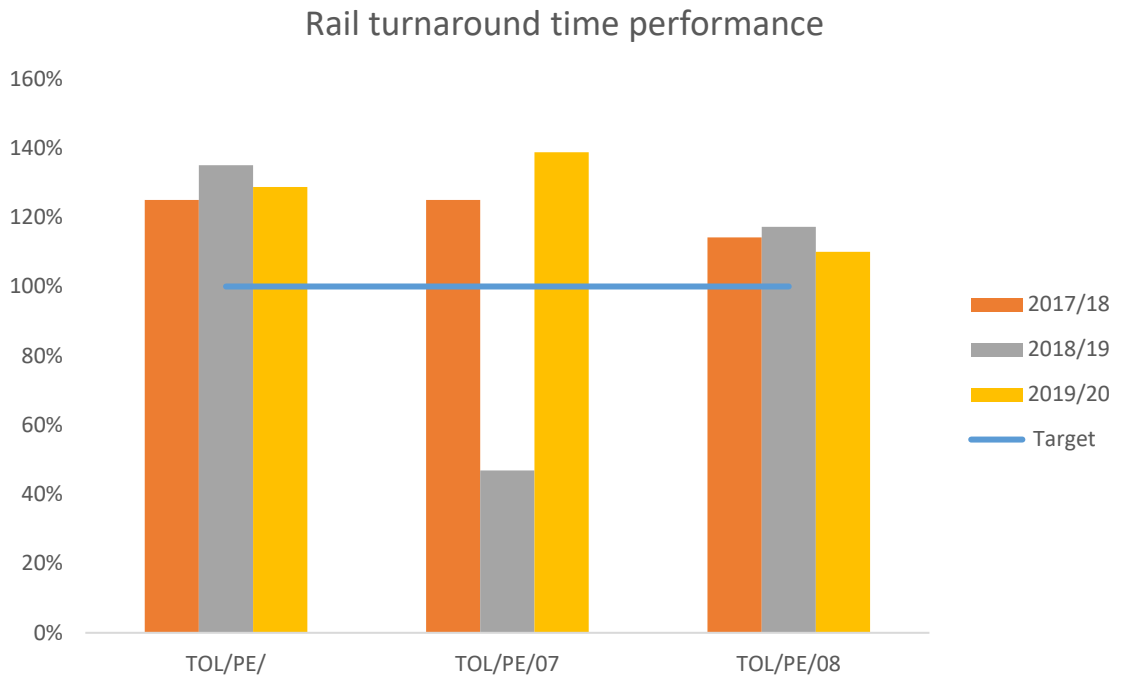


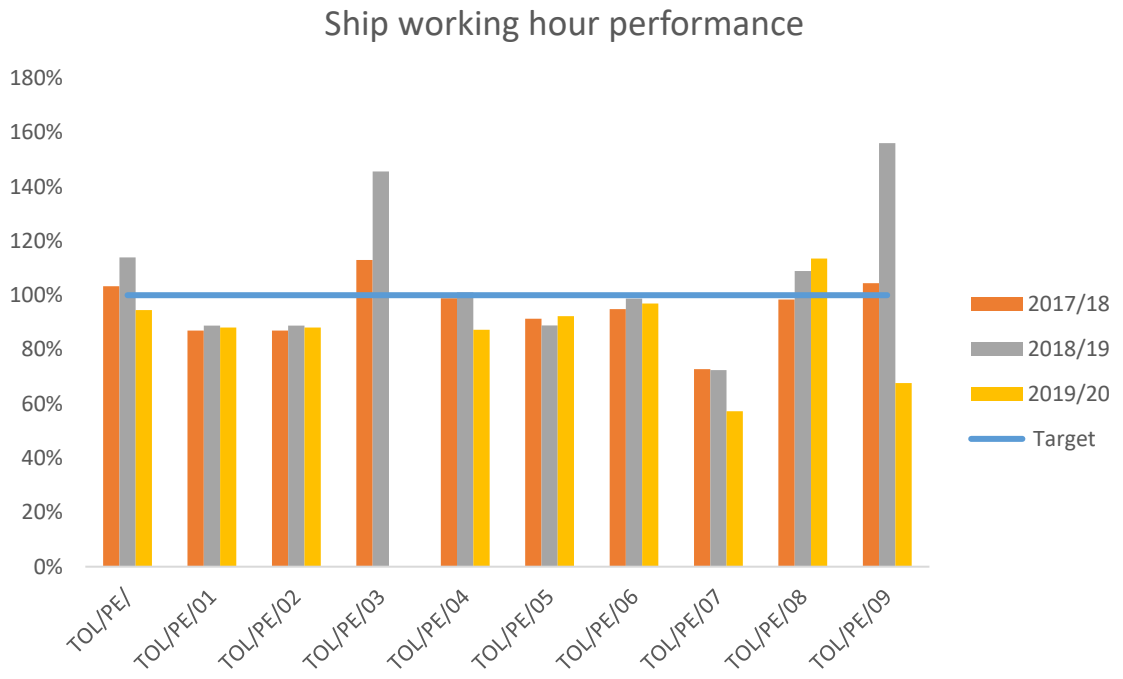
Port of Port Elizabeth

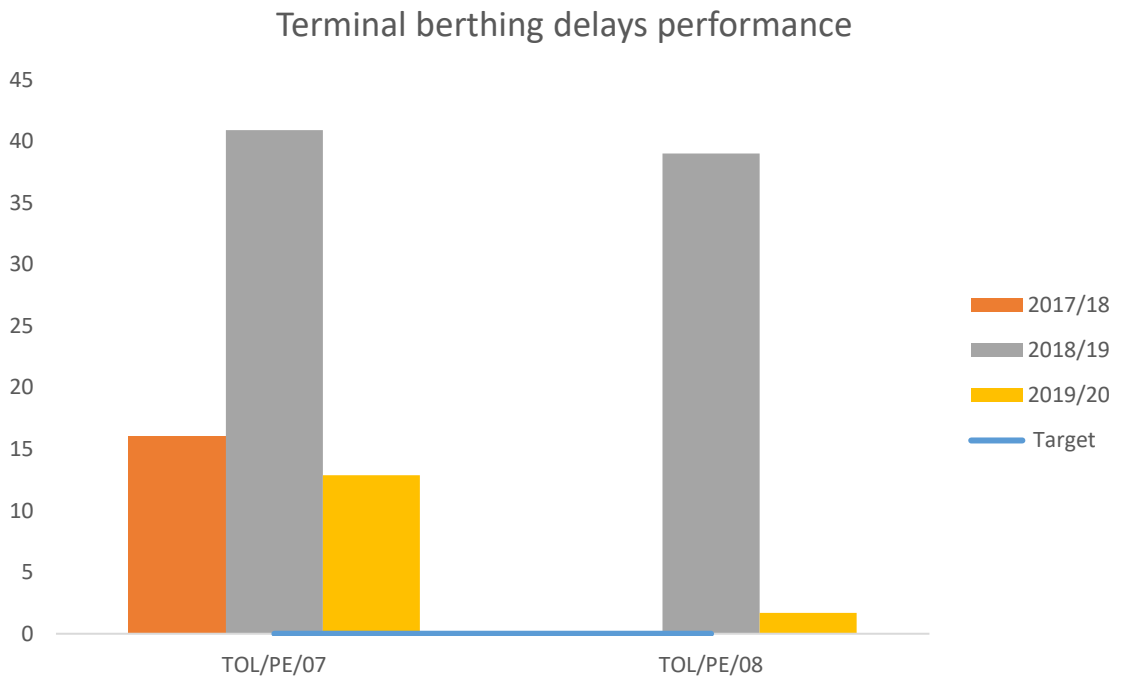
In the Port of Port Elizabeth, performance analysis was evaluated based on the reported TOPS results.

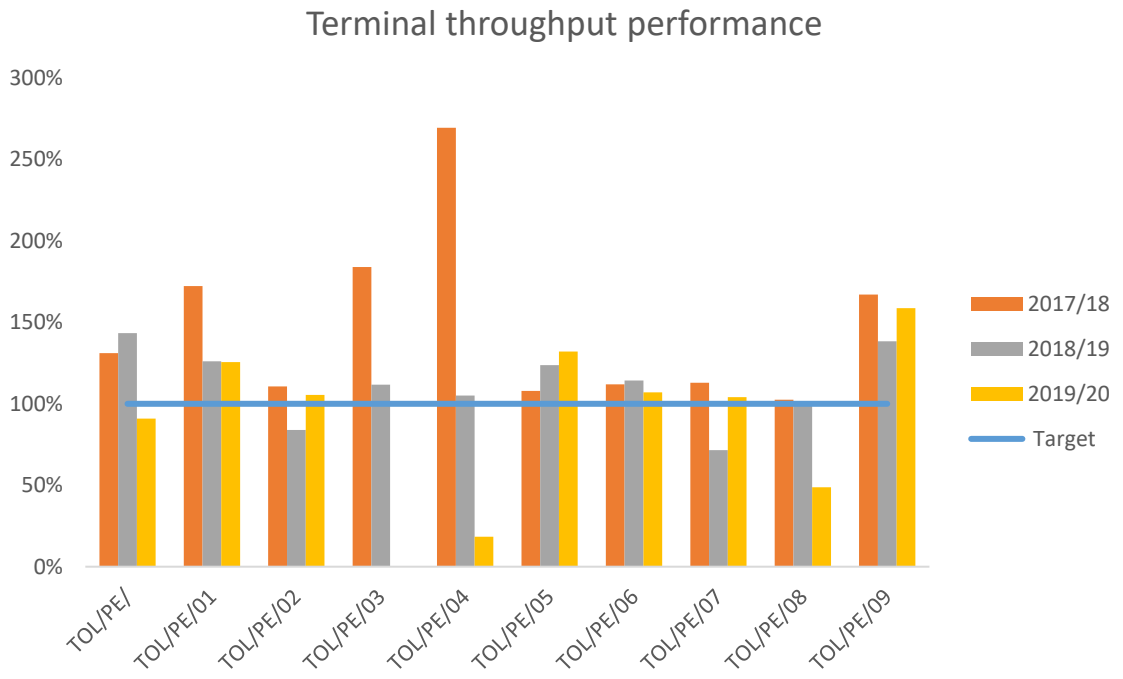


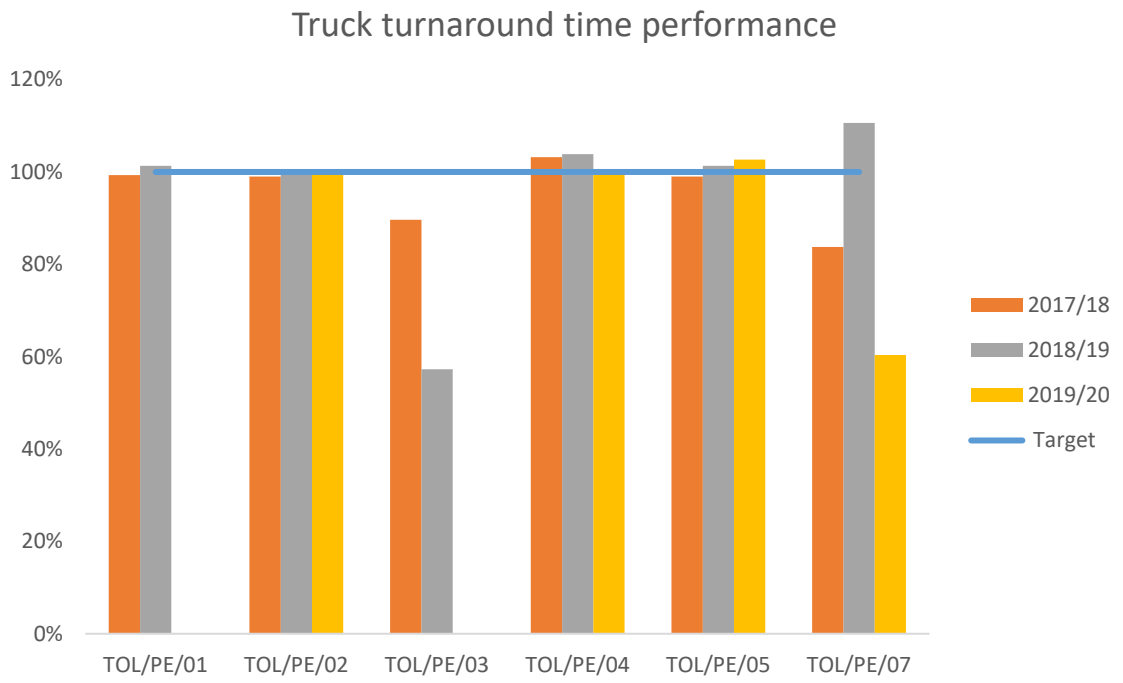

Cargo dwell time performance
200%
100%
0%
-100%
-200%
-300%
-400%
-500%
TOL/PE/
TOL/PE/01
TOL/PE/02
TOL/PE/03
TOL/PE/04
TOL/PE/05
TOL/PE/06
TOL/PE/07
TOL/PE/08
TOL/PE/09
2017/18
2018/19
2019/20
Target


Rail turnaround time performance
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/PE/
TOL/PE/07
TOL/PE/08
2017/18
2018/19
2019/20
Target


Ship working hour performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/PE/
TOL/PE/01
TOL/PE/02
TOL/PE/03
TOL/PE/04
TOL/PE/05
TOL/PE/06
TOL/PE/07
TOL/PE/08
TOL/PE/09
2017/18
2018/19
2019/20
Target

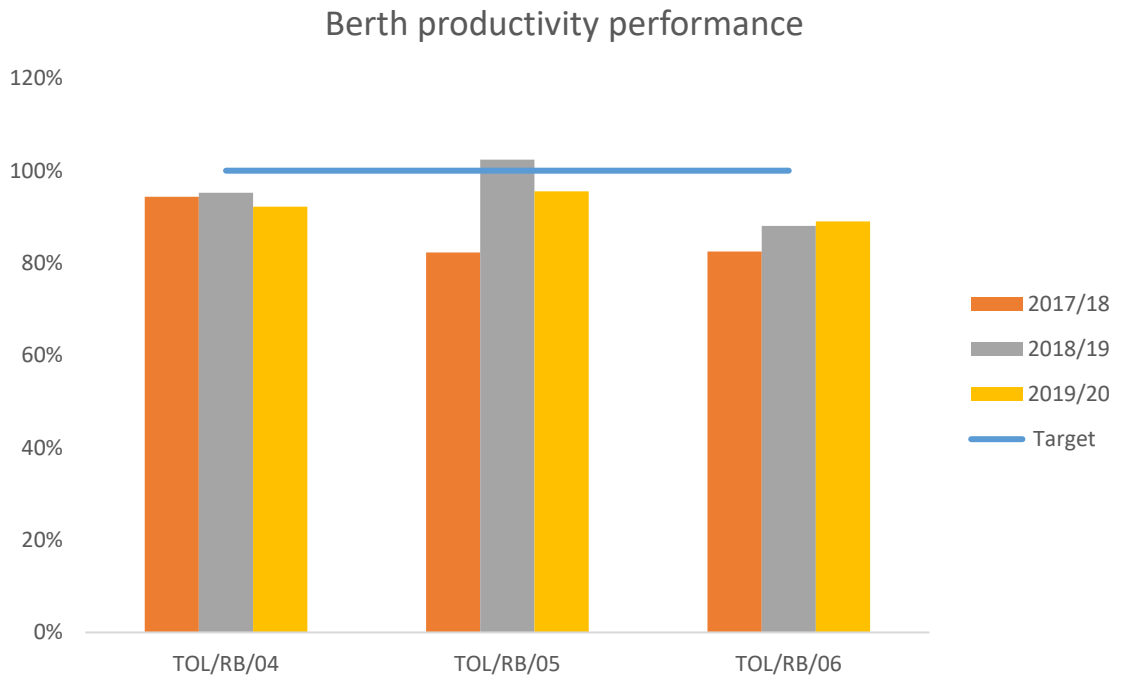

Terminal berthing delays performance
45
40
35
30
25
20
15
10
5
0
TOL/PE/07
TOL/PE/08
2017/18
2018/19
2019/20
Target

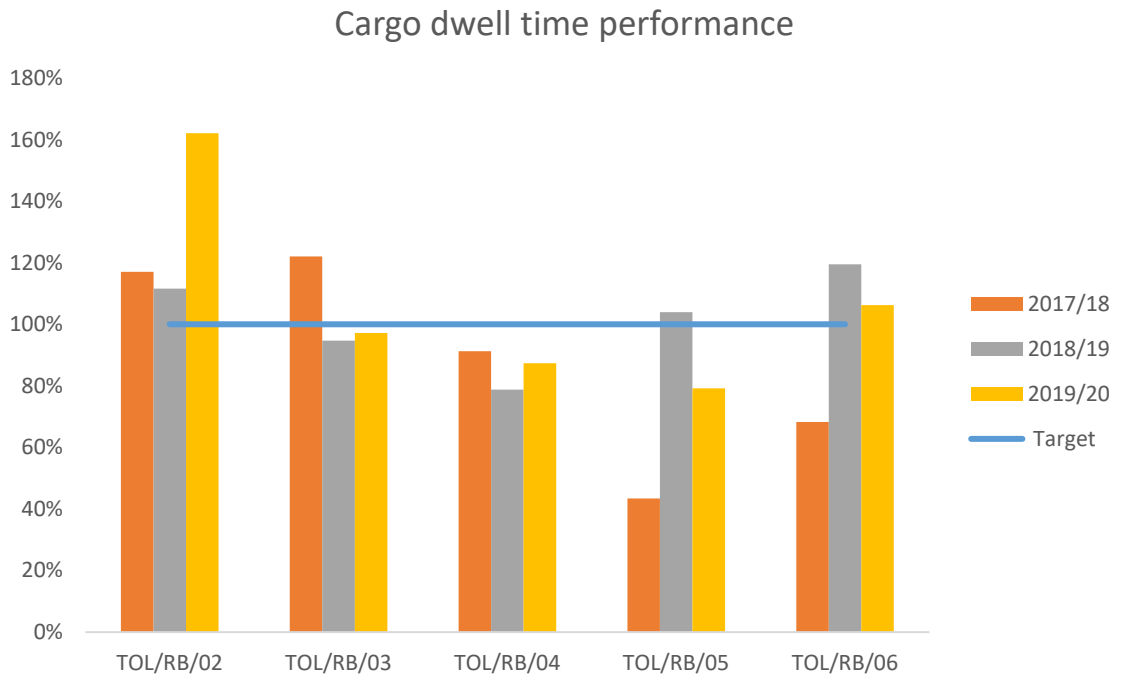

Terminal throughput performance
300%
250%
200%
150%
100%
50%
0%
TOL/PE/
TOL/PE/01
TOL/PE/02
TOL/PE/03
TOL/PE/04
TOL/PE/05
TOL/PE/06
TOL/PE/07
TOL/PE/08
TOL/PE/09
2017/18
2018/19
2019/20
Target

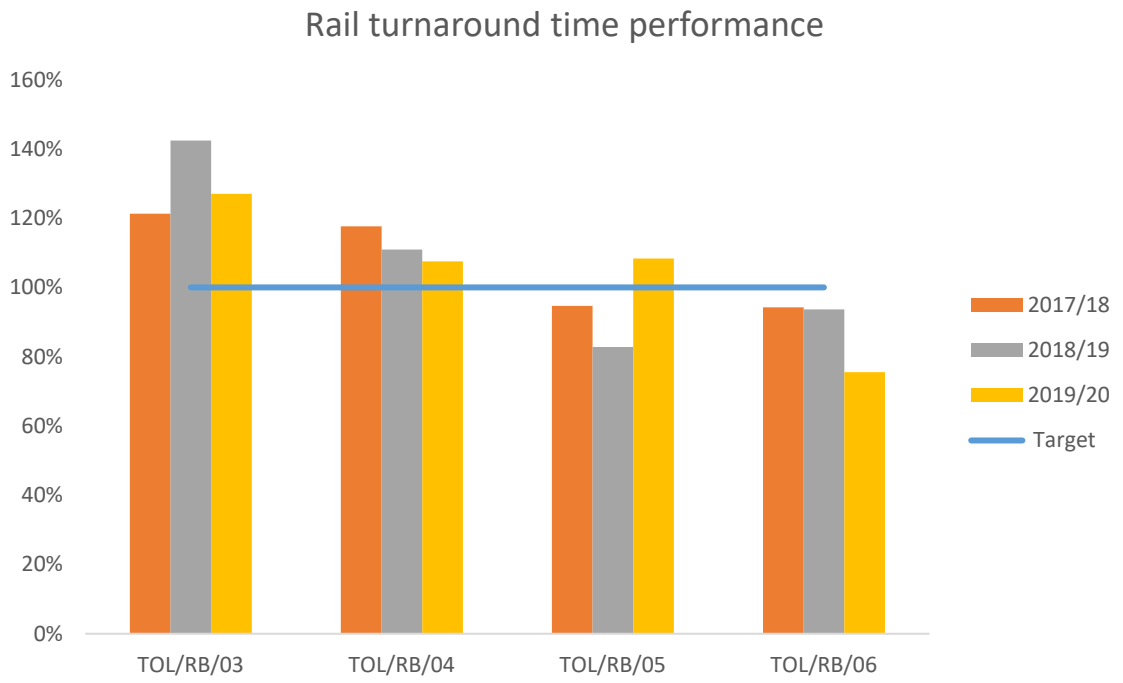

Truck turnaround time performance
120%
100%
80%
60%
40%
20%
0%
TOL/PE/01
TOL/PE/02
TOL/PE/03
TOL/PE/04
TOL/PE/05
TOL/PE/07
2017/18
2018/19
2019/20
Target

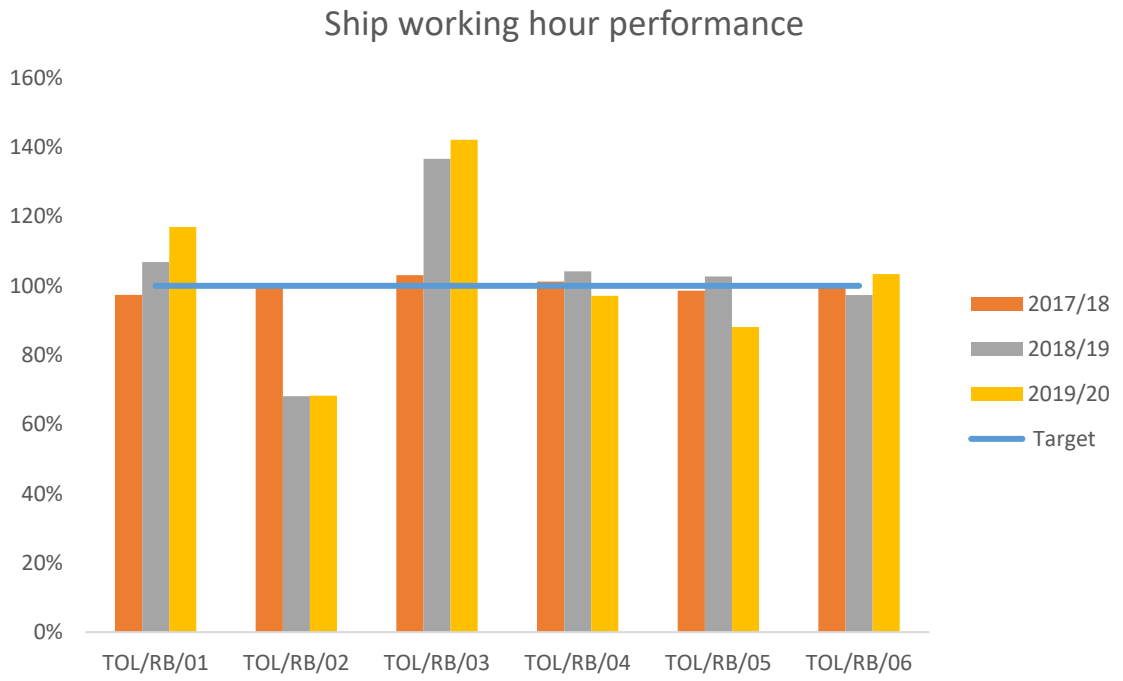
Port of Richards Bay

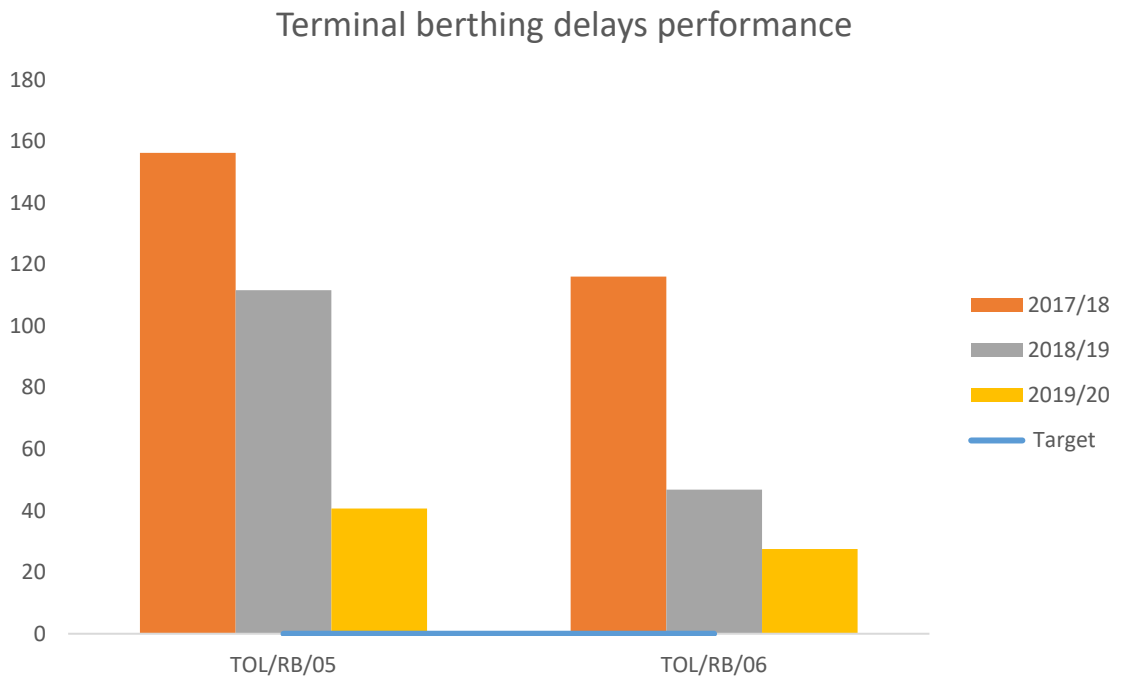
The TOPS reported information was again gathered for the Port of Richards Bay, and the following performance analysis was conducted:

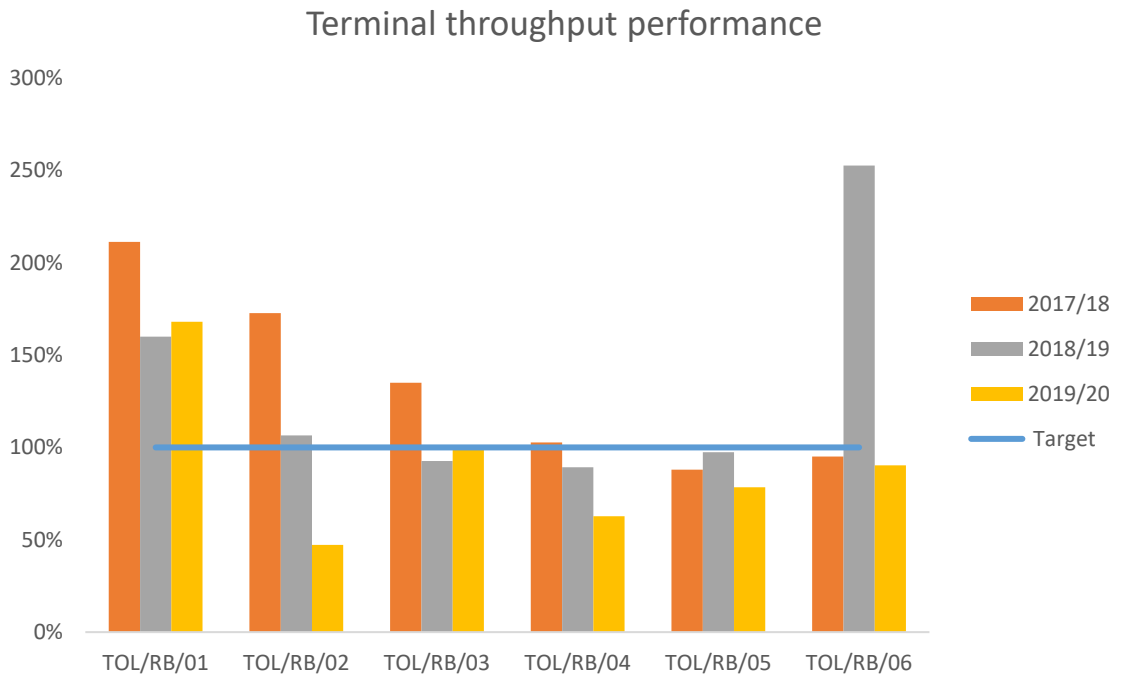


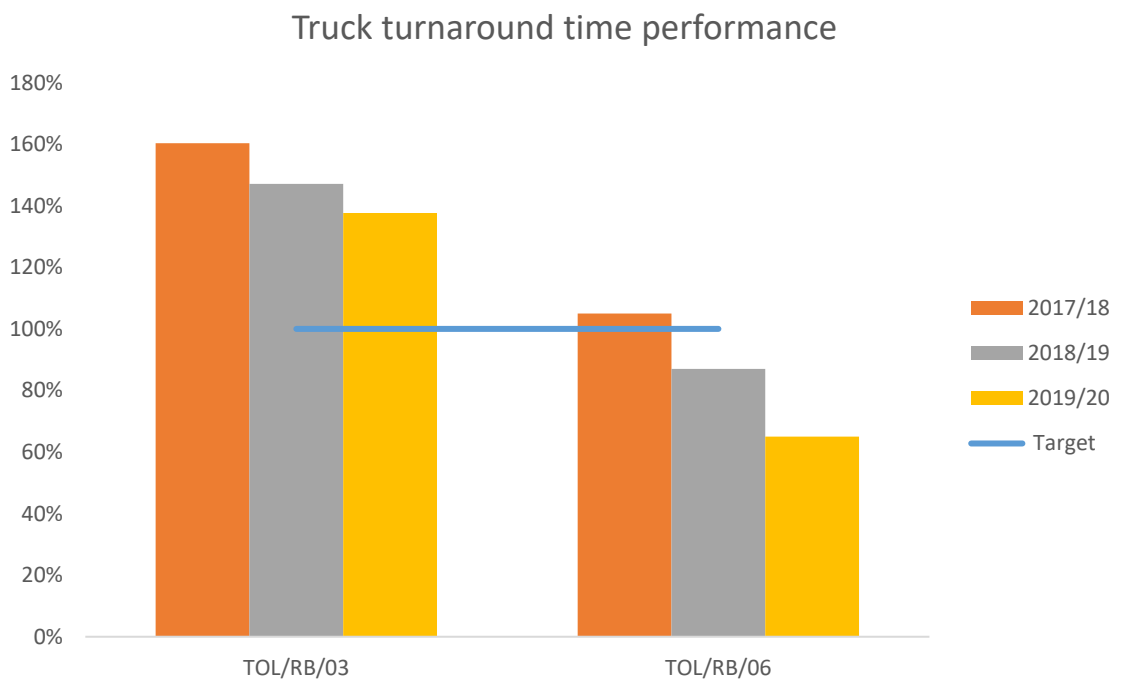

Cargo dwell time performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/RB/02
TOL/RB/03
TOL/RB/04
TOL/RB/05
TOL/RB/06
2017/18
2018/19
2019/20
Target


Rail turnaround time performance
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/RB/03
TOL/RB/04
TOL/RB/05
TOL/RB/06
2017/18
2018/19
2019/20
Target


Ship working hour performance
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/RB/01
TOL/RB/02
TOL/RB/03
TOL/RB/04
TOL/RB/05
TOL/RB/06
2017/18
2018/19
2019/20
Target

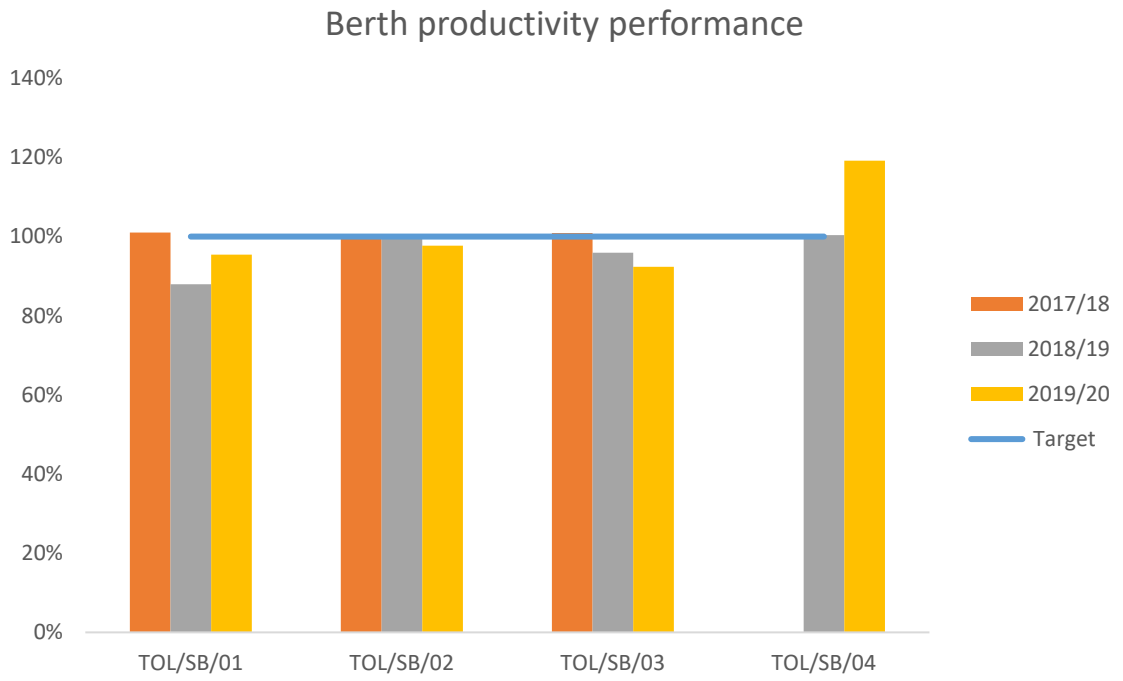

Terminal berthing delays performance
180
160
140
120
100
80
60
40
20
0
TOL/RB/05
TOL/RB/06
2017/18
2018/19
2019/20
Target

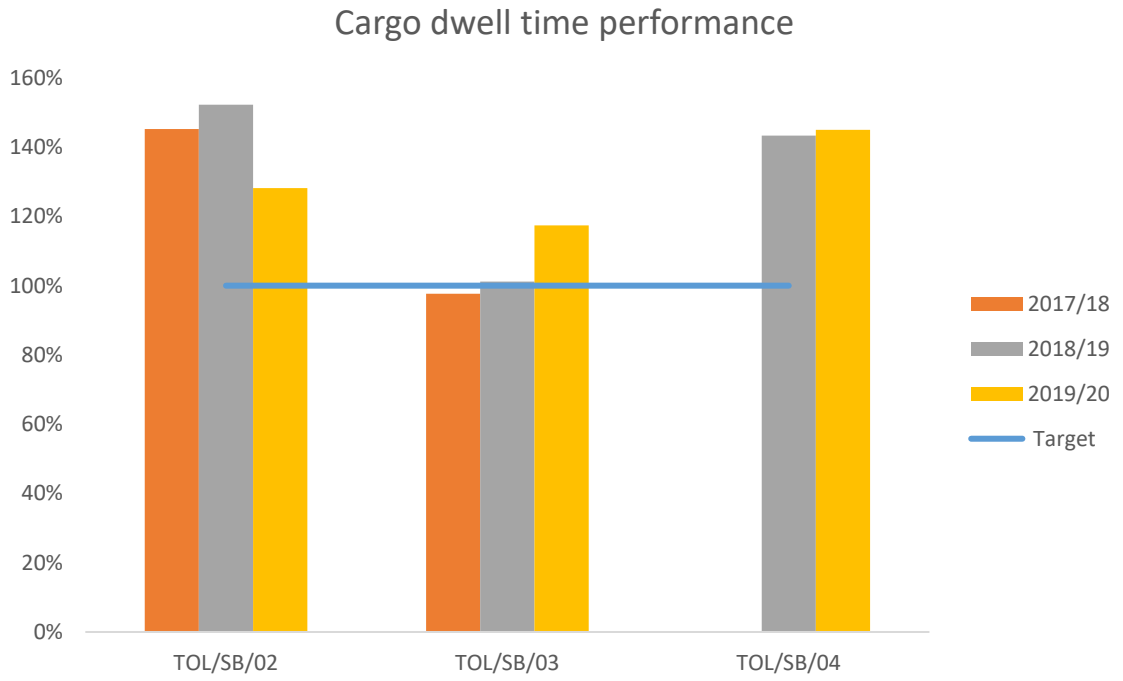

Terminal throughput performance
300%
250%
200%
150%
100%
50%
0%
TOL/RB/01
TOL/RB/02
TOL/RB/03
TOL/RB/04
TOL/RB/05
TOL/RB/06
2017/18
2018/19
2019/20
Target

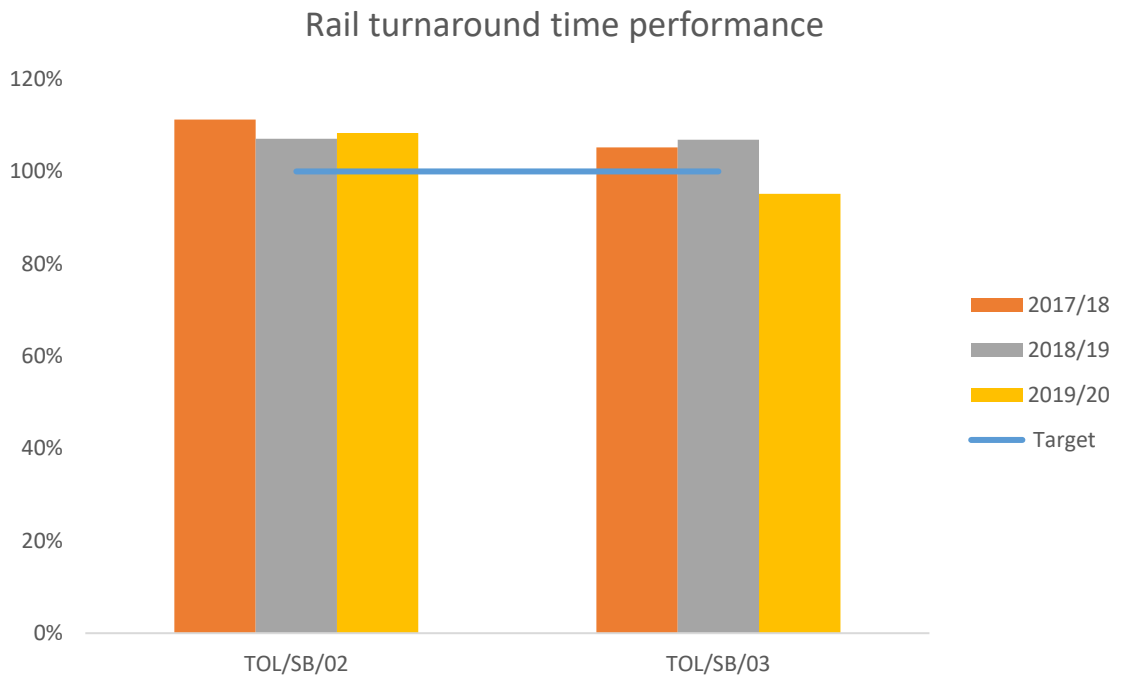

Truck turnaround time performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/RB/03
TOL/RB/06
2017/18
2018/19
2019/20
Target

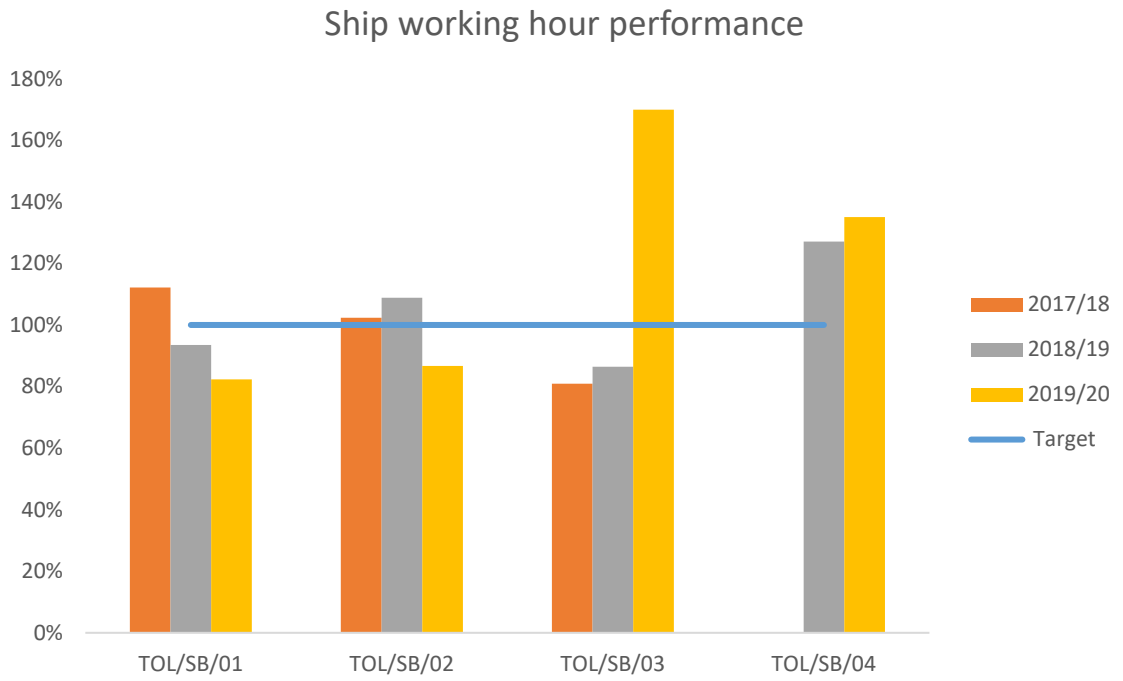
Port of Saldanha Bay

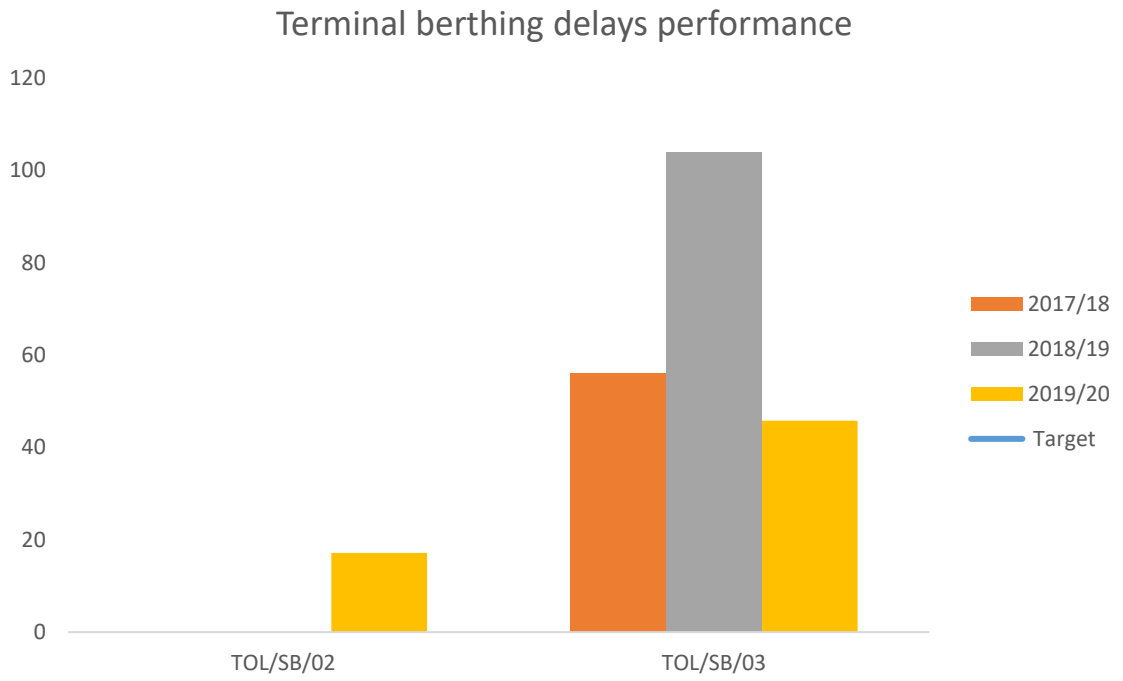
The TOPS results for Port of Saldanha Bay was captured, and the following performance evaluation was conducted:

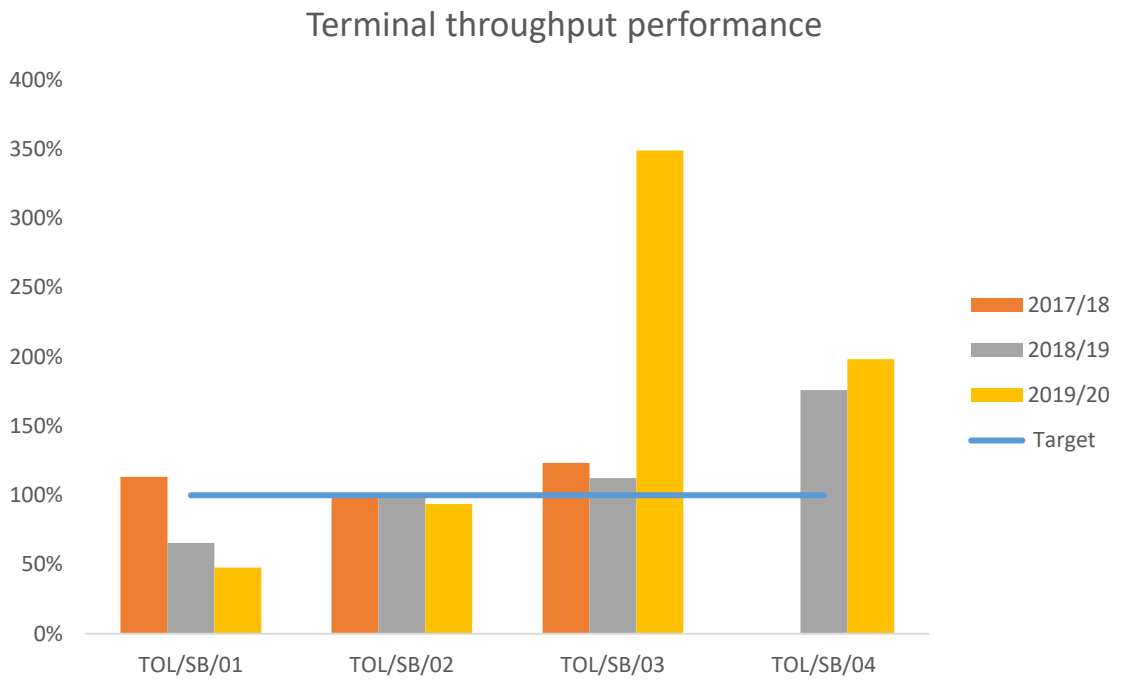


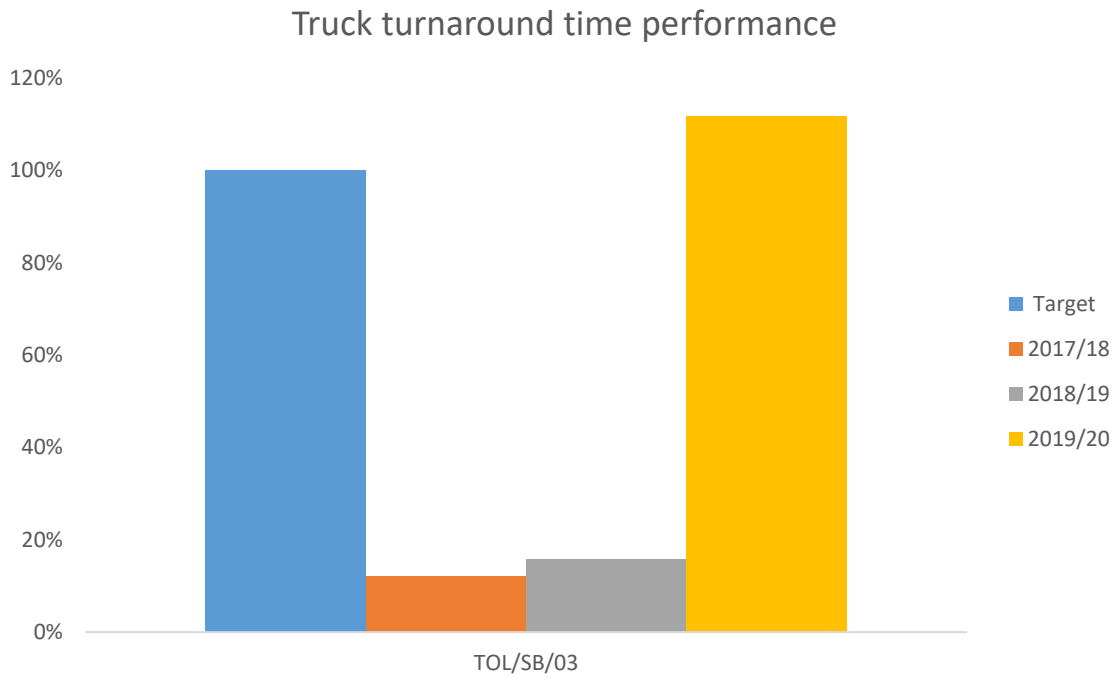



Rail turnaround time performance
120%
100%
80%
60%
40%
20%
0%
TOL/SB/02
TOL/SB/03
2017/18
2018/19
2019/20
Target


Ship working hour performance
180%
160%
140%
120%
100%
80%
60%
40%
20%
0%
TOL/SB/01
TOL/SB/02
TOL/SB/03
TOL/SB/04
2017/18
2018/19
2019/20
Target


Terminal berthing delays performance
120
100
80
60
40
20
0
TOL/SB/02
TOL/SB/03
2017/18
2018/19
2019/20
Target


Terminal throughput performance
400%
350%
300%
250%
200%
150%
100%
50%
0%
TOL/SB/01
TOL/SB/02
TOL/SB/03
TOL/SB/04
2017/18
2018/19
2019/20
Target


Truck turnaround time performance
120%
100%
80%
60%
40%
20%
0%
TOL/SB/03
Target
2017/18
2018/19
2019/20

ANNEXURE 2: List of Terminal Operators

Table 3: Terminal Operators

License No	Terminal Operator	Type of Operation:
TOL/RB/01	Hillside Aluminium Limited, trading as Hillside Aluminium	Liquid Bulk
TOL/RB/02	Engen Petroleum Limited	Liquid Bulk
TOL/RB/03	Bidvest Tank Terminal (Pty) Ltd	Liquid Bulk
TOL/RB/04	Richards Bay Coal Terminal (Pty) Ltd	Dry Bulk
TOL/RB/05	Transnet Port Terminals, a division of Transnet SOC Limited	Dry Bulk
TOL/RB/06	Transnet Port Terminals, a division of Transnet SOC Limited	Multi-Purpose
TOL/EL/01	BP Southern Africa (Pty) Ltd	Liquid Bulk
TOL/EL/02	Chevron South Africa (Pty) Ltd	Liquid Bulk
TOL/EL/03	Engen Petroleum Ltd	Liquid Bulk
TOL/EL/04	Total South Africa (Pty) Ltd	Liquid Bulk
TOL/EL/05	Transnet Port Terminals, a division of Transnet SOC Limited	Automotive
TOL/EL/06	Transnet Port Terminals, a division of Transnet SOC Limited –Combi Terminal	Multi-Purpose
TOL/EL/07	Transnet Port Terminals, a division of Transnet SOC Limited – Grain Terminal	Dry Bulk
TOL/SB/01	Strategic Fuel Fund Association	Liquid Bulk
TOL/SB/02	Transnet Port Terminals, a division of Transnet SOC Limited	Dry Bulk
TOL/SB/03	Transnet Port Terminals, a division of Transnet SOC Limited	Multi-Purpose
TOL/SB/04	Sunrise Energy	Liquid bulk
TOL/PE/01	Chevron South Africa (Pty) Ltd	Liquid Bulk
TOL/PE/02	Engen Petroleum Ltd	Liquid Bulk
TOL/PE/03	FPT Port Leasing (Pty) Ltd	Break Bulk
TOL/PE/04	Shell South Africa Marketing (Pty) Ltd	Liquid Bulk
TOL/PE/05	Total South Africa (Pty) Ltd	Liquid Bulk
TOL/PE/06	Transnet Port Terminals, a division of Transnet SOC Limited	Automotive
TOL/PE/07	Transnet Port Terminals, a division of Transnet SOC Limited	Containers
TOL/PE/08	Transnet Port Terminals, a division of Transnet SOC Limited	Dry Bulk
TOL/PE/09	Transnet Port Terminals, a division of Transnet SOC Limited	Multi-purpose
TOL/PE/	Transnet Port Terminals, a division of Transnet SOC Limited	Skiptainer vessels
TOL/NGQ/01	Transnet Port Terminals, a division of Transnet SOC Limited	Containers
TOL/CT/01	AECI (Pty) Ltd - Cape Chemicals Terminal	Liquid Bulk
TOL/CT/02	Joint Bunkering Services	Liquid Bulk
TOL/CT/03	Cape Town Bulk Storage (Pty) Ltd	Liquid Bulk
TOL/CT/04	Chevron South Africa (Pty) Ltd	Liquid Bulk
TOL/CT/05	FFS Refiners (Pty) Ltd	Liquid Bulk
TOL/CT/06	FFS Refiners (Pty) Ltd	Multi-Purpose
TOL/CT/07	OTGC Terminals (Pty) Ltd	Liquid Bulk
TOL/CT/08	Transnet Port Terminals, a division of Transnet SOC Limited	Containers
TOL/CT/09	Transnet Port Terminals, a division of Transnet SOC Limited	Multi-Purpose
TOL/CT/10	Crossberth Cold Storage (Pty) Ltd	Break-bulk
TOL/DB/01	PBD Boeredienste (Pty) Ltd) – Maydon Wharf	Dry Bulk

License No	Terminal Operator	Type of Operation:
TOL/DB/02	Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (Millweed House)	Multi - Purpose
TOL/DB/03	Ensimbini Terminals (Pty) Ltd – Maydon Wharf	Multi-Purpose
TOL/DB/04	Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (Herschell Road)	Multi -Purpose
TOL/DB/05	Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (MW10)	Multi-Purpose
TOL/DB/06	Bidfreight Port Operations (Pty) Ltd – Maydon Wharf (MW15)	Multi-Purpose
TOL/DB/07	Bidfreight Port Operations (Pty) Ltd, – Maydon Wharf (Sunburst – Wisely Road)	Multi-Purpose
TOL/DB/08	Tata Chemicals SA (Pty) Ltd– Maydon Wharf	Dry Bulk
TOL/DB/09	Chemoleo (Pty) Ltd – Island View	Liquid Bulk
TOL/DB/10	Chevron South Africa (Pty) Ltd – Island View	Liquid Bulk
TOL/DB/11	Commercial Cold Storage (Pty) Ltd - Maydon Wharf	Break Bulk
TOL/DB/12	Commercial Cold Storage Ports (Pty) Ltd - Maydon	Break Bulk
TOL/DB/13	Durban Coal Terminal (Pty) Ltd - Bulk Connection terminal - The Bluff	Dry Bulk
TOL/DB/14	Navocare (Pty) Ltd	Break Bulk
TOL/DB/15	Engen Petroleum Ltd – Island View	Liquid Bulk
TOL/DB/16	Engen Petroleum Ltd – Island View	Liquid Bulk
TOL/DB/17	FPT Port Leasing (Pty) Ltd	Break Bulk
TOL/DB/18	Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd – Maydon Wharf 13	Multi-Purpose
TOL/DB/19	Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd – Maydon Wharf Jenkyn Road	Multi-Purpose
TOL/DB/20	Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd – Maydon Wharf, Methven Road	Multi-Purpose
TOL/DB/21	Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd – Maydon Wharf, Methven Road	Multi-Purpose
TOL/DB/22	OTGC Terminals (Pty) Ltd – Maydon Wharf (Pure Cane Molasses Terminal)	Liquid Bulk
TOL/DB/23	Island View Storage Ltd – Island View (Chemicals, Gases, Oils, etc.)	Liquid Bulk
TOL/DB/24	Island View Storage Ltd – Maydon Wharf: (Edible Oils)	Liquid Bulk
TOL/DB/25	Island View Storage Ltd – Island View (Fynnland): (Chemicals, Gases, Oils, Lube Oils, etc.)	Liquid Bulk
TOL/DB/26	Manuchar SA (Pty) Ltd – Maydon Wharf	Multi-Purpose
TOL/DB/27	Protank (Pty) Ltd, trading as Indian Ocean Terminals – Maydon Wharf	Liquid Bulk
TOL/DB/28	Profert (Pty) Ltd – Maydon Wharf: (Fertilizer & Urea)	Dry Bulk
TOL/DB/29	South African Bulk Terminals Ltd trading as Rennies Bulk Terminals – Maydon Wharf	Dry Bulk
TOL/DB/30	South African Bulk Terminals Ltd, trading as Durban Bulk Shipping – Island View **(Refer TOL/DB/58)**	Dry Bulk
TOL/DB/31	Shell & BP South Africa Petroleum Refineries (Pty) Ltd	Liquid Bulk
TOL/DB/32	Shell & BP South Africa Petroleum Refineries (Pty) Ltd (SAPREF) – Island View - (Portions 71-74, 41-83, 38-40)	Liquid Bulk
TOL/DB/33	Shell & BP South Africa Petroleum Refineries (Pty) Ltd (SAPREF) – Island View	Liquid Bulk
TOL/DB/34	Natcos, consisting of SASOL Oil (Pty) Ltd and Total SA (Pty) Ltd– Island View	Liquid Bulk
TOL/DB/35	Natcos, consisting of SASOL Oil (Pty) Ltd and Total SA (Pty) Ltd – Island View	Liquid Bulk
TOL/DB/36	South African Sugar Association - Sugar terminal –Maydon Wharf	Dry Bulk
TOL/DB/37	Transnet Port Terminals, a division of Transnet SOC Limited – Point	Automotive
TOL/DB/38	Transnet Port Terminals, a division of Transnet SOC Limited – Pier 2 & Pier 1	Containers
TOL/DB/39	Transnet Port Terminals, a division of Transnet SOC Limited – Agriport	Dry Bulk
TOL/DB/40	Transnet Port Terminals, a division of Transnet SOC Limited – Point	Multi-Purpose
TOL/DB/41	Transnet Port Terminals, a division of Transnet SOC Limited – Maydon Wharf	Break Bulk

License No	Terminal Operator	Type of Operation:
TOL/DB/42	Transnet Port Terminals, a division of Transnet SOC Limited – Maydon Wharf	Multi-Purpose
TOL/DB/43	Total South Africa (Pty) Ltd – Island View	Liquid Bulk
TOL/DB/44	Vopak Terminal Durban (Pty) Ltd – Island View.	Liquid Bulk
TOL/DB/45	Vopak Terminal Durban (Pty) Ltd – Fynnland	Liquid Bulk
TOL/DB/46	H & R South Africa (Pty) Ltd	Liquid Bulk
TOL/DB/47	Veetech Oil (Pty) Ltd	Liquid Bulk
TOL/DB/48	Blendcor (Pty) Ltd	Liquid Bulk
TOL/DB/49	Shell & BP South Africa Petroleum Refineries (Pty) Ltd (SAPREF) – Island View (Portion 106)	Liquid Bulk
TOL/DB/50	Rocasync (Pty) Ltd, trading as Pro Terminals – Maydon Wharf (Licence expired)	Dry Bulk
TOL/DB/53	Zenex Oil (Pty) Ltd –Island View - Portions 111 & 112	Liquid Bulk
TOL/DB/54	Engen Petroleum Limited	Liquid Bulk
TOL/DB/55	Grindrod Terminals Durban, a division of Grindrod South Africa (Pty) Ltd – Maydon Wharf, Shadwell Road.	Multi-Purpose
TOL/DB/58	South African Bulk Terminals Ltd, trading as Durban Bulk Shipping –Island View – **Split of Application (TOL/DB/30)**	Dry Bulk