



LDB ANALYTICS : December Report 2017 for JNPT



DLDS's Logistics Databank Project(LDB) is currently providing Container visibility services for more than 70% of India's Container Volume and as on date has provided services for more than **6 million EXIM Containers of India** in the western corridor starting from the port till the ICD's through a single window(www.ldb.co.in).

Pan India launch of DMICDC's Logistics Databank Operations was announced on 18th Dec 2017, this will enable in bringing Visibility & Transparency across the Indian Supply Chain and reduce the Container Transportation time and the costs.

DLDS Analytics reports have been able to bring in Visibility to the Stakeholders enabling them in improvising the key performance Indicators as below:

- In comparison to the October –November-December 2016 (OND-16) quarter, JNPT has witnessed an improvement across the Import & Export bound Container Dwell Time during the October –November-December 2017 (OND-17) quarter.

OND 2016	JNPT Import Dwell Time Improvement	OND 2017
	42.86%	
	JNPT Export Dwell Time Improvement	
	14.90%	

- JNPT also witnessed improvement in Dwell time for Import & Export Container movement in the OND 17 quarter in comparison to July-Aug-Sep 2017(JAS-17) quarter.

JAS 2017	JNPT Import Dwell Time Improvement	OND 2017
	57.4%	
	JNPT Export Dwell Time Improvement	
	14%	



- Dwell time of the Container Freight Station(CFS) around JNPT also has witnessed an improvement in comparison to the OND -16 quarter.

OND 2016	JNPT CFS Dwell Time Improvement 26.7%	OND 2017
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- There was an improvement recorded across the CFS and ICD Dwell time in comparison to the JAS-17 quarter.

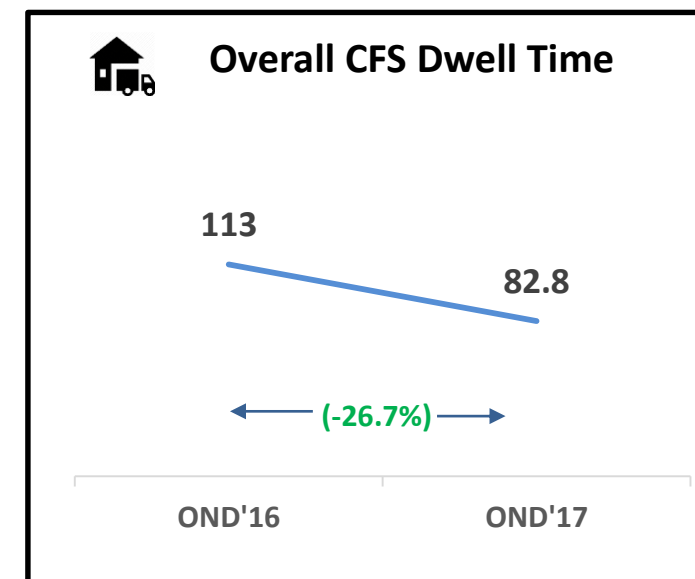
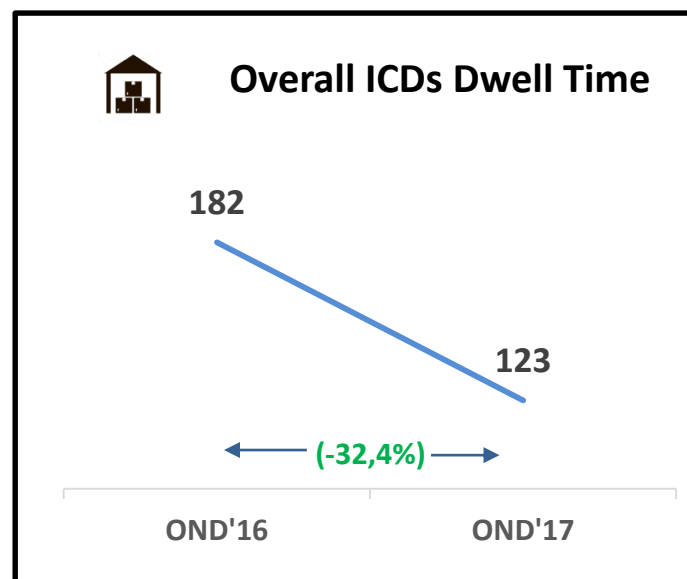
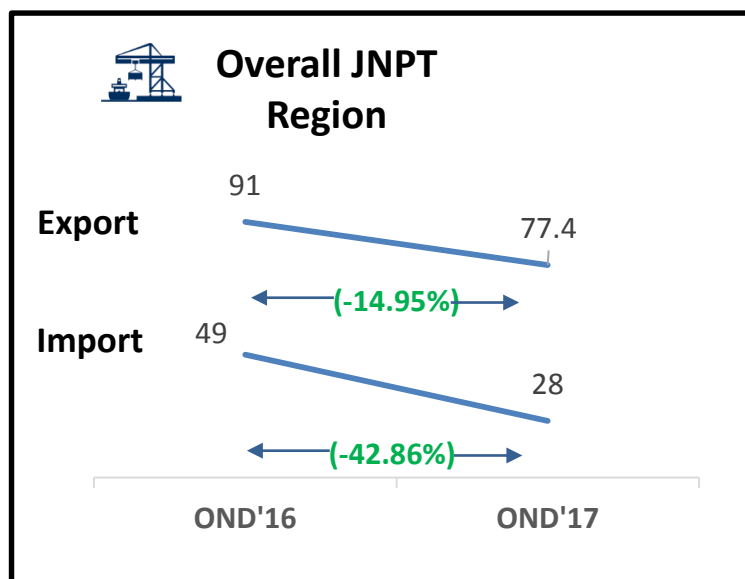
JAS 2017	JNPT CFS Dwell Time Improvement	OND 2017
	5.1 %	
	ICD Dwell Time Improvement	
	3.90%	

- In comparison to the JAS-17 quarter, lead time of Container movement from NCR region Inland Container Depots to the JNPT region port terminals has improved by 8.3% (approx 1 day).
- Improvement of 29% was recorded in the Port dwell time of Gateway Terminal India for the quarter OND'17, their performance had gone down due to Ransomware Virus attack in JAS 2017 quarter.

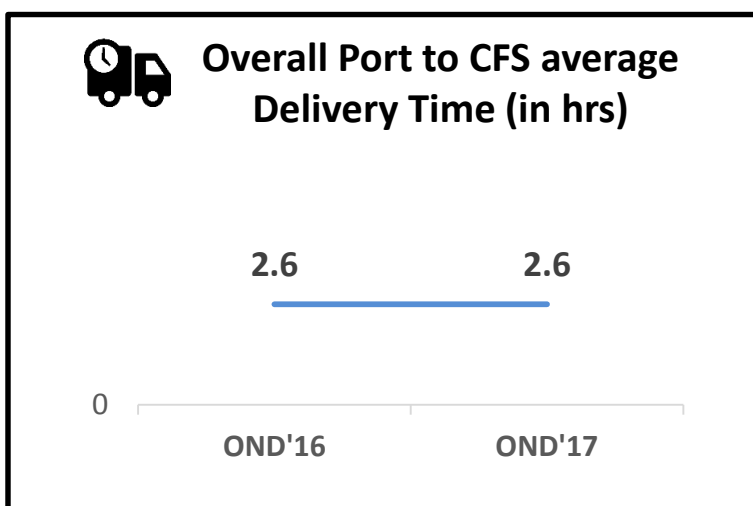


Performance Metrics

The below graphs depicts the Y-o-Y progress of dwell time performance of JNPT region port terminals, ICDs and CFS under LDB



Transit Time Metrics



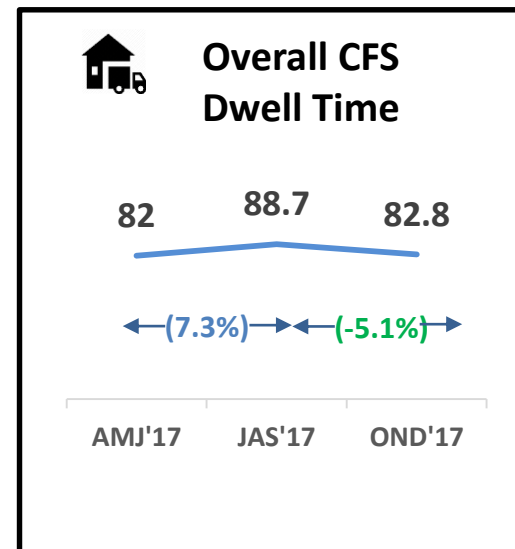
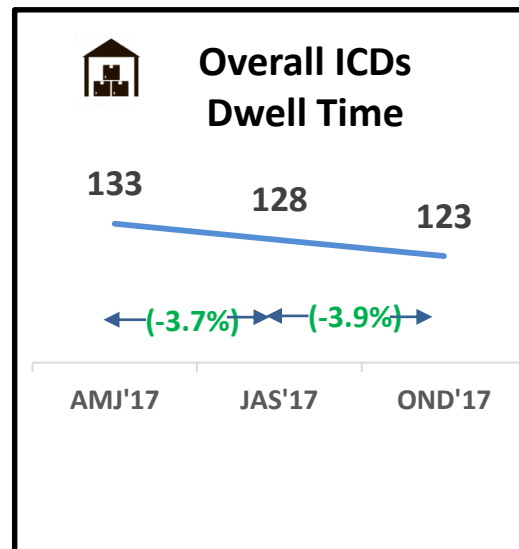
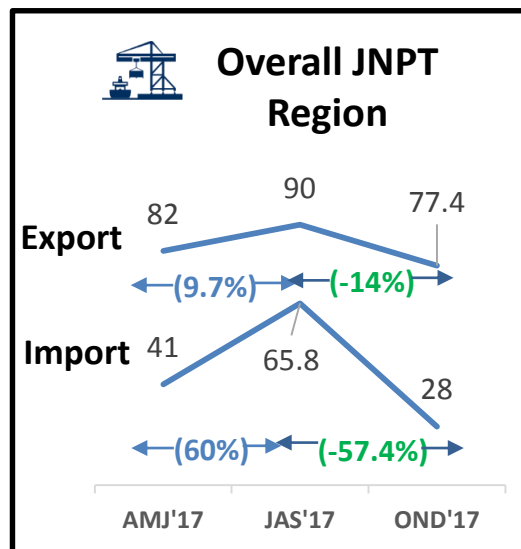
Dwell Time Reduction

- Significant improvement in Port dwell time for both Import and Export cycle by 42.86% and 14.9% for OND'17 quarter.
- CFS and ICD dwell time performance has also seen an improvement of approximately 27%



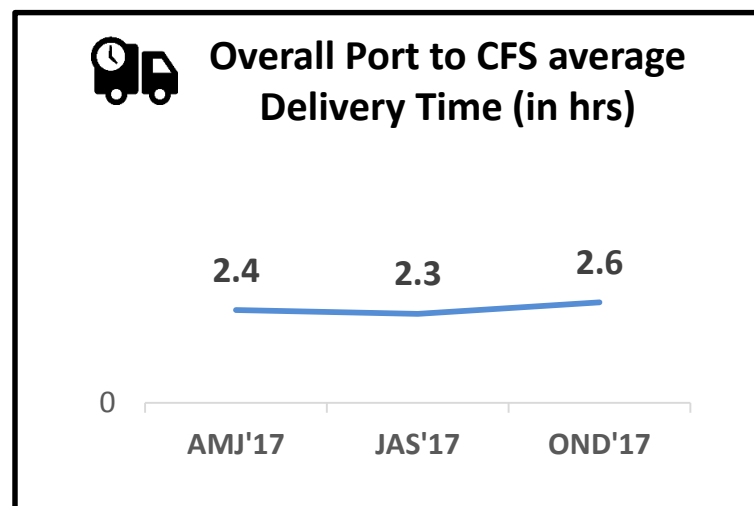
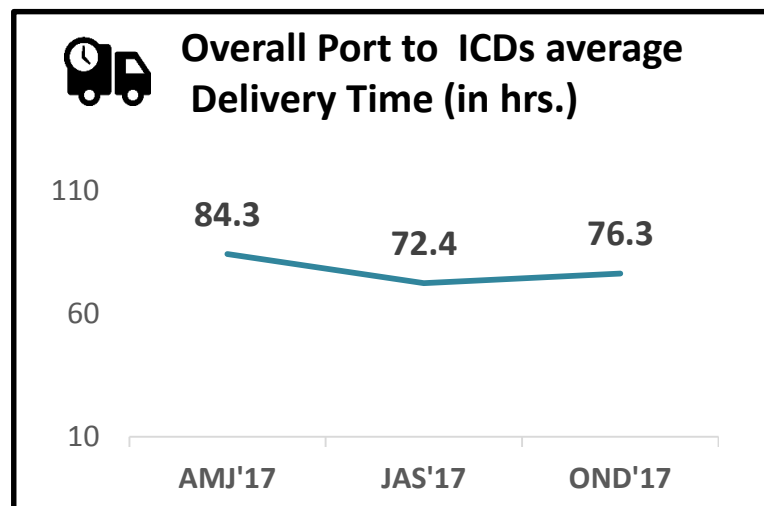


With help of above activities below results have been achieved :



Dwell Time Reduction

- Significant improvement in Port dwell time for both Import and Export cycle by 57.4% and 14% for OND'17 quarter.
- CFS and ICD dwell time performance has also seen an improvement of 5.1% and 3.9 %

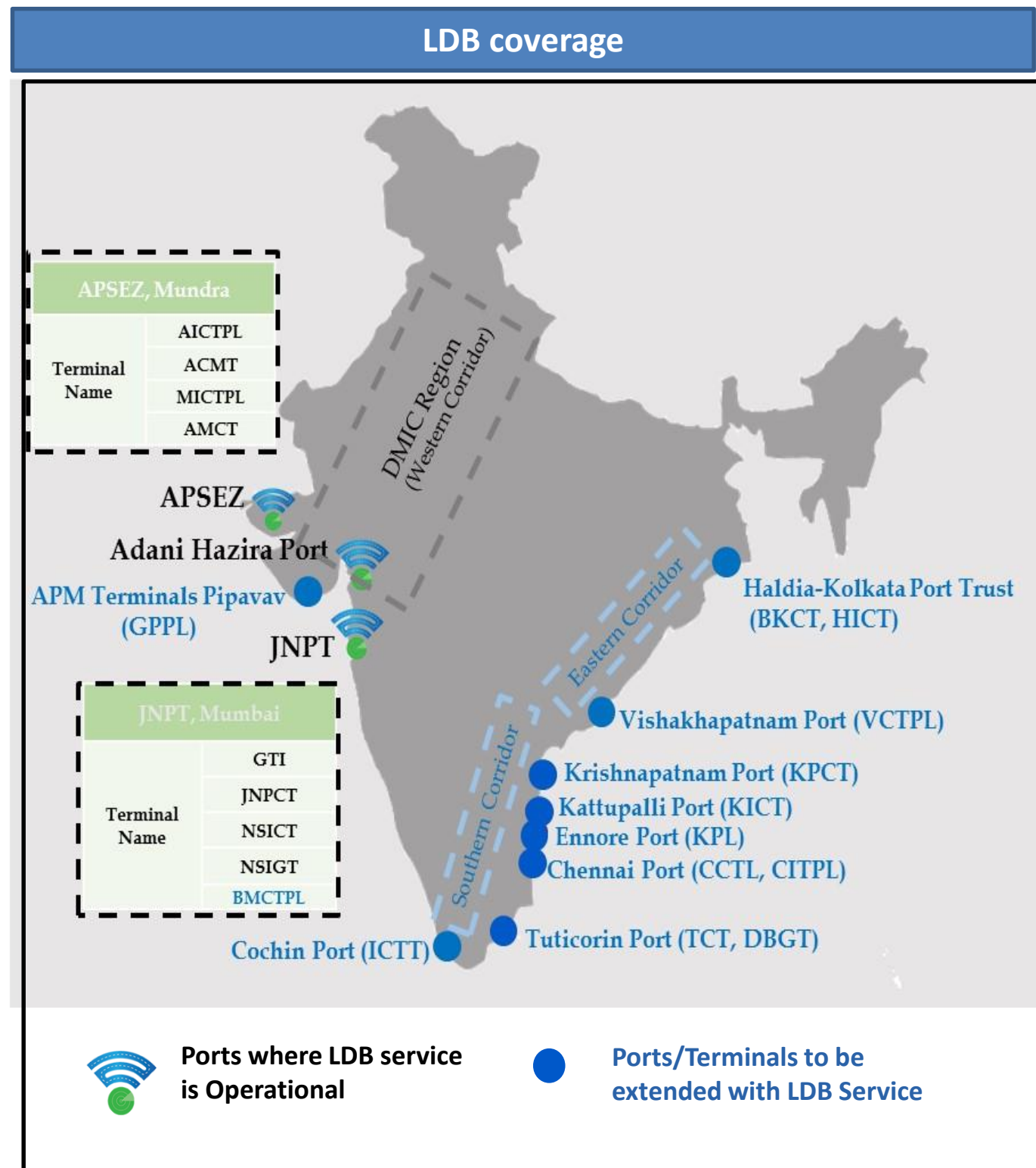


9
Port Terminals

10
In-land container Depots

47
Container Freight Stations

16
Toll Plazas



Performance Benchmarking





Performance benchmarking for JNPT Region Port Terminals- OND '17 quarter

Port Terminals

Top Performing Terminal

Gateway Terminals India (GTI)

Dwell Time : **46** hrs.

Low Performing Terminal

**Jawaharlal Nehru Port
Container Terminal (JNPCT)**

Dwell Time : **60.4** hrs.





Performance benchmarking for JNPT Region CFS - OND'17 quarter

CFS	
Top Performing CFS's	
CWC Impex Park CFS, Navi Mumbai	Dwell Time : 53.4 hrs.
Low Performing CFS's	
Take Care Logistics CFS	Dwell Time : 108.6 hrs.





Performance benchmarking for ICDs -OND'17 quarter

Top Performing ICD		Low Performing ICD	
CMA CGM Agencies ICD, Dadri	Dwell Time : 80 hrs.	CONCOR ICD, Aurangabad	Dwell Time : 181 hrs.

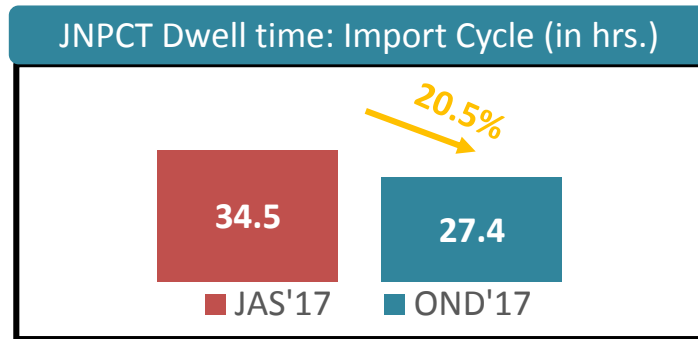


1

JNPT region port terminals has seen improvement in its import cycle port dwell time by around 57.4% in OND'17 as compared to JAS'17

Contributing factor for the reduction in import dwell time is the more efficient handling of the container movement wherein **over 96% of truck bound containers are cleared within 5 days.**

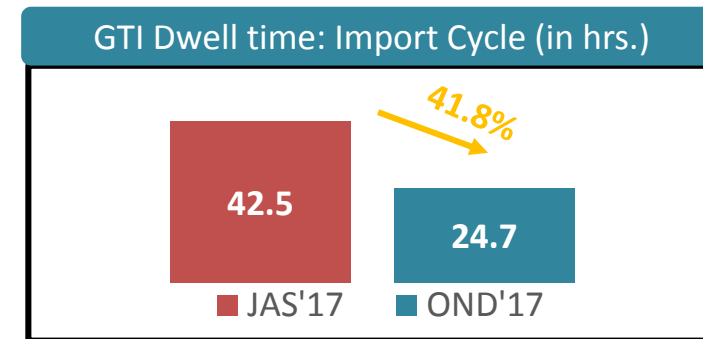
- JNPT has improved its Import dwell time by 20.5 %



Within 5 days More than 5 days



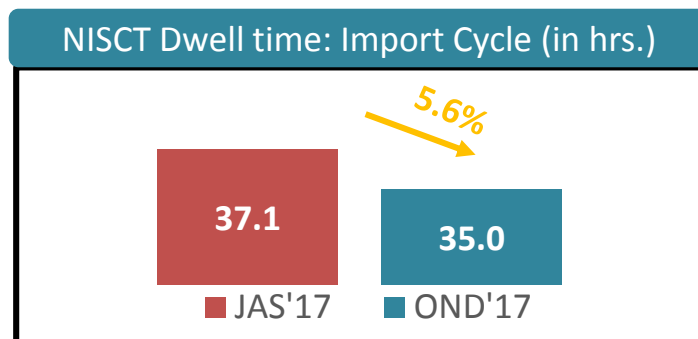
- GTI has improved its Import dwell time by 41.8 %



Within 5 days More than 5 days



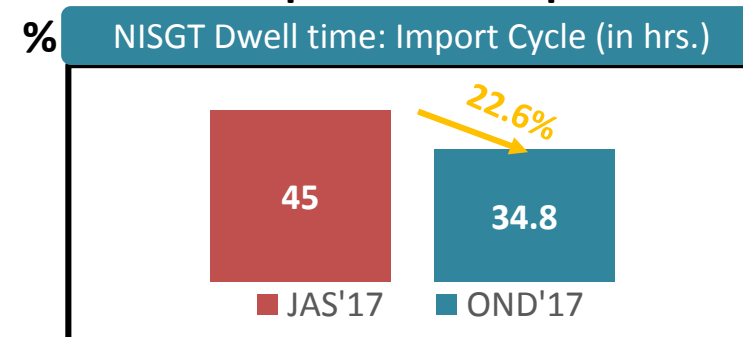
- NSICT has improved its Import dwell time by 5.6 %



Within 5 days More than 5 days



- NSIGT has improved its Import dwell time by 22.6 %



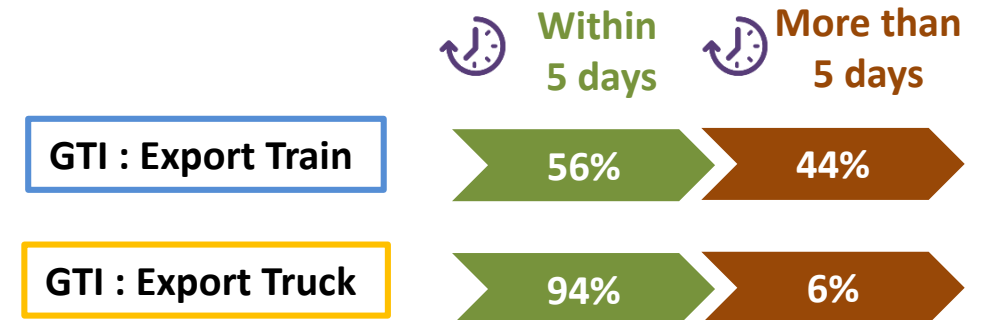
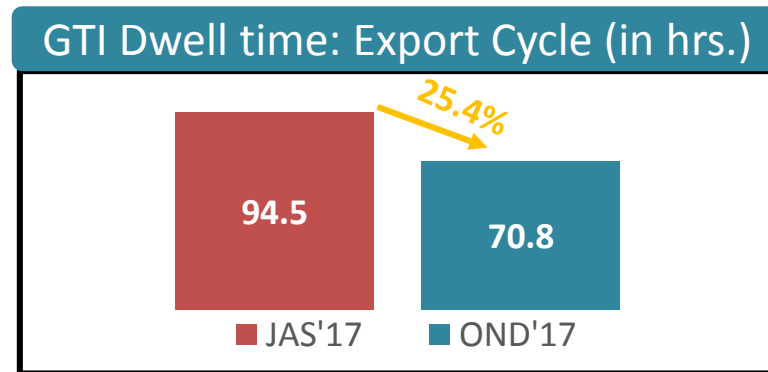
Within 5 days More than 5 days



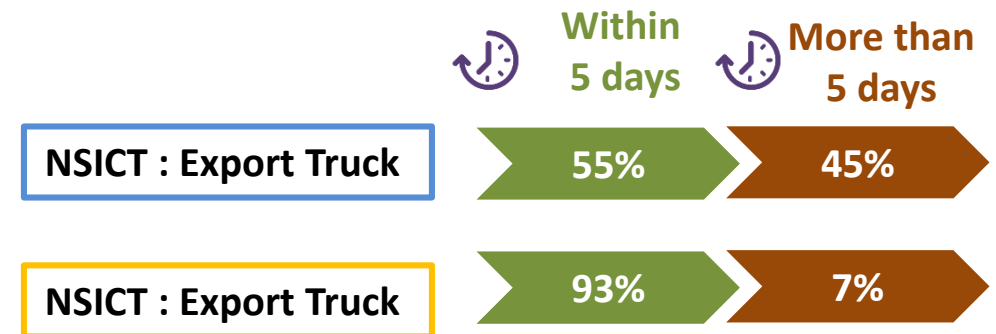
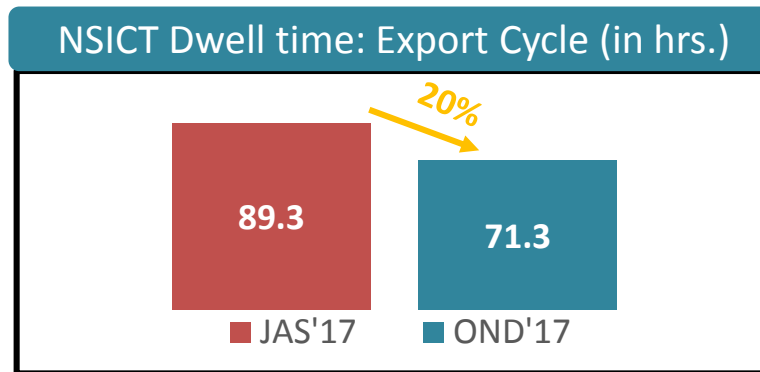
1 JNPT region port terminals has seen improvement in its export cycle port dwell time by around 14% in OND'17 compared to JAS'17

Efficient handling of the container as show below **over 90% of truck bound containers are cleared within 5 days**

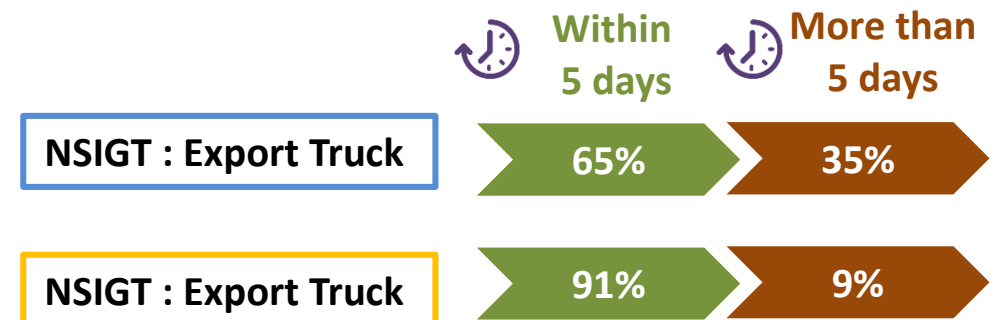
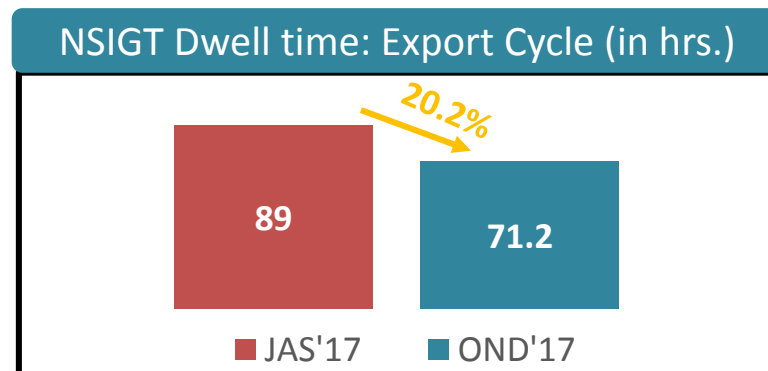
- GTI has reduced its export dwell time by 25.4 %



- NSICT has reduced its export dwell time by 20 %



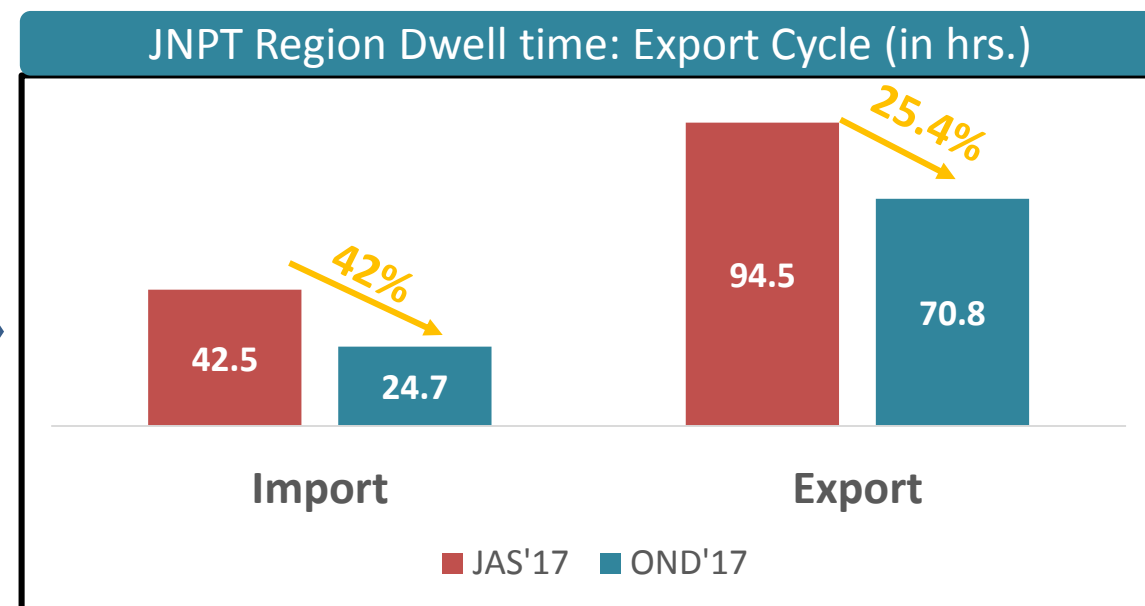
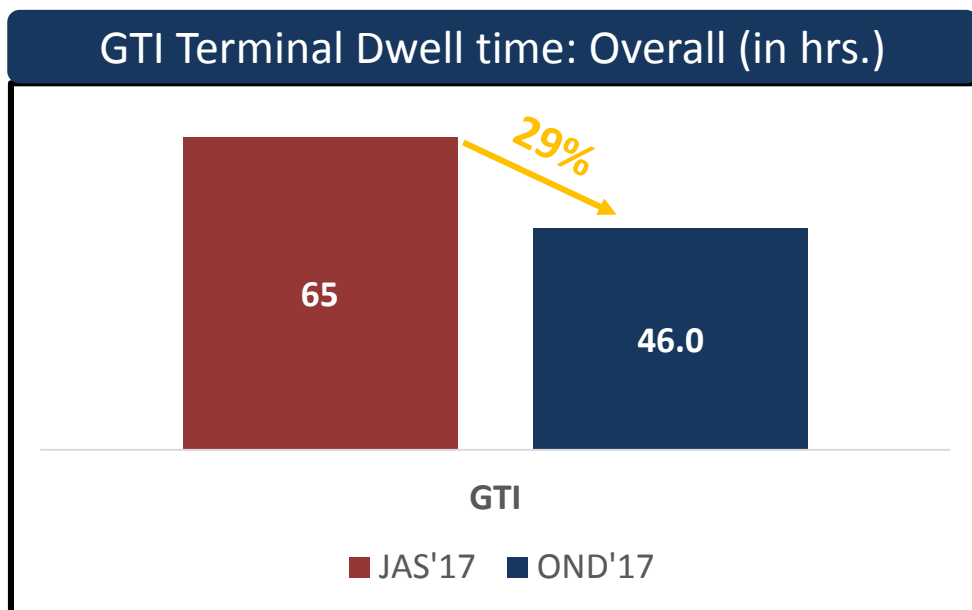
- NSIGT has reduced its export dwell time by 20.2 %



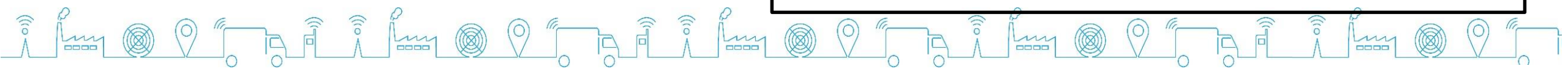
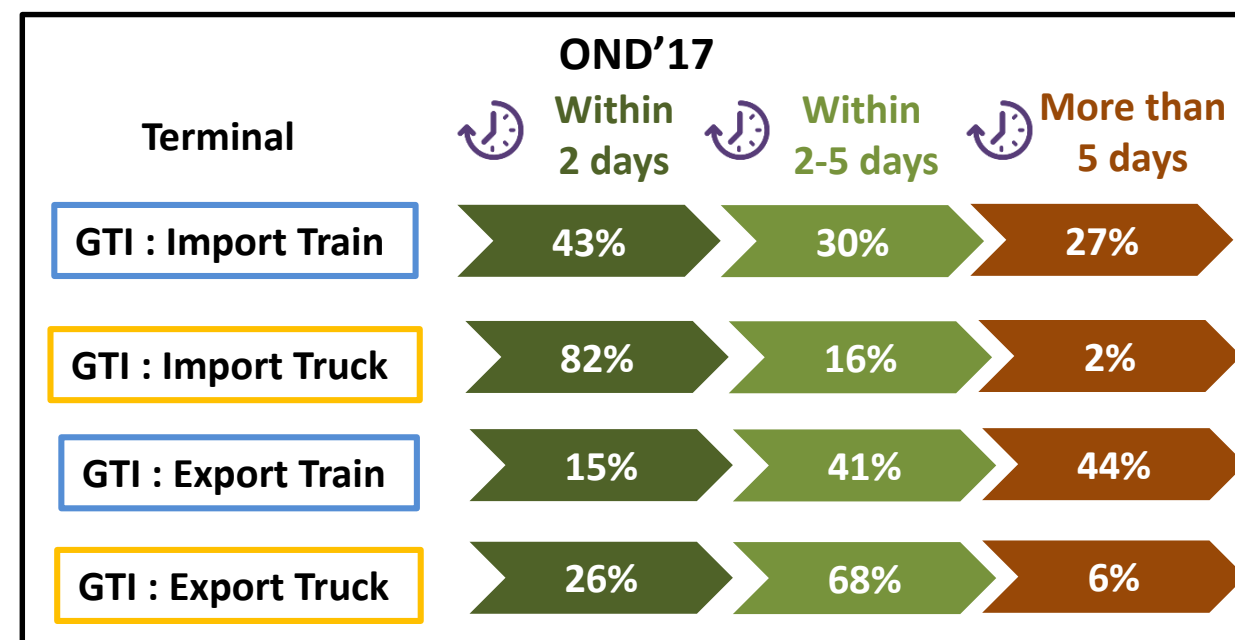
2

GTI terminal has significantly improved its port dwell time performance by 29% in OND'17

GTI has reduced its overall port dwell time in OND'17 quarter by 29% as compared to last JAS'17 quarter. GTI was attacked by Ransomware in July'17 which affected its performance. However they have significantly recovered their performance in OND'17 quarter. Its import dwell time has been improved by 42% and export dwell time by 25.4% as compared to last quarter

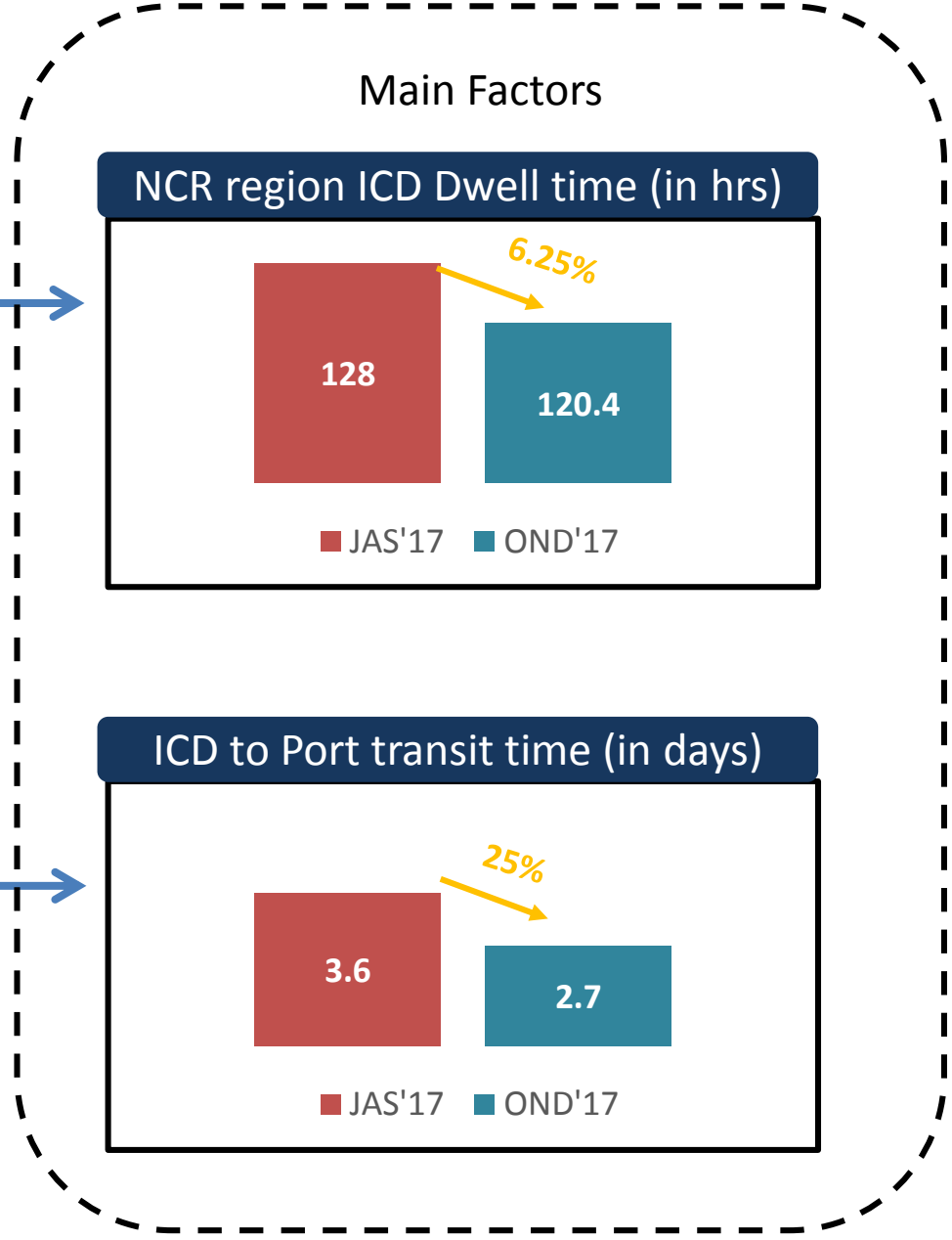
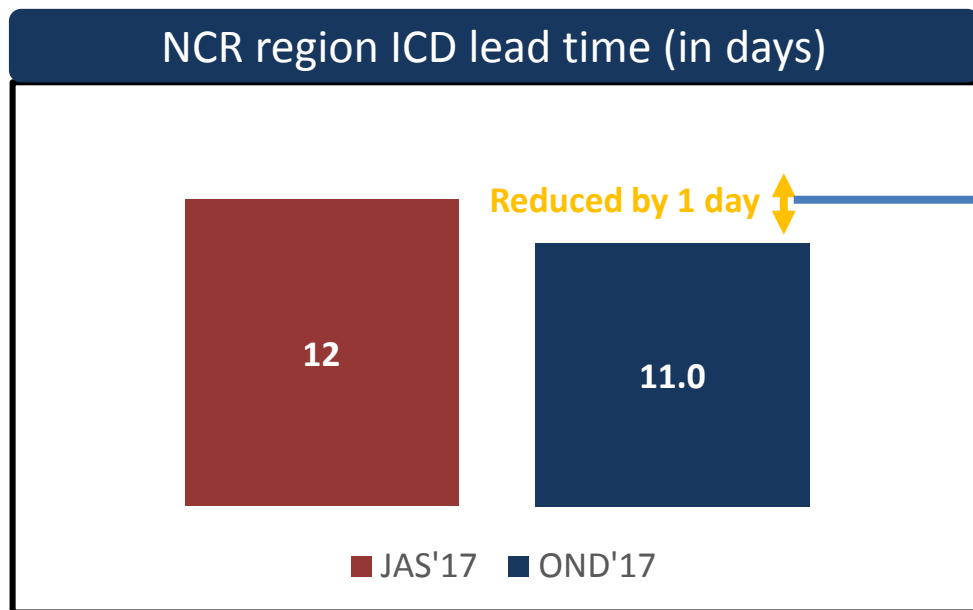


GTI container clearance day distribution has been depicted in the figure. Truck bound container has been managed effectively throughout the OND'17 as around 95% of the containers have been cleared with 5 days



2

Lead time of NCR region ICDs has improved by 8.3% in OND'17 quarter as comparison to JAS'17 quarter

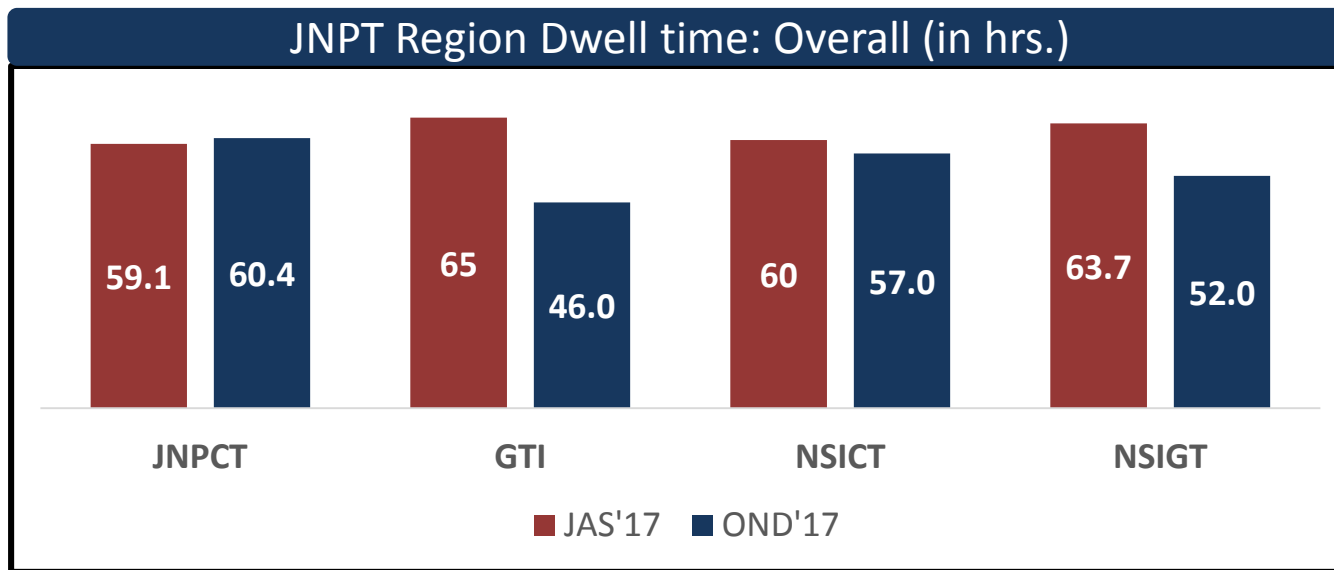


Performance Index



JNPT port dwell time trend :

The below table shows the overall port dwell time (i.e. import and export cycle combine) trend of all the JNPT* Port terminals for quarter OND'17. Port dwell time is the time duration between the entry of the container in Port terminal to the time it moves out of the Port terminal



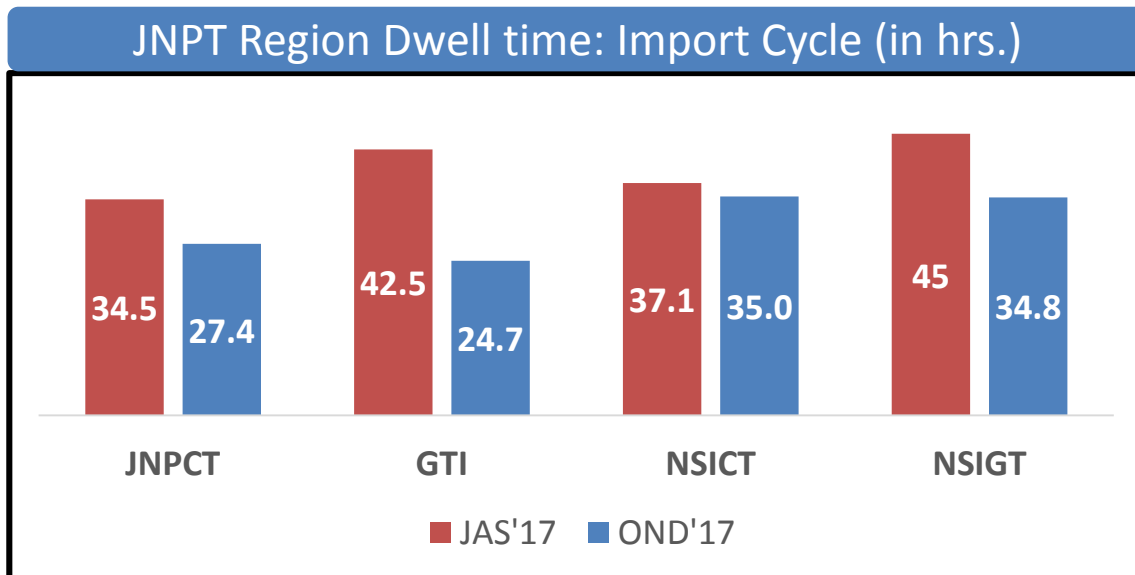
The overall JNPT region average dwell time for OND'17 quarter is **52.3 hrs** which has improved from **62 hrs** in JAS'17 quarter

The below tables showcase the Import and Export cycle dwell time for both rail and truck bound containers for month of OND'17



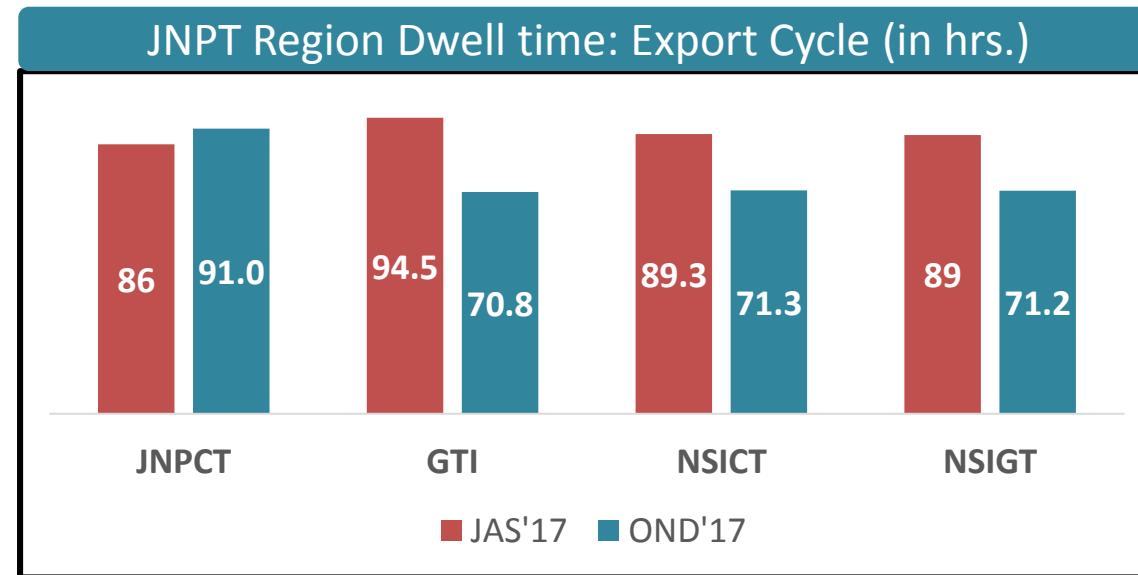
JNPT Import cycle Trend

The average import cycle dwell time of JNPT region port terminals for OND'17 quarter is **28 hrs.** which has improved from **65.8 hrs** in JAS'17



JNPT Export cycle Trend

The average export cycle dwell time of JNPT region port terminals for OND'17 quarter is **77.4 hrs** which has improved from **90 hrs** in JAS'17



JNPT region PORT Terminals : Performance Index

In order to assess the relative performance Port, Container Freight Station and Inland Container Depot ,the relative dwell time as well as the volume of containers handled by them are depicted graphically in the form of an index to portray the performance of a particular organisation on the basis of these two combined factors.

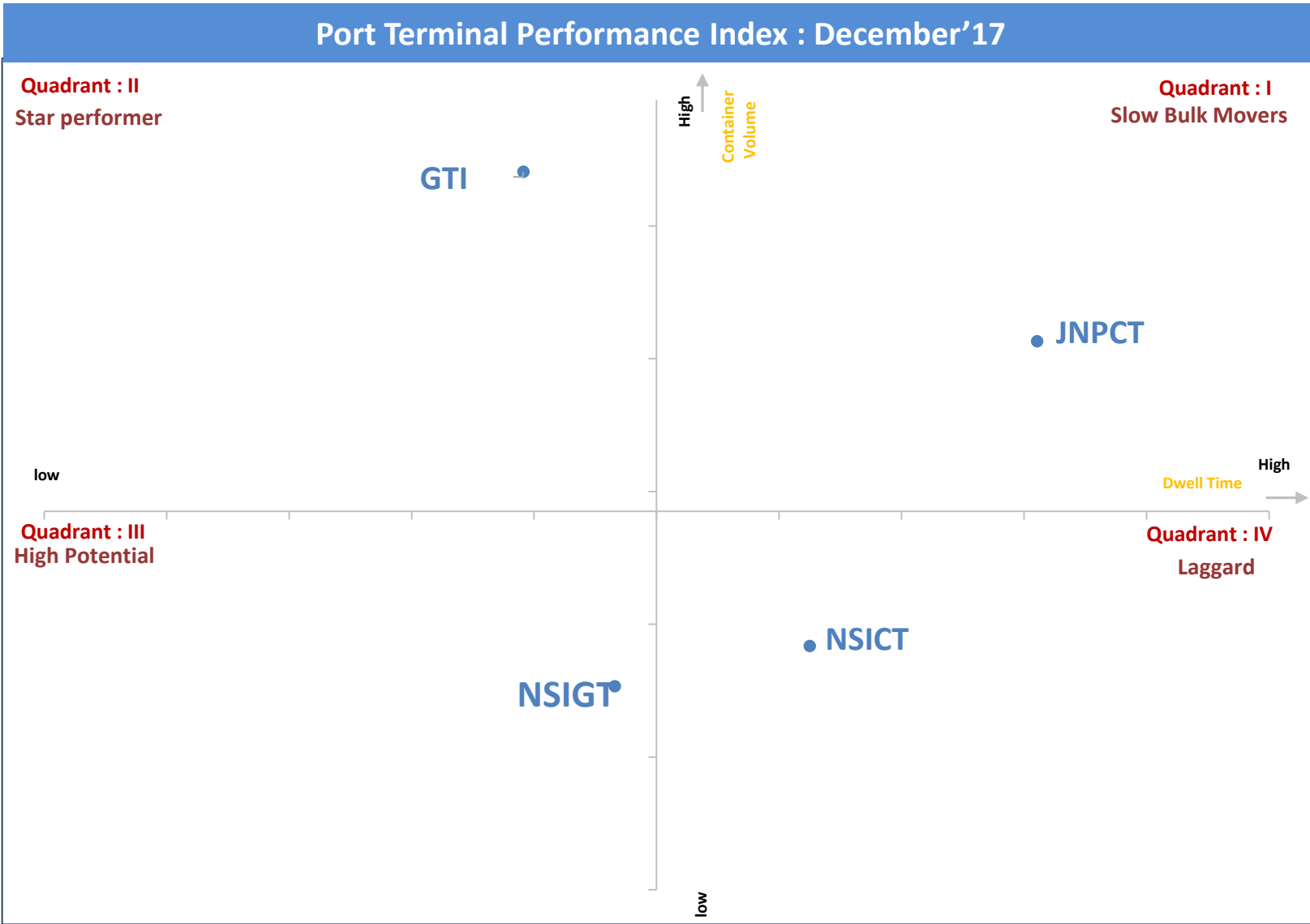
The figure depicts the Frequency Index i.e. volume by dwell time performance for JNPT Port terminals for December'17. The Quadrant II represents the high performing ports with high frequency Index i.e. high container volume at lower dwell time

Slow Bulk Movers : consist of Ports which have catered higher container volume at higher dwell time

Star Performer: consist of Ports which have catered relatively high container volume in lower dwell time

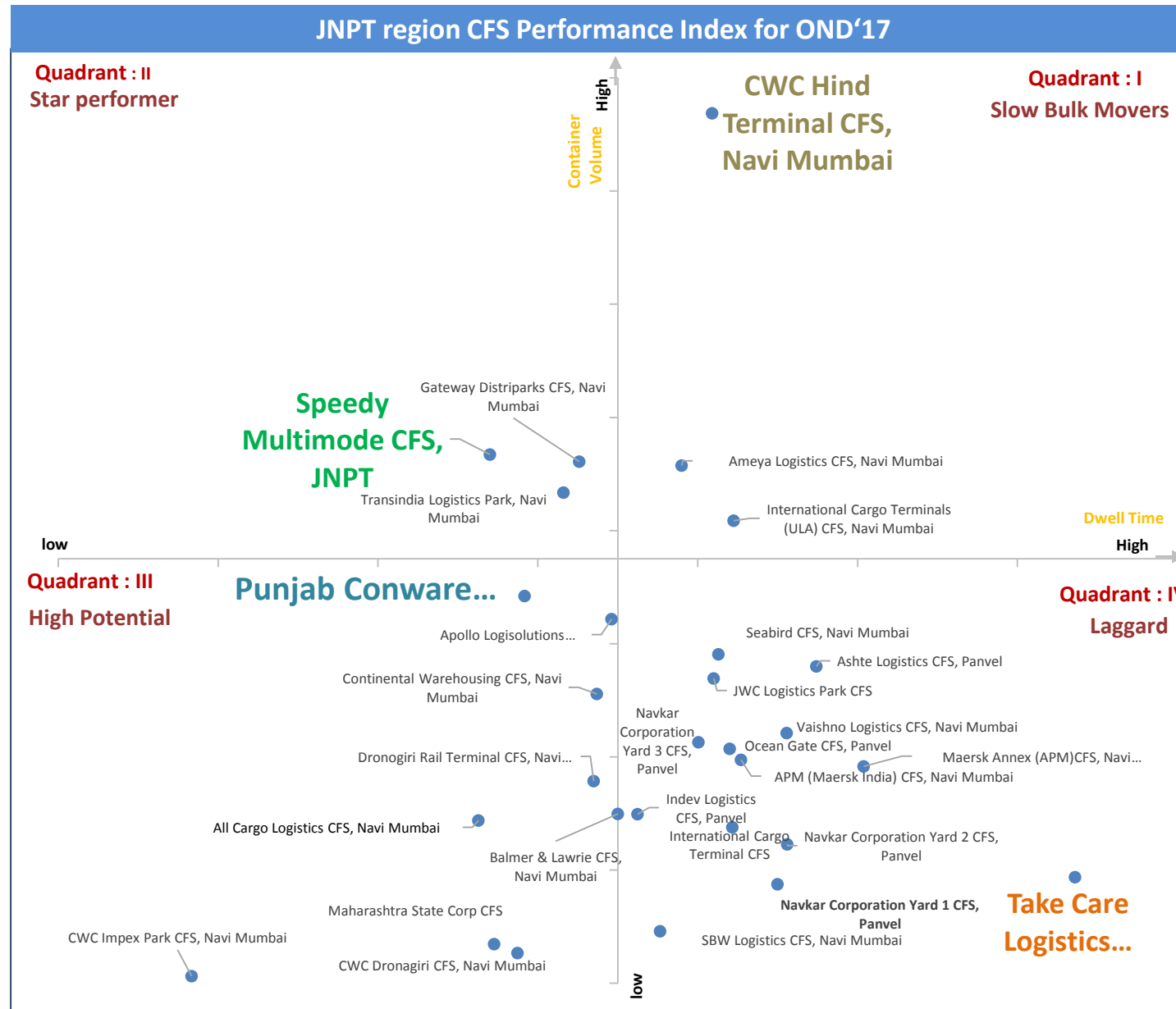
High Potential : consist of Ports which have catered relatively lower container volume in lower dwell time

Quadrant IV : consist of Ports which have catered relatively lower container volume at higher dwell time

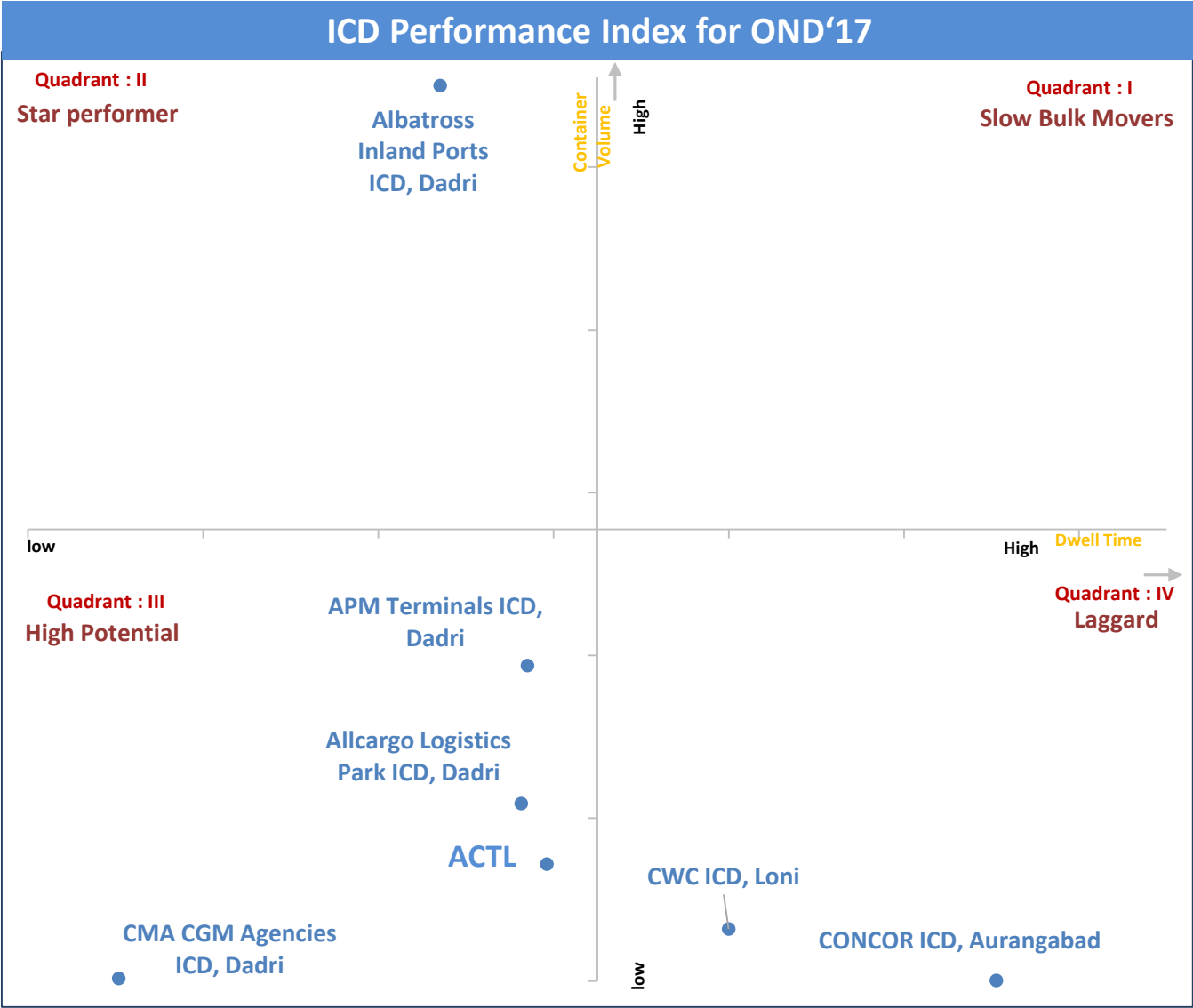


JNPT region CFS : Performance Index

The below graph depicts the Performance Index for all CFS for OND'17 quarter. The Quadrant II represent the best CFS with high frequency Index i.e. high container volume at lower dwell time



The below graph depicts the Performance Index for all ICDs for OND'17. The Quadrant II represent the best ICD with high frequency Index i.e. high container volume at lower dwell time



JNPT REGION : CONGESTION ANALYSIS AND HEAT MAP



Congestion Analysis around Mumbai Region







Cluster 1	Cluster 2
JNPT Area	Bhendkhal area, Khopate road
Cluster 3	Cluster 4
Sonari area, JNPT road	Chirle area, JNPT road
Cluster 5	Cluster 6
Plaspa area, Coachi kanyakumari Highway	Salva apta rd area, Bangalore highway
Cluster 7	Cluster 8
Patilpada area, Khopate JNPT road	Taloja, Navi Mumbai

Note : Please find the respective CFS in each cluster in annexure section

Legends

- High Congestion
- Medium Congestion
- Low Congestion
- ★ Cluster with bottleneck
- ★ Cluster without bottleneck

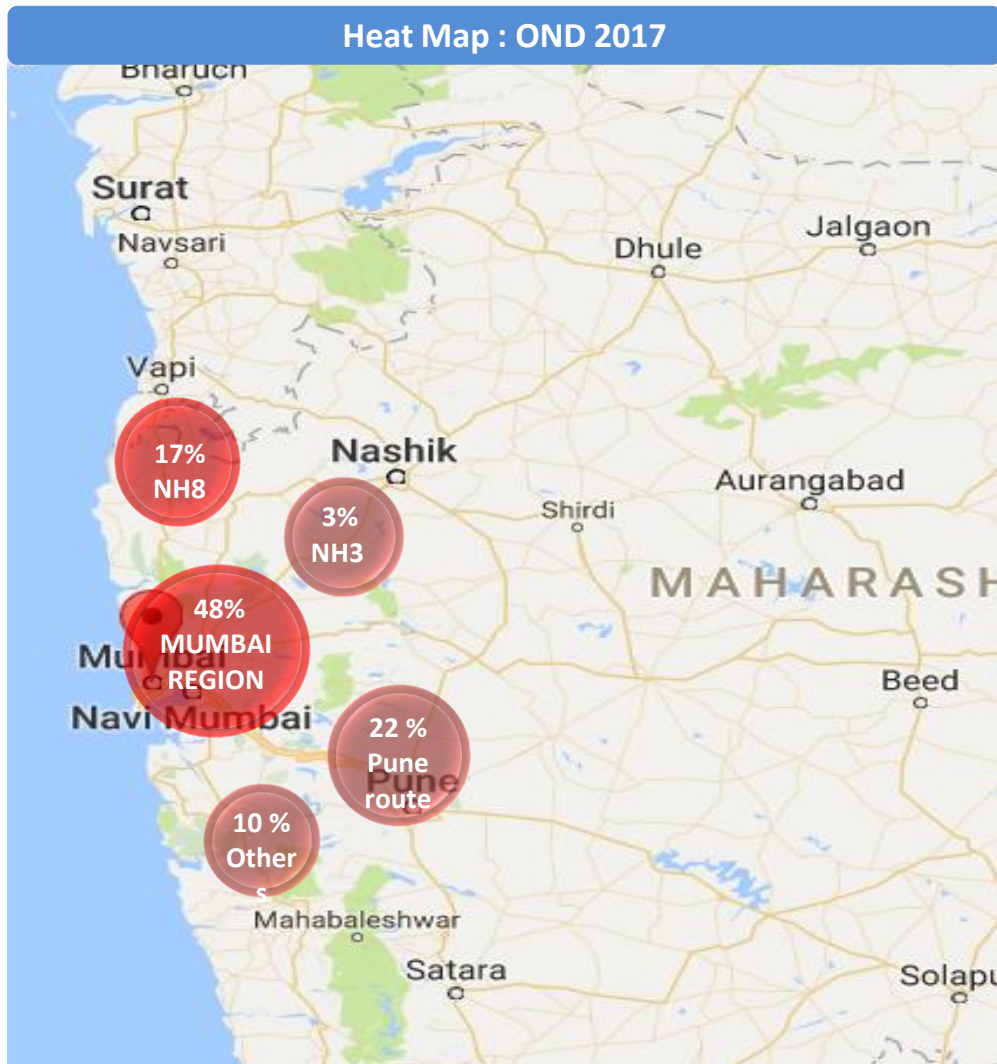
It is seen that Cluster 1 has congestion bottleneck throughout the OND'17 quarter

GTI Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	JNPCT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	NSICT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	NSIGT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■
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Note : Congestion is measured w.r.t actual time taken to cover the respective distance between clusters and terminals{



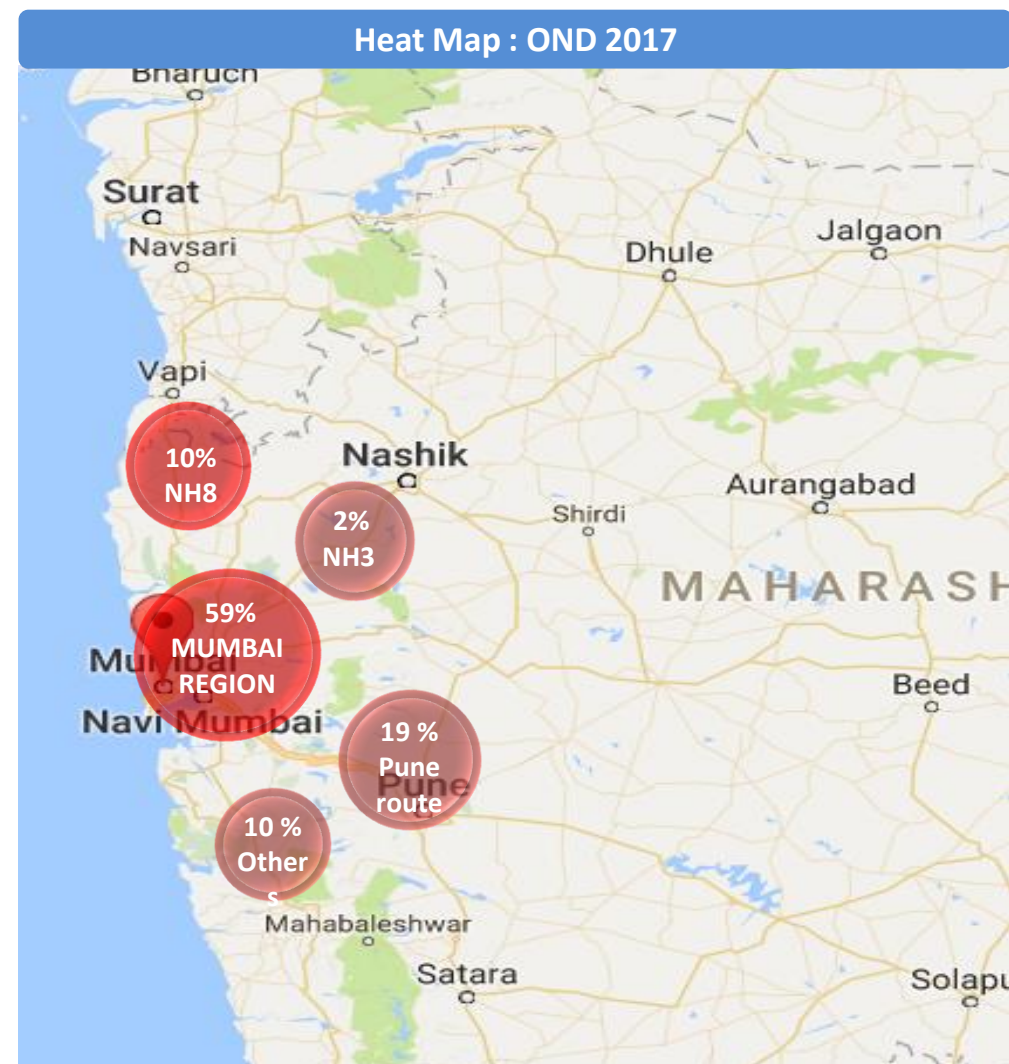
HEAT MAP : Overall Mumbai region



Region	JAS'17	OND'17
Mumbai Region	47%	48%
Pune	19%	22%
NH8	22%	17%
NH3	2%	3%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.

HEAT MAP : GTI Port Terminal

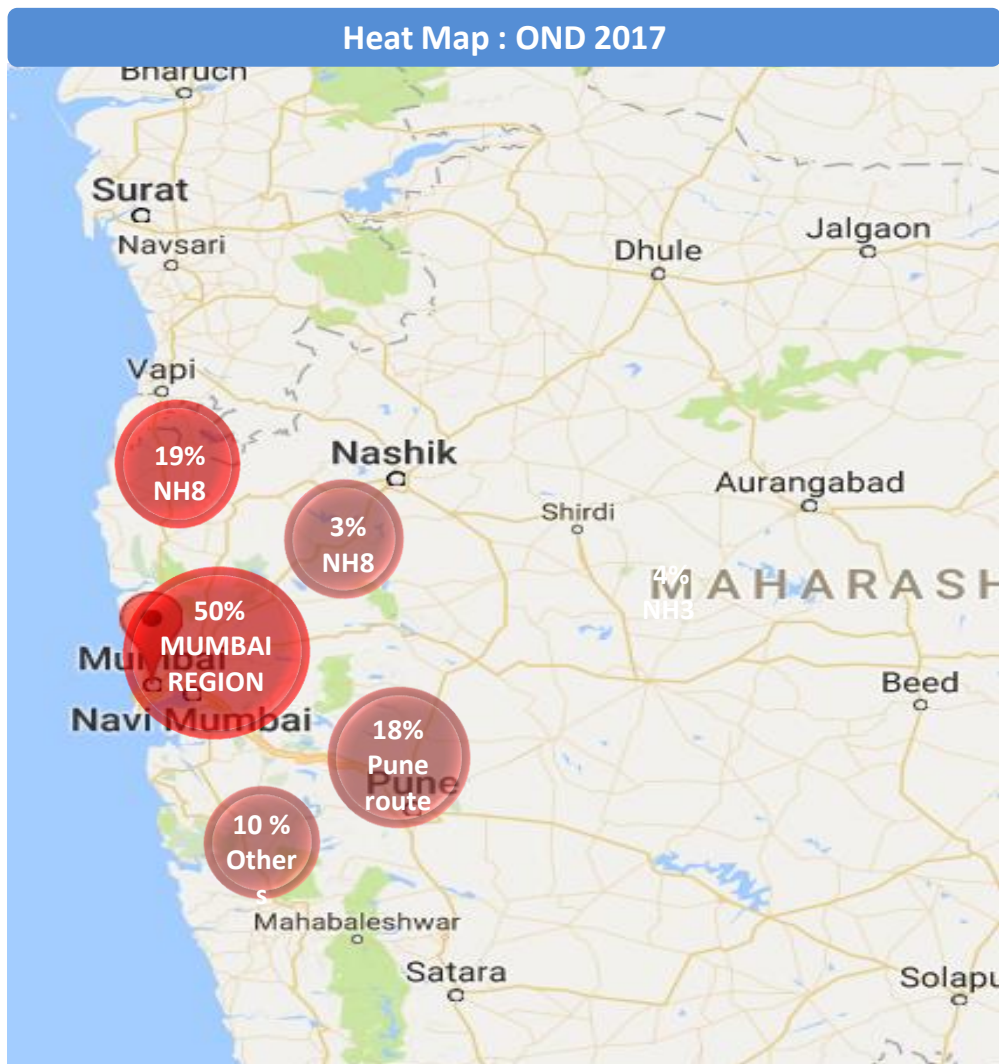


Region	JAS'17	OND'17
Mumbai Region	58%	59%
Pune	14%	19%
NH8	16%	10%
NH3	2%	2%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.



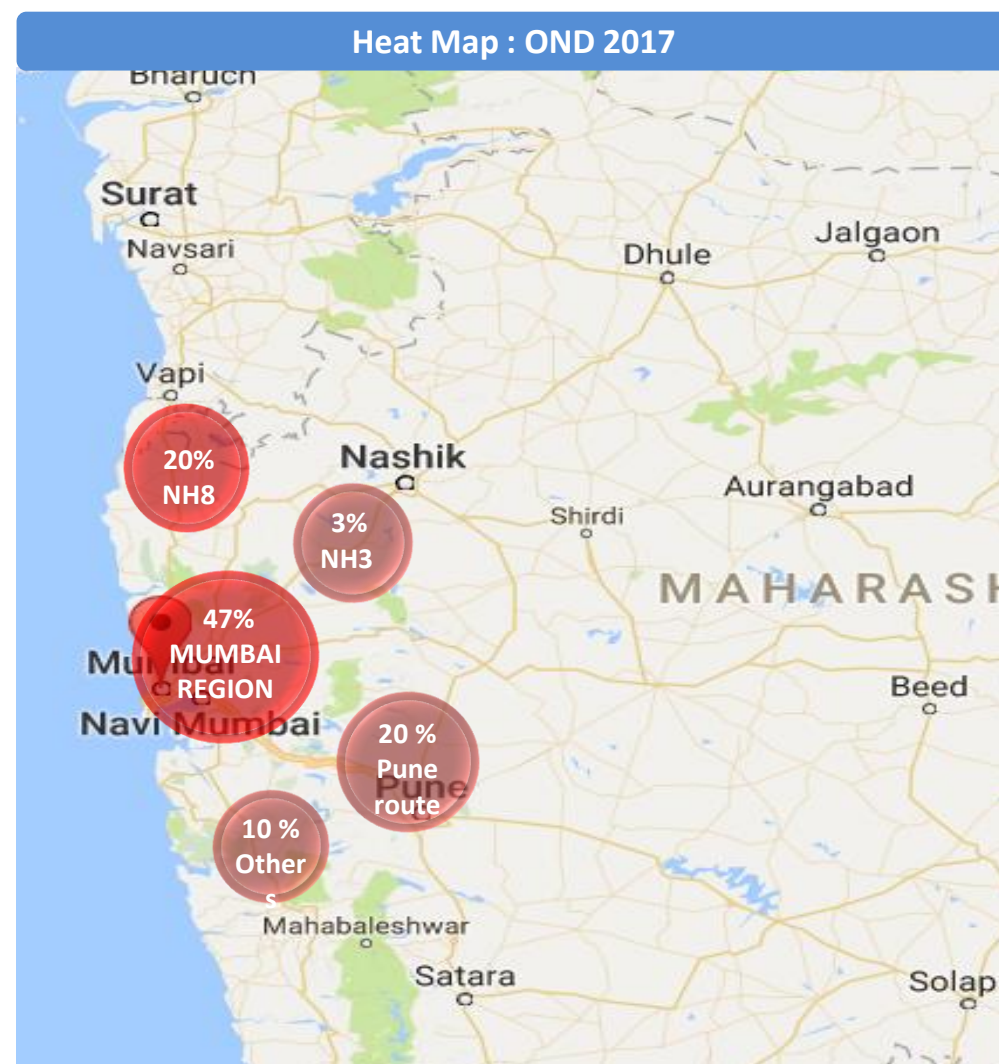
HEAT MAP : JNPCT Port Terminal



Region	JAS'17	OND'17
Mumbai Region	51%	50%
Pune	15%	18%
NH8	22%	19%
NH3	2%	3%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.

HEAT MAP : NSICT Port Terminal



Region	JAS'17	OND'17
Mumbai Region	53%	47%
Pune	15%	20%
NH8	15%	20%
NH3	3%	3%
Others	10%	10%

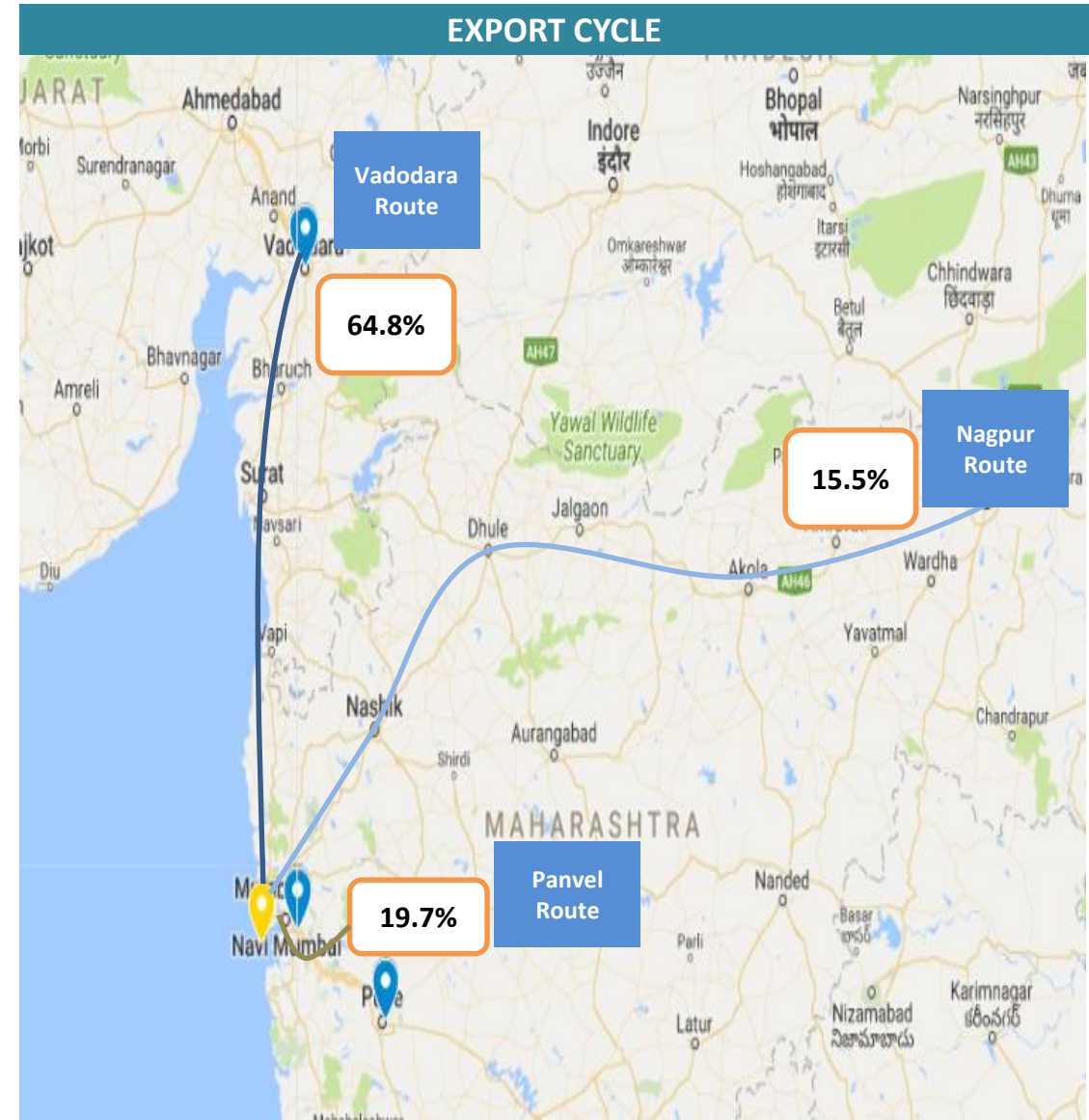
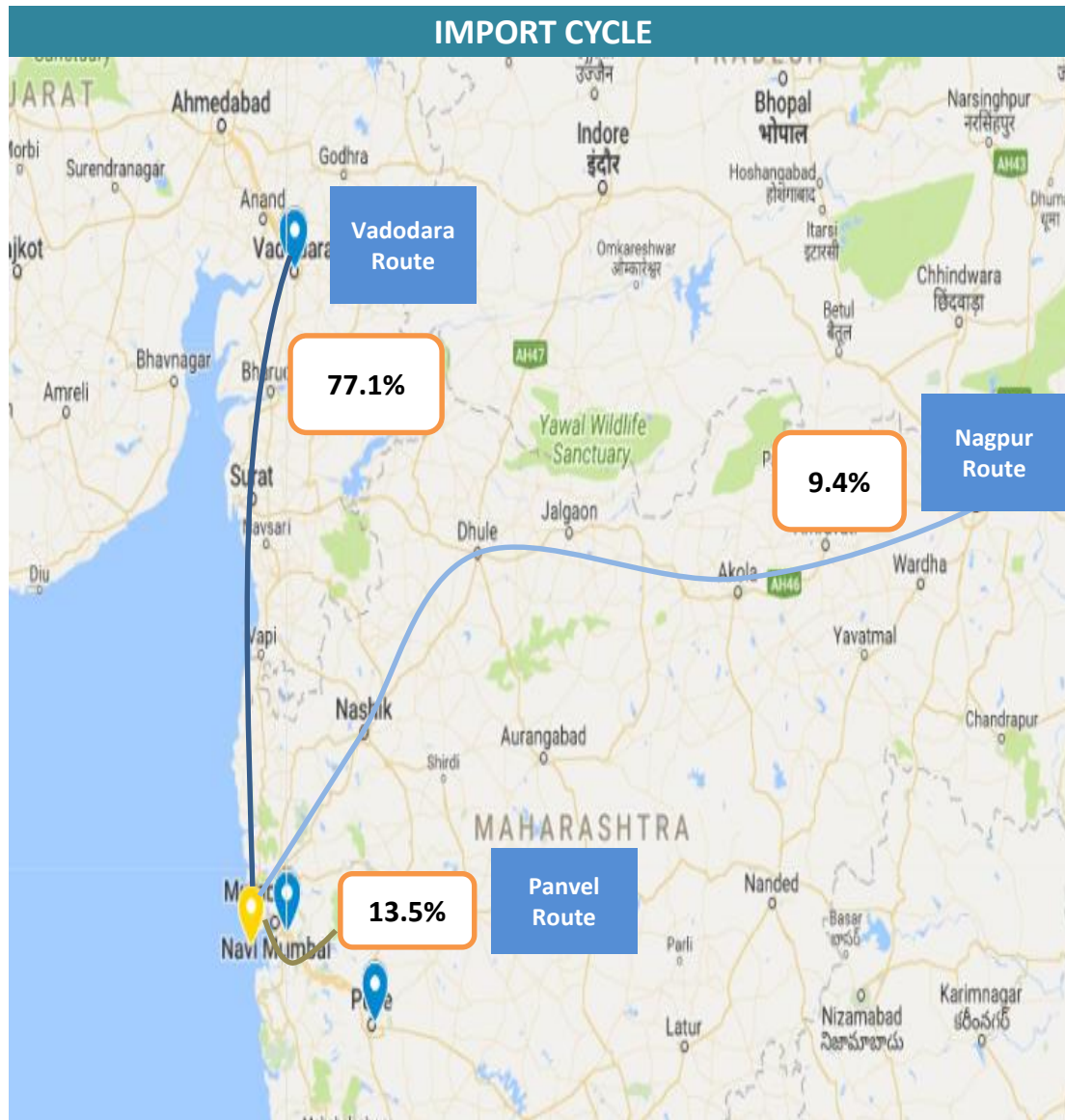
The heat map above depicts the movement of containers in and around the Mumbai region.



Container movement around JNPT Port terminal region via Train

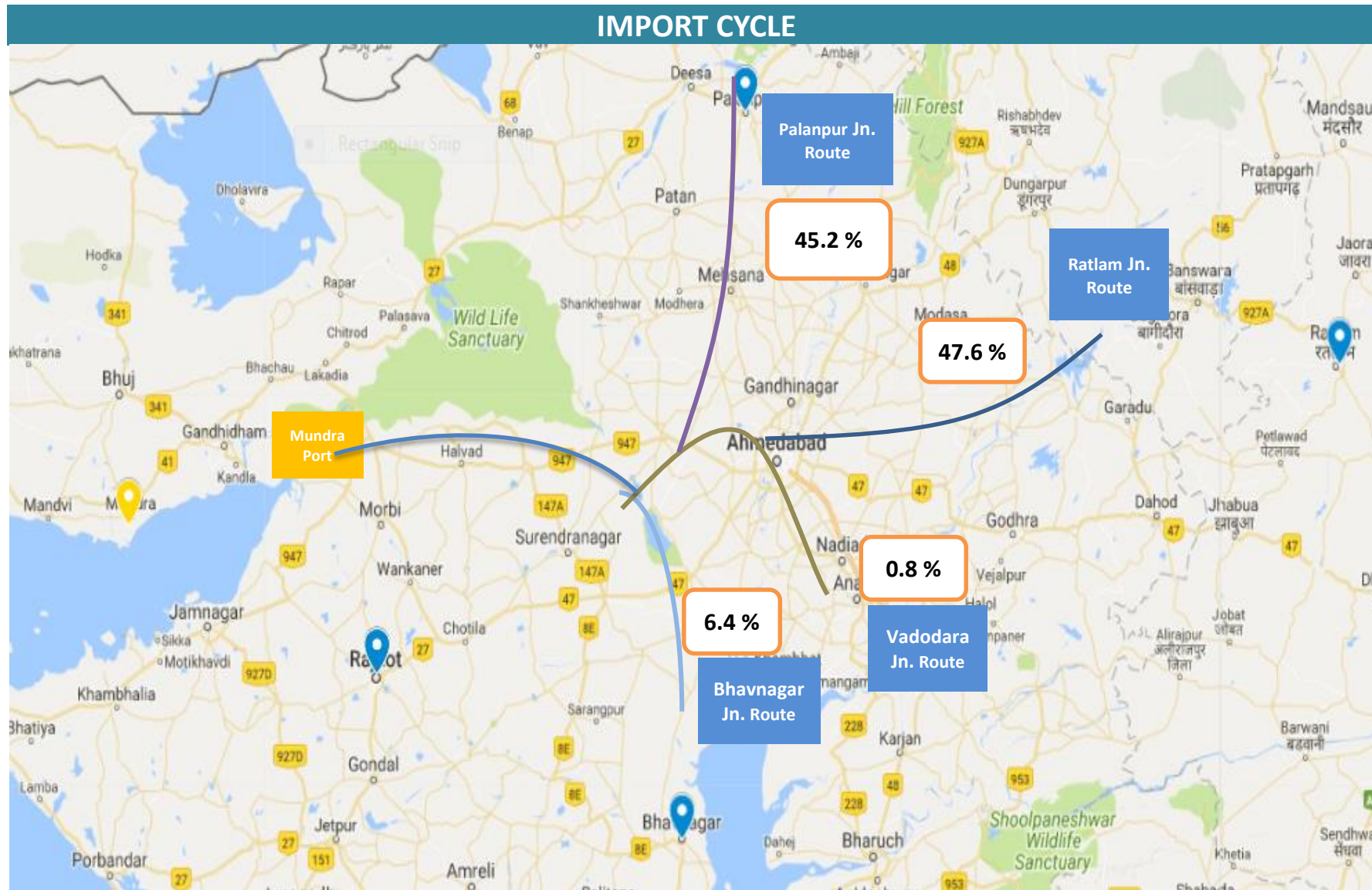
Container Movement around JNPT region via Train

The map shows the volume wise container movement through different railway routes in export and import cycle for OND'17



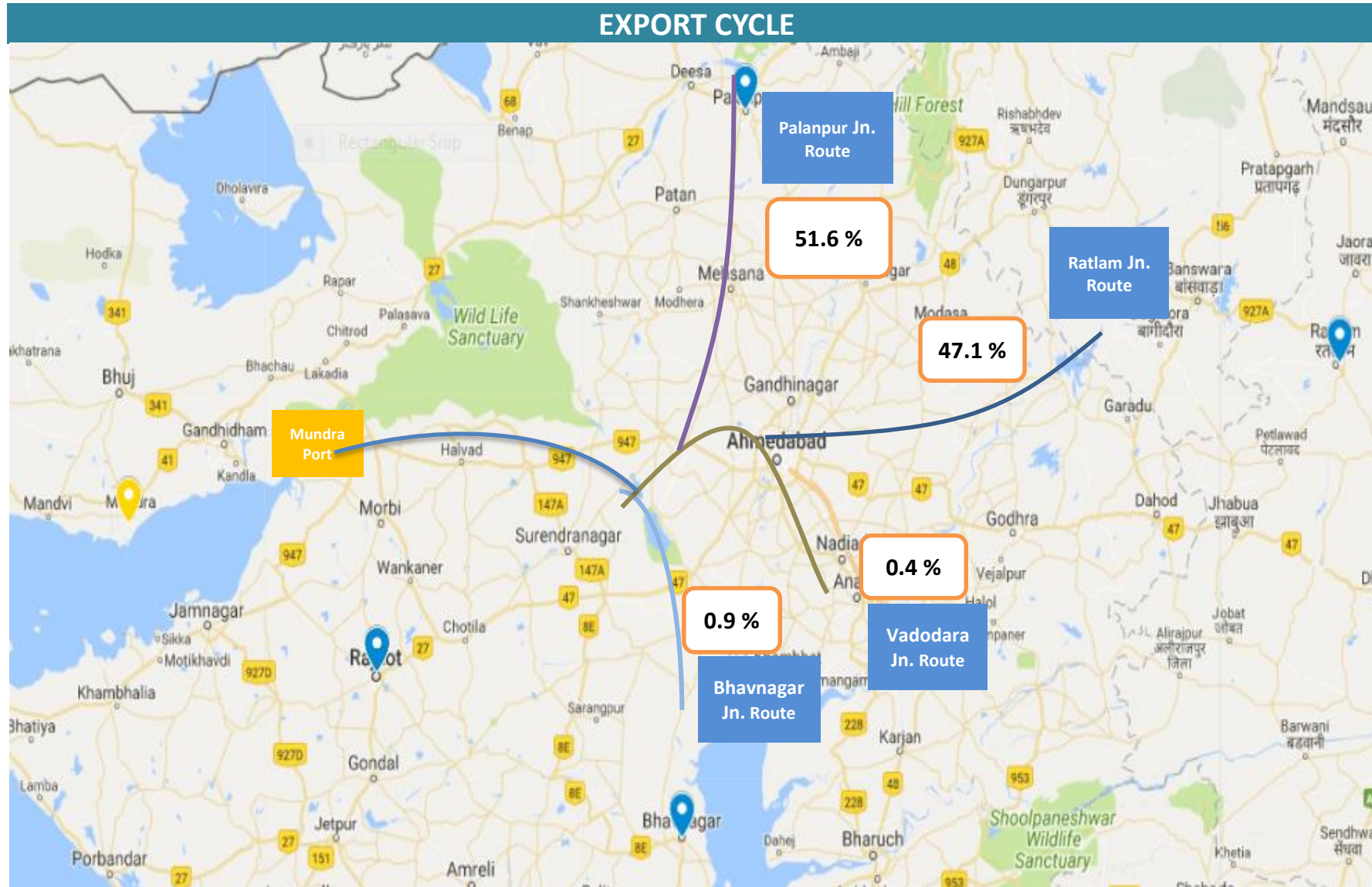
Container Movement around APSEZ region via Train : IMPORT CYCLE

The map shows the volume wise container movement through different railway routes in import cycle for OND'17 quarter



Container Movement around APSEZ region via Train : EXPORT CYCLE

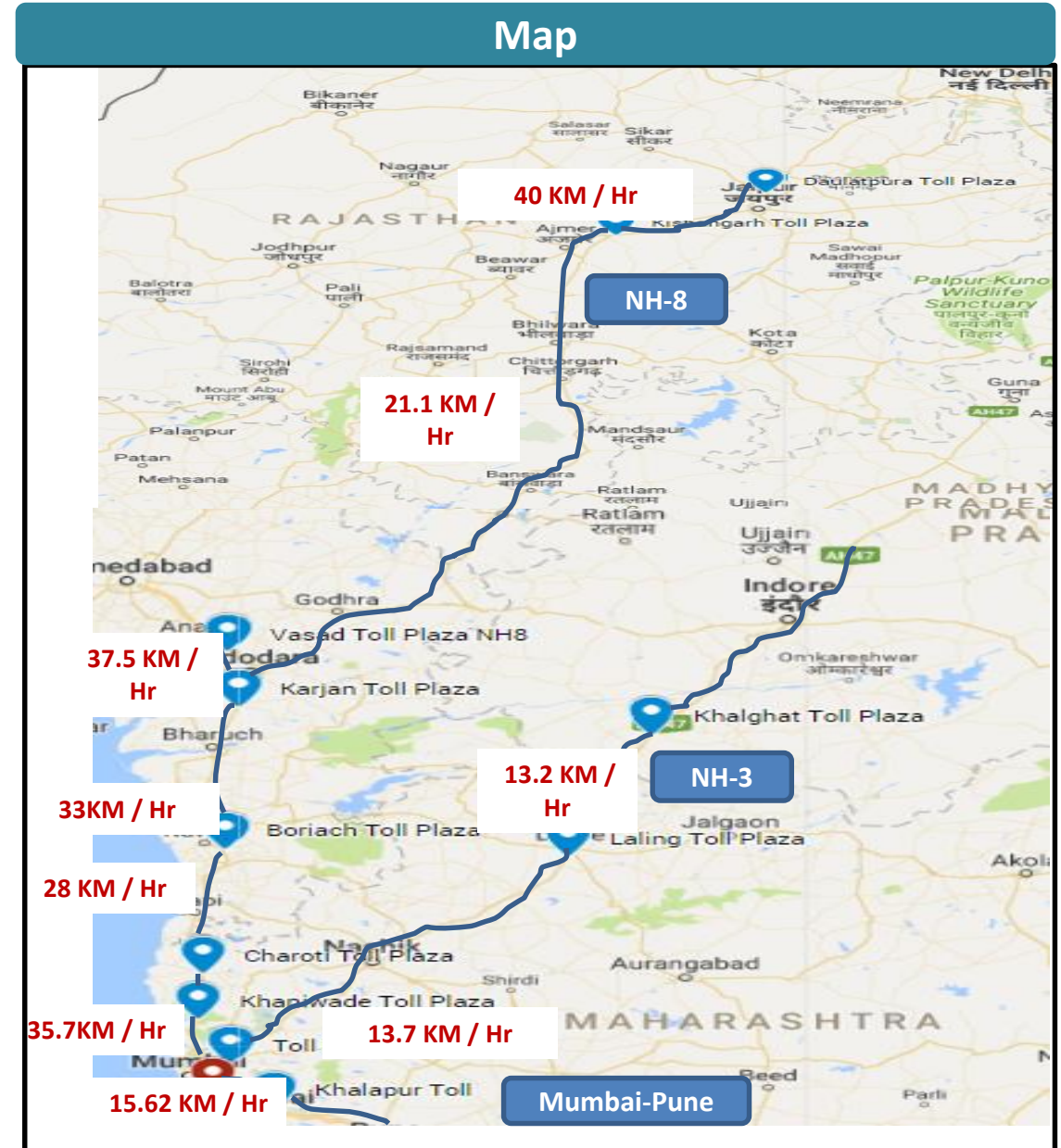
The map shows the volume wise container movement through different railway routes in Export cycle for OND'17 quarter



Congestion Analysis : TOLL PLAZA (1/2)

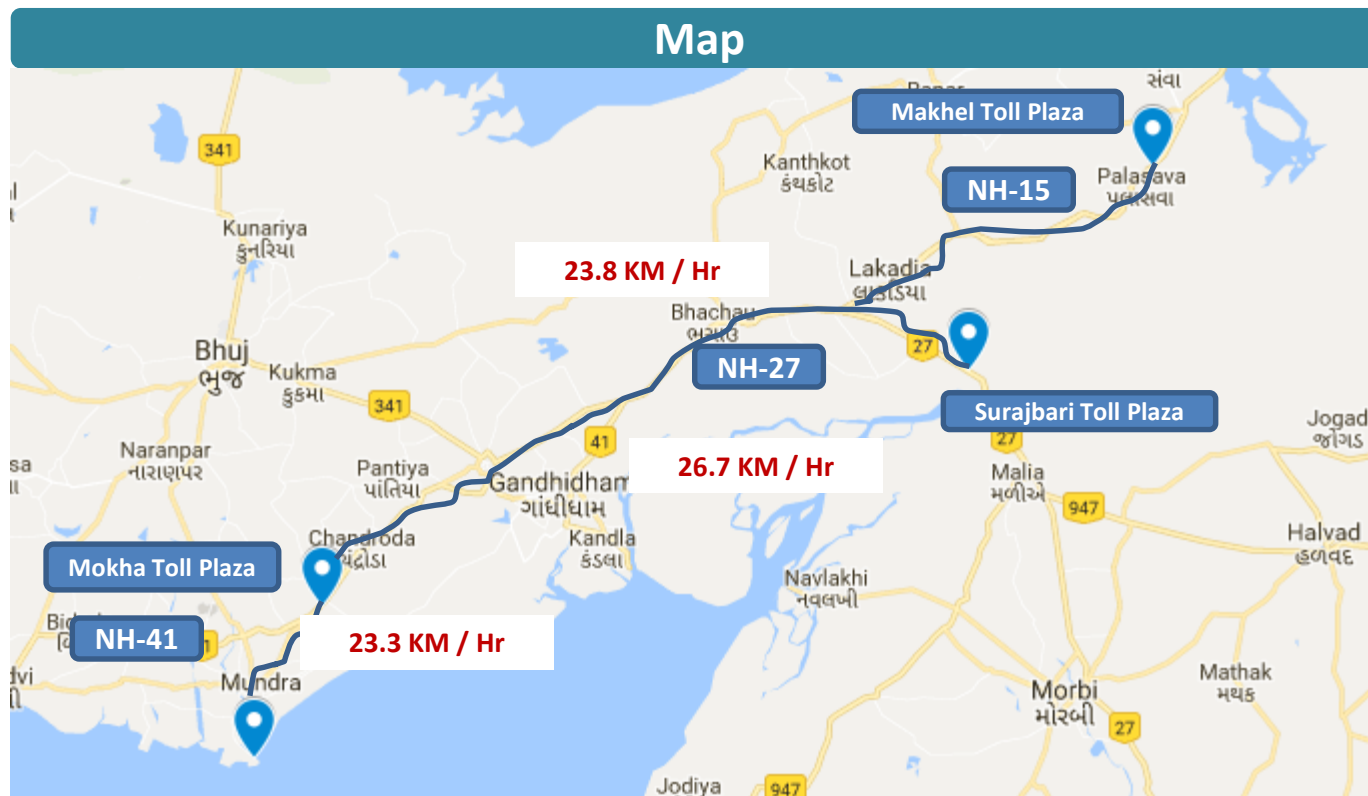
The below table shows all the toll plazas covered under DLDS connected with JNPT , the average speed has decreased between **Dhule and Khalghat** as compared to the previous quarter by **48%**

Avg. Travel Time & Speed between Toll Plazas (OND'17)					
Source	Destination Toll Plaza	Inter Distance (Km)	Avg. Travel Time (Hr)	OND'17 Avg. Speed (Km/Hr)	JAS'17 Avg. speed (km/hr)
JNPT	Khaniwade	94	6.9	13.7	13
JNPT	Khalapur	60	3.9	15.6	18.4
Khaniwade	Charoti	50	1.4	35.7	34
Charoti	Boriach	126	4.5	28	27.8
Boriach	Bharthan	142	4.3	33	33.3
Bharthan	Kishangarh	686	32.5	21.1	23.8
Bharthan	Vasad	60	1.6	37.5	36.5
Kishangarh	Daulatpura	128	3.2	40	36.3
Dhule	Khalghat	186	14	13.2	25.3



The below table shows all the toll plazas covered under DLDS in **Mundra region**.

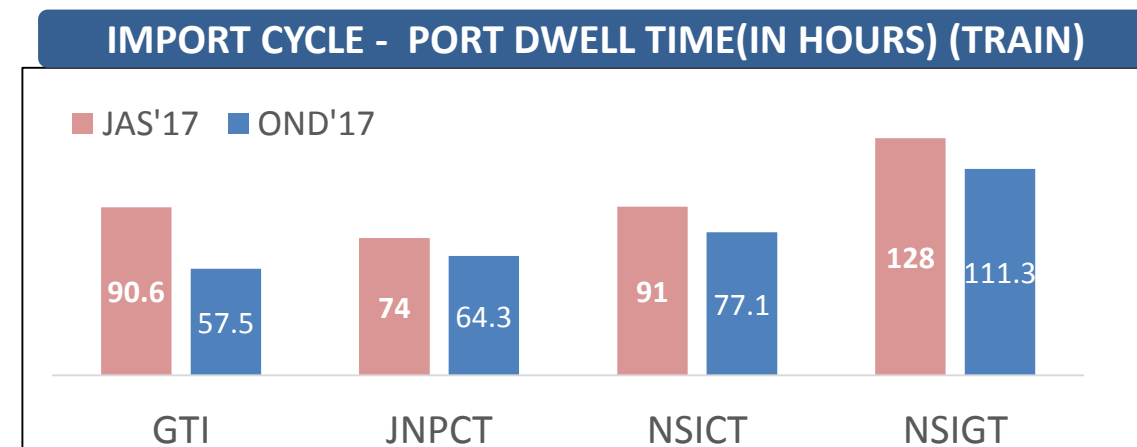
Avg. Travel Time & Speed between Toll Plazas (OND'17)				
Source	Destination Toll Plaza	Inter Distance (Km)	Avg. Travel Time (Hr)	Avg. Speed OND'17 (Km/Hr.)
MICT	Mokha	28	1.2	23.3
Mokha	Makhel	150	6.3	23.8
Mokha	Surajbari	115	4.3	26.7



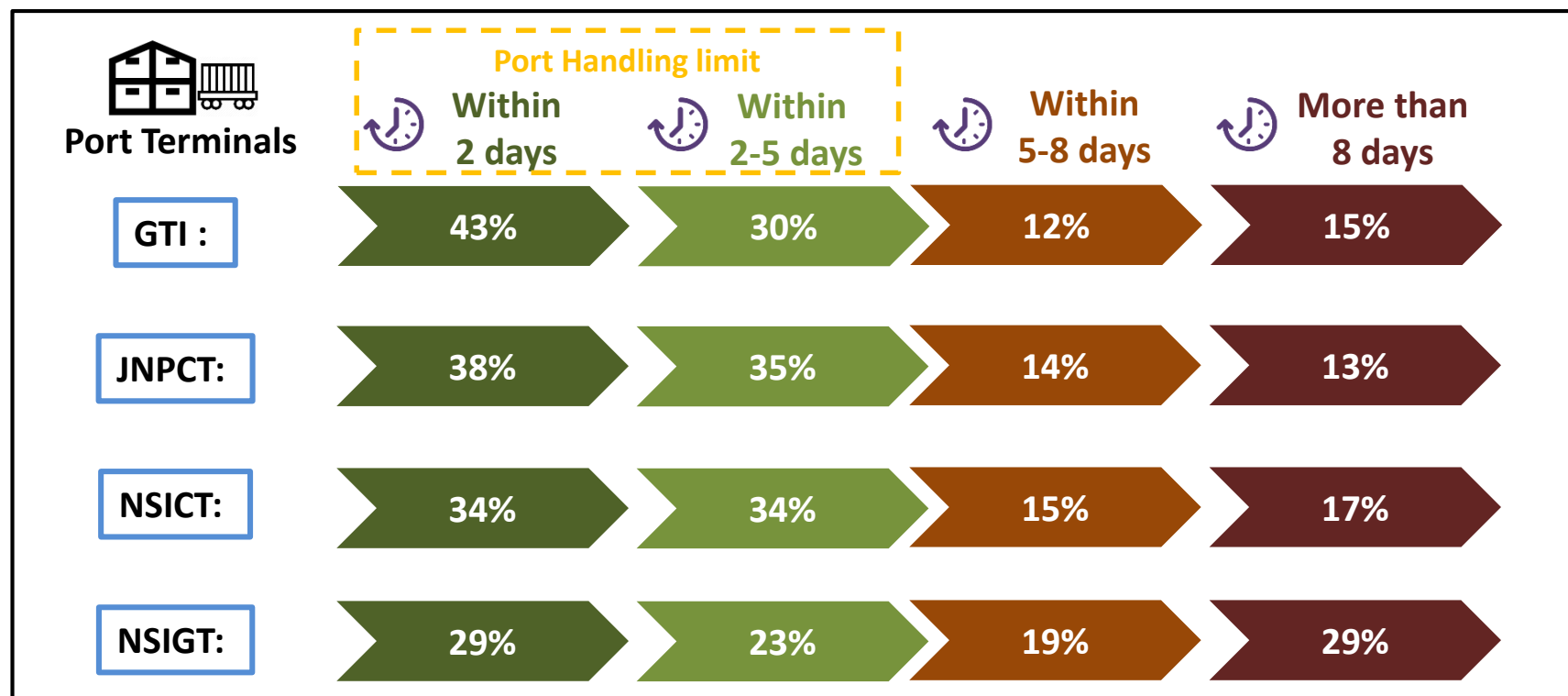
PORT IMPORT via TRAIN

The Port Dwell time data for train movement in import cycle is depicted below. Port dwell time is the time duration between the entry of the container in Port terminal to the time it moves out of the Port terminal

Port	JAS'17 (in Hrs)	OND'17 (in Hrs)
GTI	90.6	57.5
JNPCT	74	64.3
NSICT	91	77.1
NSIGT	128	111.3



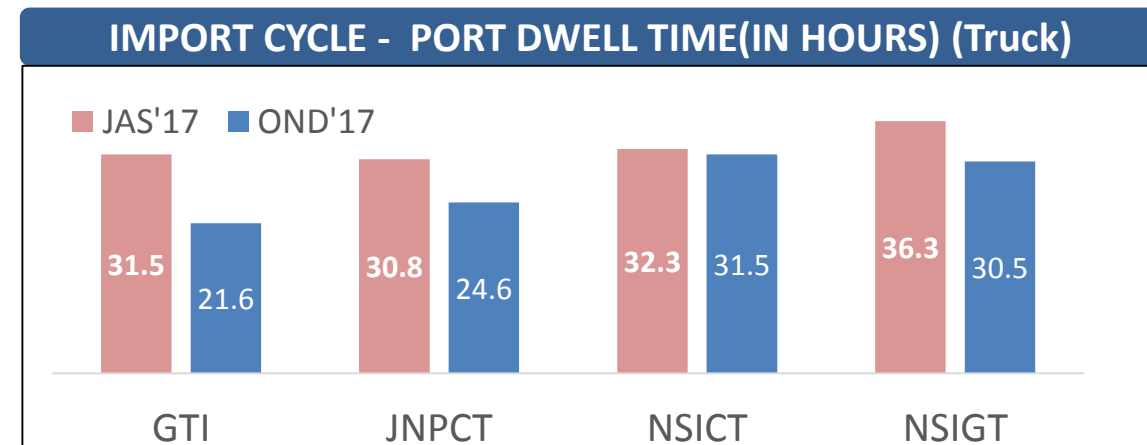
Container Volume Handled : Day wise (via train)



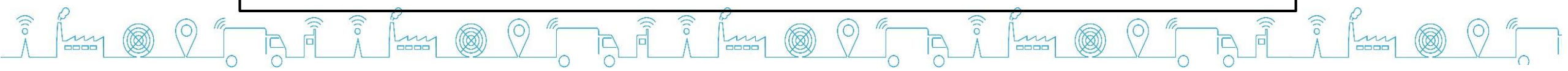
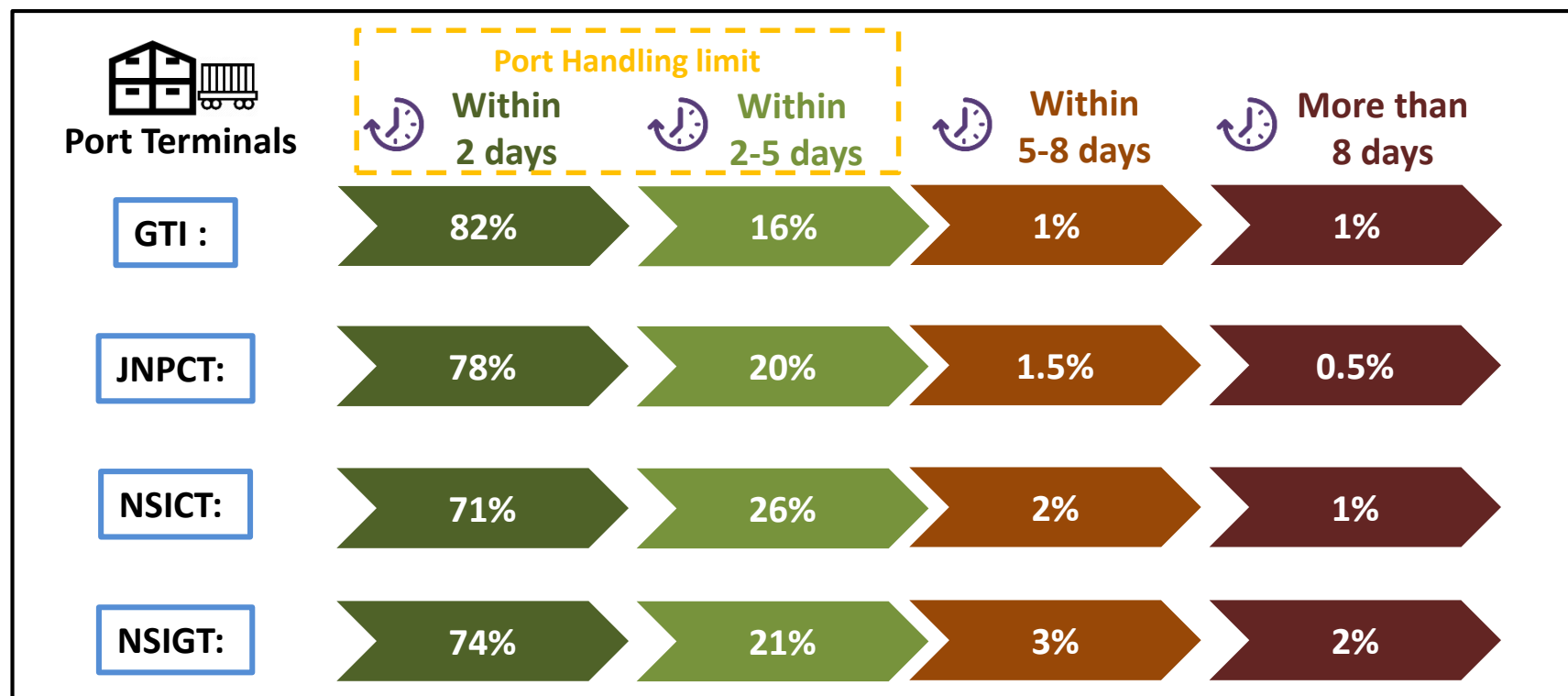
PORT IMPORT via TRUCK

The Port Dwell time data for Truck movement in import cycle is depicted below. Port dwell time is the time duration between the entry of the container in Port terminal to the time it moves out of the Port terminal

Port	JAS'17 (in Hrs)	OND'17 (in Hrs)
GTI	31.5	21.6
JNPCT	30.8	24.6
NSICT	32.3	31.5
NSIGT	36.3	30.5



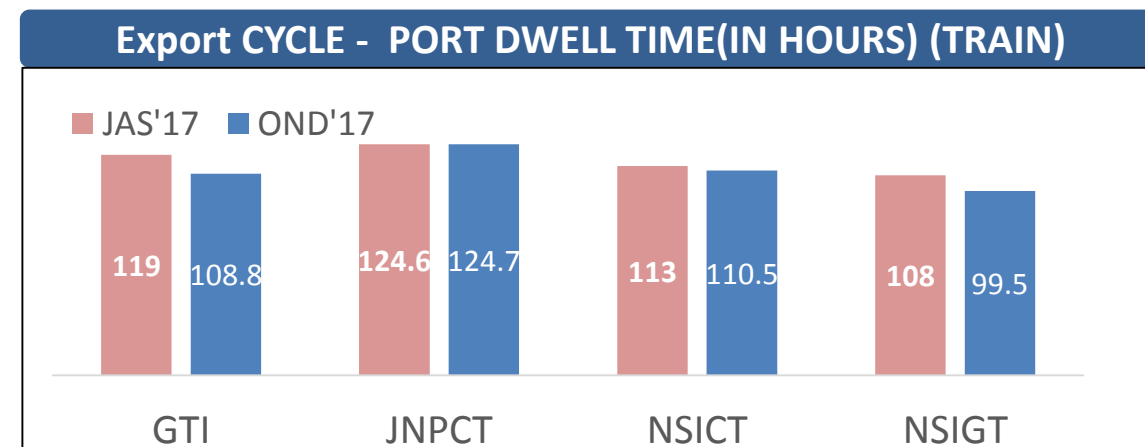
Container Volume Handled : Day wise (via truck)



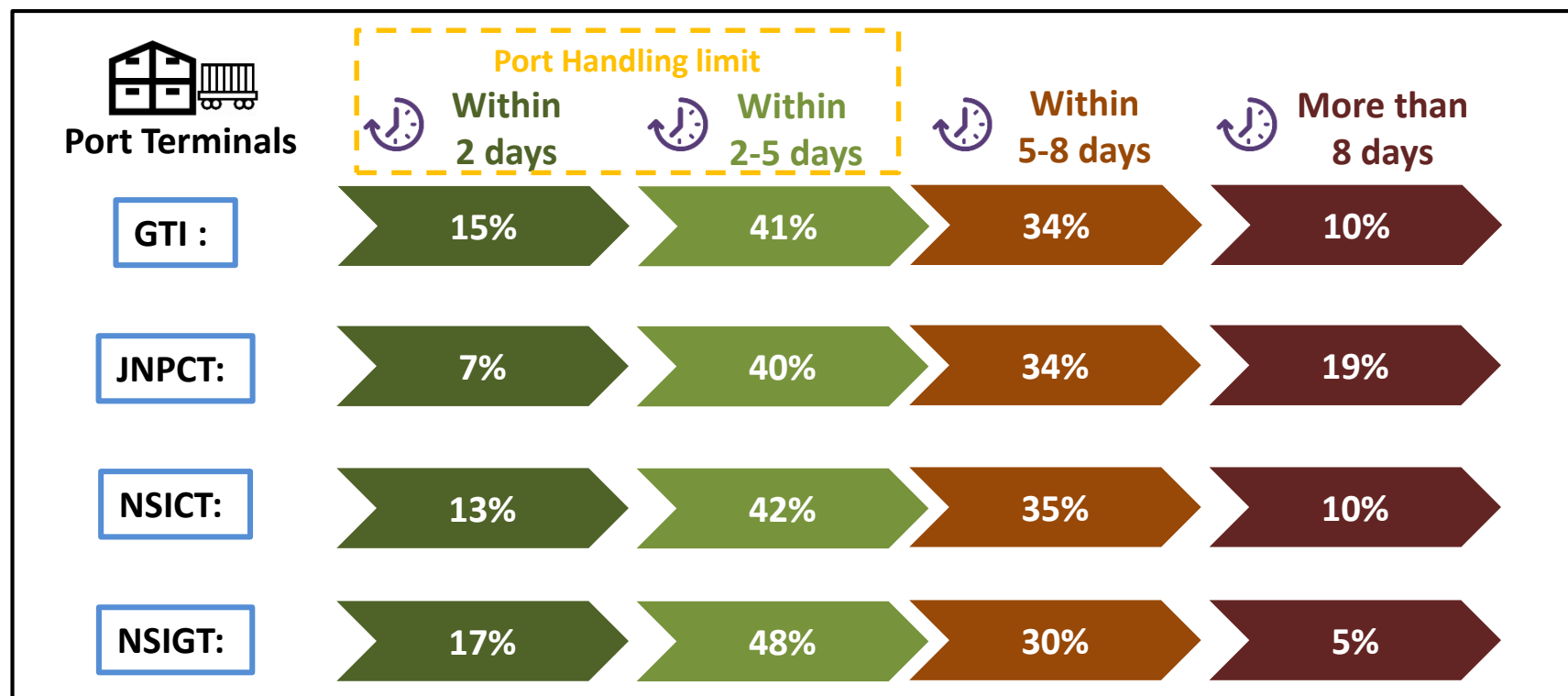
PORT EXPORT via TRAIN

The Port Dwell time data for train movement in Export cycle is depicted below. Port dwell time is the time duration between the entry of the container in Port terminal to the time it moves out of the Port terminal

Port	JAS'17 (in Hrs)	OND'17 (in Hrs)
GTI	119	108.8
JNPCT	124.6	124.7
NSICT	113	110.5
NSIGT	108	99.5



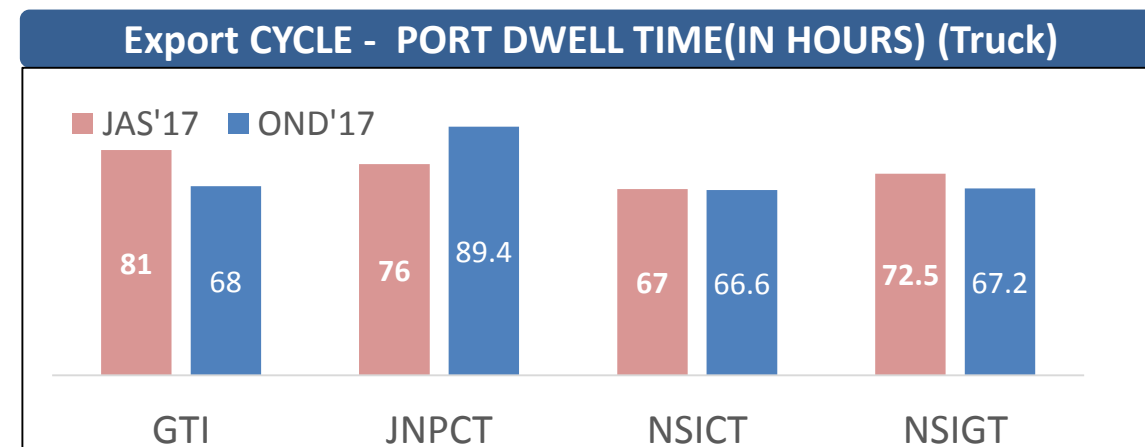
Container Volume Handled : Day wise (via train)



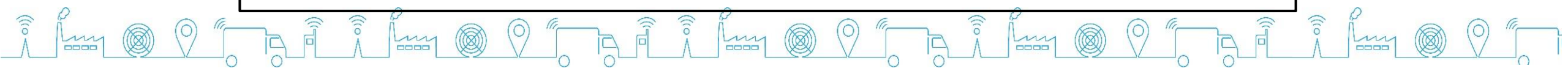
PORT EXPORT via TRUCK

The Port Dwell time data for Truck movement in Export cycle is depicted below. Port dwell time is the time duration between the entry of the container in Port terminal to the time it moves out of the Port terminal

Port	JAS'17 (in Hrs)	OND'17 (in Hrs)
GTI	81	68
JNPCT	76	89.4
NSICT	67	66.6
NSIGT	72.5	67.2



Container Volume Handled : Day wise (via truck)

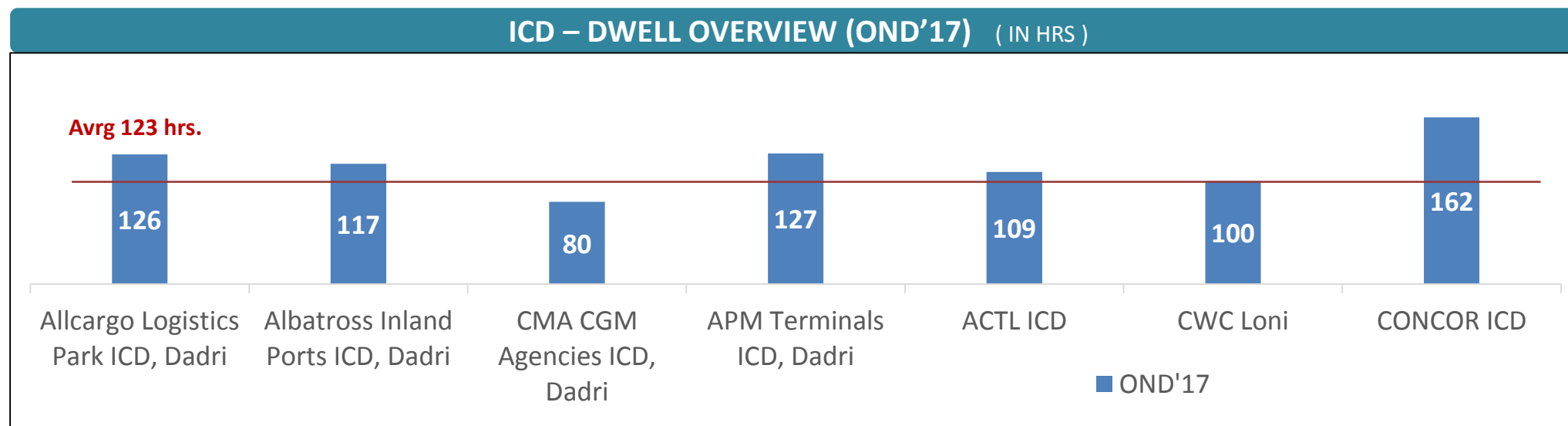


ICD DWELL TIME ANALYSIS

The table below depicts the dwell of all ICDs for month of JAS '17 and OND'17.

Dwell Time (in Hrs)		
ICD	JAS'17	OND'17
Allcargo Logistics Park ICD, Dadri	149	126
Albatross Inland Ports ICD, Dadri	117	117
CMA CGM Agencies ICD, Dadri	93	80
APM Terminals ICD, Dadri	127	127
ACTL ICD	149	129
CWC Loni	103	150
CWC ICD, Patparganj	171	*
CONCOR ICD	171	181

Top Performing ICD	
CMA CGM Agencies ICD, Dadri	80
Low Performing ICD	
CONCOR ICD	181



*Note : Insufficient data entries were received in LDB system for CWC Patparganj ICD in OND'17



Transit Time Analysis

Below table shows the average delivery time of ICD in import cycle i.e. Port out to ICD in via rail transportation

ICD- AVG DELIVERY TIME PORT OUT TO ICD IN (TRAIN)	
Region	OND'17
NCR region	3.28 days
Aurangabad	2.12 days

Below table shows the average delivery time of ICD in export cycle i.e. ICD out to port in via rail transportation

ICD- AVG DELIVERY TIME ICD OUT TO PORT IN (TRAIN)	
Region	OND'17
NCR region	2.9 days
Aurangabad	3.4 days

LEAD TIME ANALYSIS

Below table shows the average lead time of ICD in import cycle i.e. Port in to ICD out via train. The ICD's in NCR region have low dwell time as compare to Aurangabad region, thus making the lead time for the Aurangabad region higher as compare to NCR region

ICD- AVG LEAD TIME (TRAIN)	
Region	OND'17
NCR region	11 days
Aurangabad	13 days

Calculation :

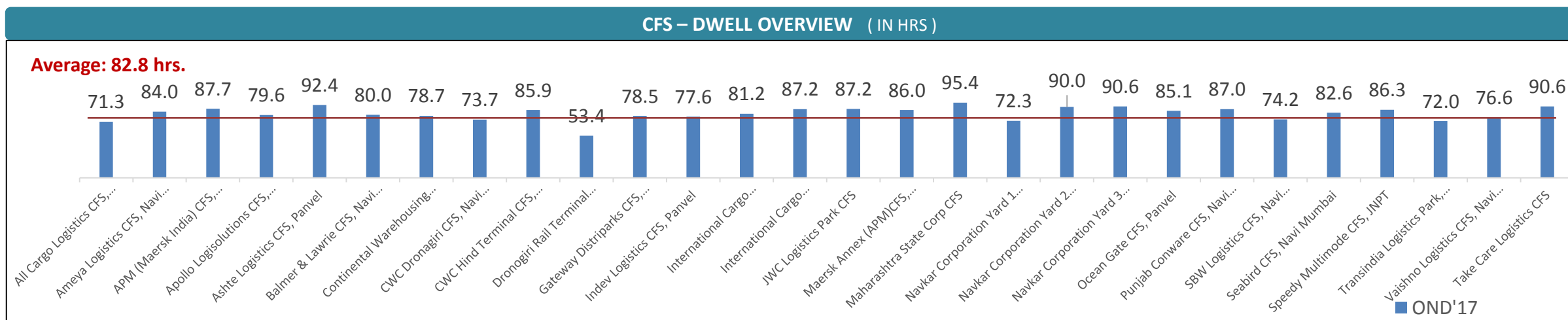
Port Dwell Time + Port to ICD Delivery Time + ICD Dwell Time = Avg. Lead Time from Port to ICD



CFS DWELL TIME ANALYSIS

Below table shows the dwell time for the respective CFS's .

CFS Dwell Time (in hrs)					
CFS	JAS'17	OND'17	CFS	JAS'17	OND'17
All Cargo Logistics CFS, Navi Mumbai	59	71.3	International Cargo Terminals (ULA) CFS, Navi Mumbai	105	87.2
Ameya Logistics CFS, Navi Mumbai	125	84.0	JWC Logistics Park CFS	103	86.0
APM (Maersk India) CFS, Navi Mumbai	102	87.7	Maersk Annex (APM)CFS, Navi Mumbai	129	95.4
Apollo Logisolutions CFS, Panvel	102	79.6	Maharashtra State Corp CFS	78	72.3
Ashte Logistics CFS, Panvel	123	92.4	Navkar Corporation Yard 1 CFS, Panvel	113	90.0
Balmer & Lawrie CFS, Navi Mumbai	101	80.0	Navkar Corporation Yard 2 CFS, Panvel	105	90.6
Continental Warehousing CFS, Navi Mumbai	101	78.7	Navkar Corporation Yard 3 CFS, Panvel	104	85.1
CWC Dronagiri CFS, Navi Mumbai	69	73.7	Ocean Gate CFS, Panvel	114	87.0
CWC Hind Terminal CFS, Navi Mumbai	118	85.9	Punjab Conware CFS, Navi Mumbai	78	74.2
CWC Impex Park CFS, Navi Mumbai	91	*	SBW Logistics CFS, Navi Mumbai	99	82.6
Dronogiri Rail Terminal CFS, Navi Mumbai	73	78.5	Seabird CFS, Navi Mumbai	107	86.3
Gateway Distriparks CFS, Navi Mumbai	92	77.6	Speedy Multimode CFS, JNPT	74	72.0
Indev Logistics CFS, Panvel	106	81.2	Transindia Logistics Park, Navi Mumbai	81	76.6
International Cargo Terminal CFS	88	87.2	Vaishno Logistics CFS, Navi Mumbai	123	90.6
			Take Care Logistics CFS	#NA	108.6



*Note : Insufficient data entries were received in LDB system for CWC Impex Park CFS, Navi Mumbai in OND'17



Below table shows the top performing CFS's

Top Performing CFS's w.r.t Dwell time (OND 2017)	
CWC Impex Park CFS, Navi Mumbai	Dwell Time : 53.4 Hrs
All Cargo Logistics CFS, Navi Mumbai	Dwell Time : 71.3 Hrs

Below table shows the low performing CFS's

Low Performing CFS's w.r.t Dwell time (OND 2017)	
Take Care Logistics CFS	Dwell Time : 108.6 Hrs
Maersk Annex (APM)CFS, Navi Mumbai	Dwell Time : 95.4 Hrs



CFS DELIVERY TIME ANALYSIS

CFS - AVERAGE DELIVERY TIME - GTI TO ALL CFS's IN MUMBAI

Below table shows the average delivery time in import cycle from GTI to all the CFS's

AVERAGE DELIVERY TIME (In Hrs)- GTI TO ALL CFS IN MUMBAI	
CFS	OND'17
Speedy Multimode Ltd CFS	1.7
Balmer & Lawrie & Co. Ltd.,CFS	1.8
Gateway Distriparks Ltd	2.8
APM (Maersk India Pvt. Ltd)CFS	2.0
Continental Warehousing (Nhava Sheva) Ltd.	1.5
Seabird Marine Services Pvt Ltd.	2.2
JWC Logistics Park Ltd CFS	3.4
Ameya Logistics Pvt. Ltd.	2.7
Ashte Logistics Pvt. Ltd.	3.3
NAVKAR CORPORATION LTD.,YARD-1 CFS	3.5
Apollo Logisolutions Ltd.	5.1
Ocean Gate Container Terminals Pvt. Ltd.CFS	2.9
Indev Logistics Pvt. Ltd.CFS	3.6
Transindia Logistics Park Pvt, Ltd CFS	2.2
All Cargo Logistics Ltd., CFS	1.8
Vaishno Logistics Yard CFS	2.2
NAVKAR CORPORATION LTD.,YARD-II CFS	3.2
PUNJAB CONWARE (PW)	1.8
DRONAGIRI RAIL TERMINAL	1.8
MAHARASHTRA STATE WARE. CORP. CFS	1.8
CWC LOGISTIC PARK - Opr.Hind Trmnl.	1.7
NAVKAR CORPORATION LTD.YARD-III CFS	3.0
International Cargo Terminal CFS	2.2
Maersk Annex (APM)CFS	2.6
International Cargo Terminal CFS	2.0
SBW Logistics CFS , Navi Mumbai	3.1

CFS - AVERAGE DELIVERY TIME - JNPCT TO ALL CFS's IN MUMBAI

Below table shows the average delivery time in import cycle from JNPCT to all the CFS's

AVERAGE DELIVERY TIME (In Hrs)- JNPCT TO ALL CFS IN MUMBAI	
CFS	OND'17
Speedy Multimode Ltd CFS)	1.5
Balmer & Lawrie & Co. Ltd.,CFS	2.5
Gateway Distriparks Ltd	2.9
APM (Maersk India Pvt. Ltd)CFS	2.2
Continental Warehousing (Nhava Sheva) Ltd.	1.8
Seabird Marine Services Pvt Ltd.	2.4
JWC Logistics Park Ltd CFS	3.7
Ameya Logistics Pvt. Ltd.	3.0
Ashte Logistics Pvt. Ltd.	3.3
NAVKAR CORPORATION LTD.,YARD-1 CFS	3.4
Apollo Logisolutions Ltd.	5.1
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.1
Indev Logistics Pvt. Ltd.CFS	3.9
Transindia Logistics Park Pvt, Ltd CFS	2.5
All Cargo Logistics Ltd., CFS	1.8
Vaishno Logistics Yard CFS	1.8
NAVKAR CORPORATION LTD.,YARD-II CFS	3.2
PUNJAB CONWARE (PW)	1.9
DRONAGIRI RAIL TERMINAL	1.7
MAHARASHTRA STATE WARE. CORP. CFS	1.8
CWC LOGISTIC PARK - Opr.Hind Trmnl.	1.8
NAVKAR CORPORATION LTD.YARD-III CFS	3.5
International Cargo Terminal CFS	2.4
Maersk Annex (APM)CFS	3.0
International Cargo Terminal CFS	2.2
SBW Logistics CFS , Navi Mumbai	3.7



CFS DELIVERY TIME ANALYSIS

CFS - AVERAGE DELIVERY TIME - NSICT TO ALL CFS's IN MUMBAI

Below table shows the average delivery time in import cycle from NSICT to all the CFS's

AVERAGE DELIVERY TIME (In Hrs)- NSICT TO ALL CFS IN MUMBAI	
CFS	OND'17
Speedy Multimode Ltd CFS	1.6
Balmer & Lawrie & Co. Ltd.,CFS	1.8
Gateway Distriparks Ltd	3.0
APM (Maersk India Pvt. Ltd)CFS	2.1
Continental Warehousing (Nhava Sheva) Ltd.	1.6
Seabird Marine Services Pvt Ltd.	2.8
JWC Logistics Park Ltd CFS	2.7
Ameya Logistics Pvt. Ltd.	2.8
Ashte Logistics Pvt. Ltd.	3.4
NAVAKAR CORPORATION LTD.,YARD-1 CFS	3.2
Apollo Logisolutions Ltd.	4.5
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.5
Indev Logistics Pvt. Ltd.CFS	3.7
Transindia Logistics Park Pvt, Ltd CFS	2.6
All Cargo Logistics Ltd., CFS	1.9
Vaishno Logistics Yard CFS	1.8
NAVKAR CORPORATION LTD.,YARD-II CFS	3.6
PUNJAB CONWARE (PW)	2.1
DRONAGIRI RAIL TERMINAL	1.6
MAHARASHTRA STATE WARE. CORP. CFS	4.8
CWC LOGISTIC PARK - Opr.Hind Trmnl.	1.8
NAVKAR CORPORATION LTD.YARD-III CFS	4.1
International Cargo Terminals CFS	2.0
Maersk Annex (APM)CFS	2.4
International Cargo Terminal CFS	2.3
SBW Logistics CFS , Navi Mumbai	3.5

CFS - AVERAGE DELIVERY TIME - NSIGT TO ALL CFS's IN MUMBAI

Below table shows the average delivery time in import cycle from NSIGT to all the CFS's

AVERAGE DELIVERY TIME (In Hrs)- NSIGT TO ALL CFS IN MUMBAI	
CFS	OND'17
Speedy Multimode Ltd CFS	1.6
Balmer & Lawrie & Co. Ltd.,CFS	1.9
Gateway Distriparks Ltd	2.9
APM (Maersk India Pvt. Ltd)CFS	2.2
Continental Warehousing (Nhava Sheva) Ltd.	1.7
Seabird Marine Services Pvt Ltd.	2.4
JWC Logistics Park Ltd CFS	3.6
Ameya Logistics Pvt. Ltd.	2.7
Ashte Logistics Pvt. Ltd.	3.7
NAVAKAR CORPORATION LTD.,YARD-1 CFS	4.4
Apollo Logisolutions Ltd.	4.7
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.3
Indev Logistics Pvt. Ltd.CFS	4.1
Transindia Logistics Park Pvt, Ltd CFS	3.0
All Cargo Logistics Ltd., CFS	2.1
Vaishno Logistics Yard CFS	2.2
NAVKAR CORPORATION LTD.,YARD-II CFS	4.1
PUNJAB CONWARE (PW)	2.3
DRONAGIRI RAIL TERMINAL	1.3
MAHARASHTRA STATE WARE. CORP. CFS	1.9
CWC LOGISTIC PARK - Opr.Hind Trmnl.	1.9
International Cargo Terminals CFS	2.2
Maersk Annex (APM)CFS	2.9
International Cargo Terminal CFS	2.1
SBW Logistics CFS , Navi Mumbai	4.5



CFS - AVERAGE DELIVERY TIME – all CFS in Mumbai TO JNPT Port

Below table shows the delivery time in export cycle from the CFS's to PORT terminals

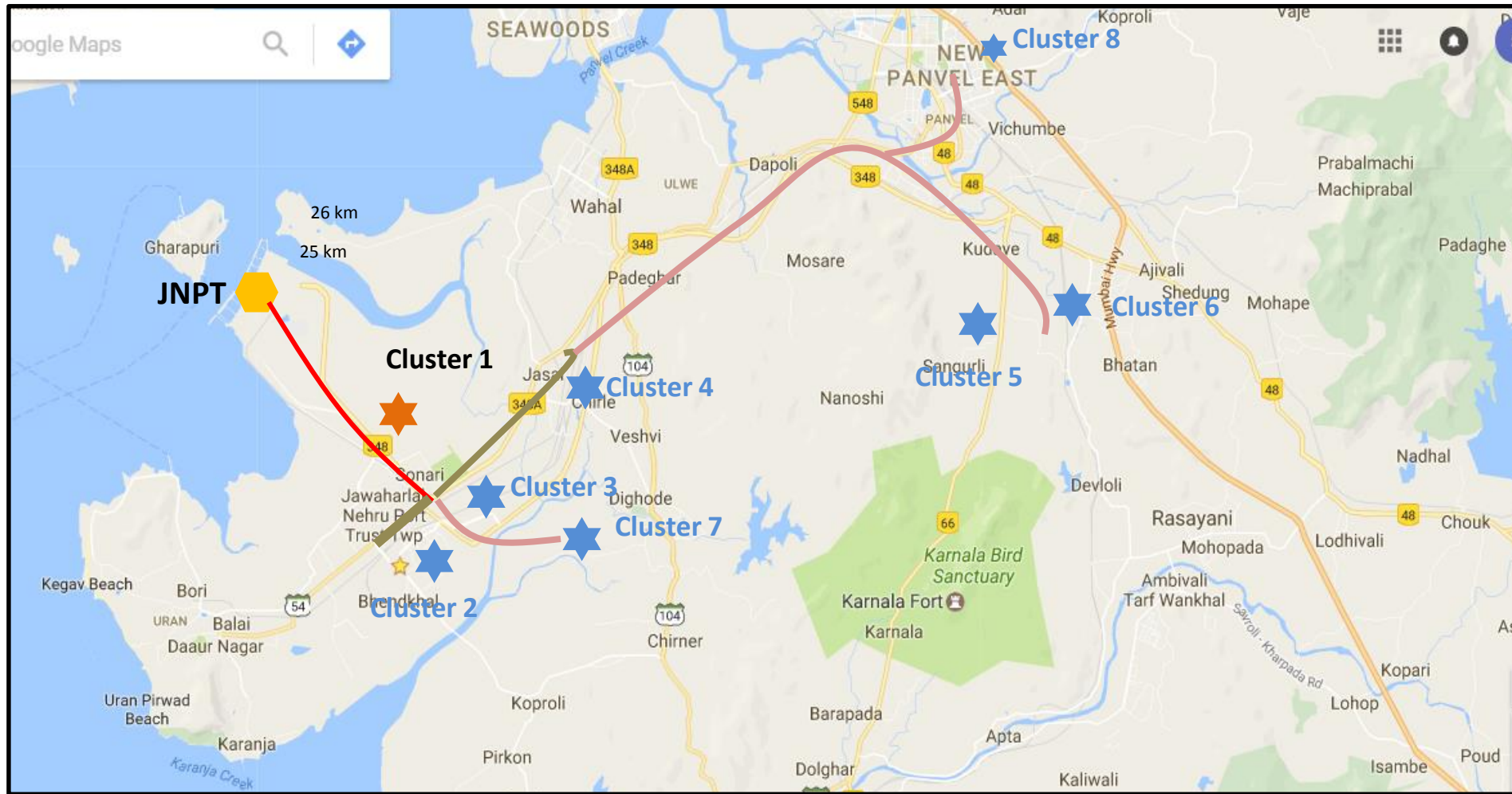
For OND'17 quarter

CFS Out Port in (Export Cycle in Hrs)

CFS	JNPCT	GTI	NSICT	NSIGT
Apollo Logisolutions Ltd.	5.4	7.6	8.5	7.0
Jawaharlal Nehru Port CFS (Speedy Multimode Ltd CFS)	2.0	3.1	2.7	4.3
NAVKAR CORPORATION LTD.YARD-III CFS	6.0	7.4	5.0	7.6
MAHARASHTRA STATE WARE. CORP. CFS	2.4	3.5	3.8	5.6
PUNJAB CONWARE (PW)	2.8	3.1	3.6	4.5
All Cargo Logistics Ltd., CFS	4.2	4.2	5.1	10.8
DRONAGIRI RAIL TERMINAL	2.3	4.1	3.8	5.2
Ameya Logistics Pvt. Ltd.	4.5	4.3	4.7	6.6
CWC IMPEX PARK CFS	3.3	6.3	4.7	4.7
Balmer & Lawrie & Co. Ltd.,CFS	3.3	7.0	3.8	4.5
Continental Warehousing (Nhava Sheva) Ltd.	2.8	2.9	3.2	3.8
Transindia Logistics Park Pvt, Ltd CFS	3.6	3.7	4.4	7.0
JWC Logistics Park Ltd CFS	4.0	4.3	5.0	7.6
CWC Dronagiri CFS	3.5	5.0	4.7	2.9
Vaishno Logistics Yard CFS	3.0	4.0	3.4	5.2
Gateway Distriparks Ltd	3.3	4.3	4.5	4.5
CWC LOGISTIC PARK - Opr.Hind Trmnl.	2.6	4.3	3.4	5.4
International Cargo Terminals & Infrastructure Private Limited-CFS	5.6	7.0	7.5	16.9
Ashte Logistics Pvt. Ltd.	5.1	5.0	5.1	6.0
APM (Maersk India Pvt. Ltd)CFS	2.2	3.3	2.6	3.7
Maersk Annex (APM)CFS	20.8	34.1	12.2	13.7
Seabird Marine Services Pvt Ltd.	3.1	4.0	7.5	8.2
NAVKAR CORPORATION LTD.,YARD-II CFS	4.6	7.6	7.6	9.6
Indev Logistics Pvt. Ltd.CFS	4.6	4.5	4.9	3.8
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.2	4.3	3.6	3.8
SBW Logistics CFS , Navi Mumbai	10.1	7.5	9.1	18.1
International Cargo Terminal CFS	2.8	4.7	4.7	4.0
NAVKAR CORPORATION LTD.,YARD-1 CFS	7.4	6.5	21.4	12.2



Congestion Analysis around Mumbai Region







Cluster 1	Cluster 2
JNPT Area	Bhendkhal area, Khopate road
Cluster 3	Cluster 4
Sonari area, JNPT road	Chirle area, JNPT road
Cluster 5	Cluster 6
Plaspa area, Coachi kanyakumari Highway	Salva apta rd area, Bangalore highway
Cluster 7	Cluster 8
Patilpada area, Khopate JNPT road	Taloja, Navi Mumbai

Note : Please find the respective CFS in each cluster in annexure section

Legends

- High Congestion
- Medium Congestion
- Low Congestion
- ★ Cluster with bottleneck
- ★ Cluster without bottleneck

It is seen that Cluster 1 has congestion bottleneck throughout the OND'17 quarter

GTI Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	JNPCT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	NSICT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■	NSIGT Terminal  Congestion Level Export Cycle :- ■ Import Cycle :- ■
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Note : Congestion is measured w.r.t actual time taken to cover the respective distance between clusters and terminals{



Base on container movement from port to CFS in Mumbai region, 28 CFS's have been grouped into 8 Clusters on the basis of their vicinity. Below table shows all the clusters and the relevant data for GTI terminal

CFS Cluster : GTI Terminal

- In export cycle the GTI terminal is having congestion for traffic from cluster 8, cluster6
- In import cycle the movement of traffic towards cluster 6 is facing congestion

GTI terminal for month of OND'17				
Clusters	No. of CFS's in Cluster	Distance from Port (Km)	Import cycle time (in Hrs)	Export cycle time (in Hrs)
Cluster 1	1	8	1.7	3.1
Cluster 2	6	13	2	4.7
Cluster 3	6	11	1.8	4
Cluster 4	1	13	2.2	4
Cluster 5	2	25	3.2	4.3
Cluster 6	6	25	3.4	6.9
Cluster 7	4	12	2	3.9
Cluster 8	1	34	3.1	7.5

CFS Cluster : JNPCT Terminal

- In export cycle the JNPCT terminal is having traffic congestion from cluster 8

JNPCT terminal for month of OND'17				
Clusters	No. of CFS's in Cluster	Distance from Port (Km)	Import cycle time (in Hrs)	Export cycle time (in Hrs)
Cluster 1	1	8	1.5	2
Cluster 2	6	13	2.4	3.3
Cluster 3	6	11	1.8	3
Cluster 4	1	13	1.8	3
Cluster 5	2	25	3.4	3.6
Cluster 6	6	25	3.5	5.1
Cluster 7	4	12	2.1	3.9
Cluster 8	1	34	3.7	10.1

Export container usually aren't allowed in the port before the arrival of their respective vessel so this unplanned transportation of the export containers from the CFS's to Port can cause **bottlenecks**



Base on container movement from port to CFS in Mumbai region, 28 CFS's have been grouped into 8 Clusters on the basis of their vicinity. Below table shows all the clusters and the relevant data for GTI terminal

CFS Cluster : NSICT Terminal

- In export cycle the NSICT terminal is having congestion for traffic from cluster 8 and cluster 6
- In import cycle the movement of traffic towards cluster 8, cluster 6 is facing congestion

NSICT terminal for month of OND'17				
Clusters	No. of CFS's in Cluster	Distance from Port (Km)	Import cycle time (in Hrs)	Export cycle time (in Hrs)
Cluster 1	1	8	1.6	2.7
Cluster 2	6	13	2.1	4.2
Cluster 3	6	11	3.8	4.3
Cluster 4	1	13	1.8	3.4
Cluster 5	2	25	3.1	4.3
Cluster 6	6	25	3.7	5.1
Cluster 7	4	12	2.2	4.6
Cluster 8	1	34	3.5	9.1

CFS Cluster : NSIGT Terminal

- In export cycle the NSIGT terminal is having traffic congestion from cluster 7, cluster 8

NSIGT terminal for month of OND'17				
Clusters	No. of CFS's in Cluster	Distance from Port (Km)	Import cycle time (in Hrs)	Export cycle time (in Hrs)
Cluster 1	1	8	1.6	4.3
Cluster 2	6	13	2.2	4.5
Cluster 3	6	11	1.9	5
Cluster 4	1	13	2	5.2
Cluster 5	2	25	2.2	5.7
Cluster 6	6	25	4.3	7.3
Cluster 7	4	12	2.4	6.8
Cluster 8	1	34	4.5	18.1

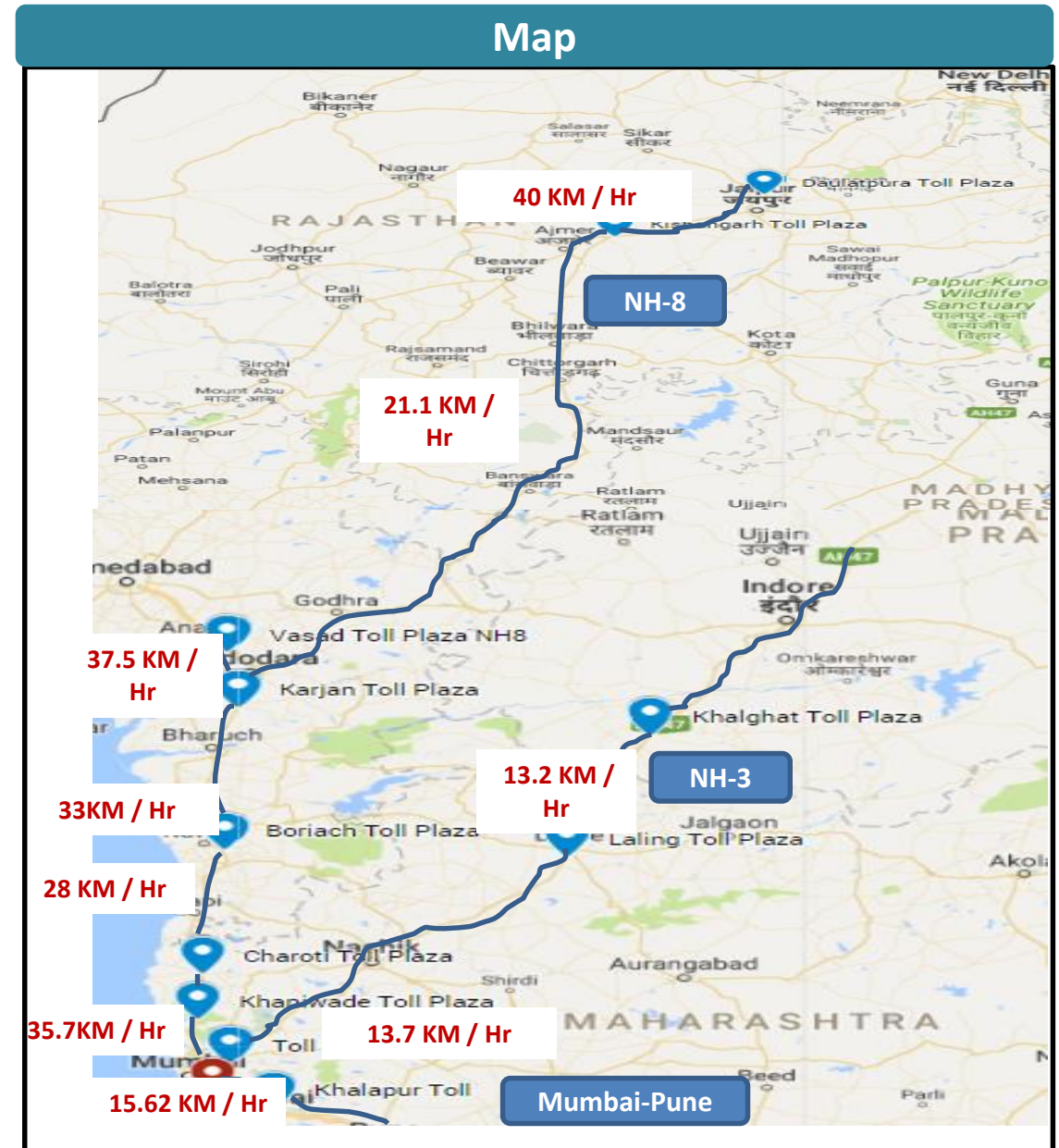
Export container usually aren't allowed in the port before the arrival of their respective vessel so this unplanned transportation of the export containers from the CFS's to Port can cause **bottlenecks**



Congestion Analysis : TOLL PLAZA

The below table shows all the toll plazas covered under DLDS connected with JNPT , the average speed has decreased between **Dhule and Khalghat** as compared to the previous quarter by **48%**

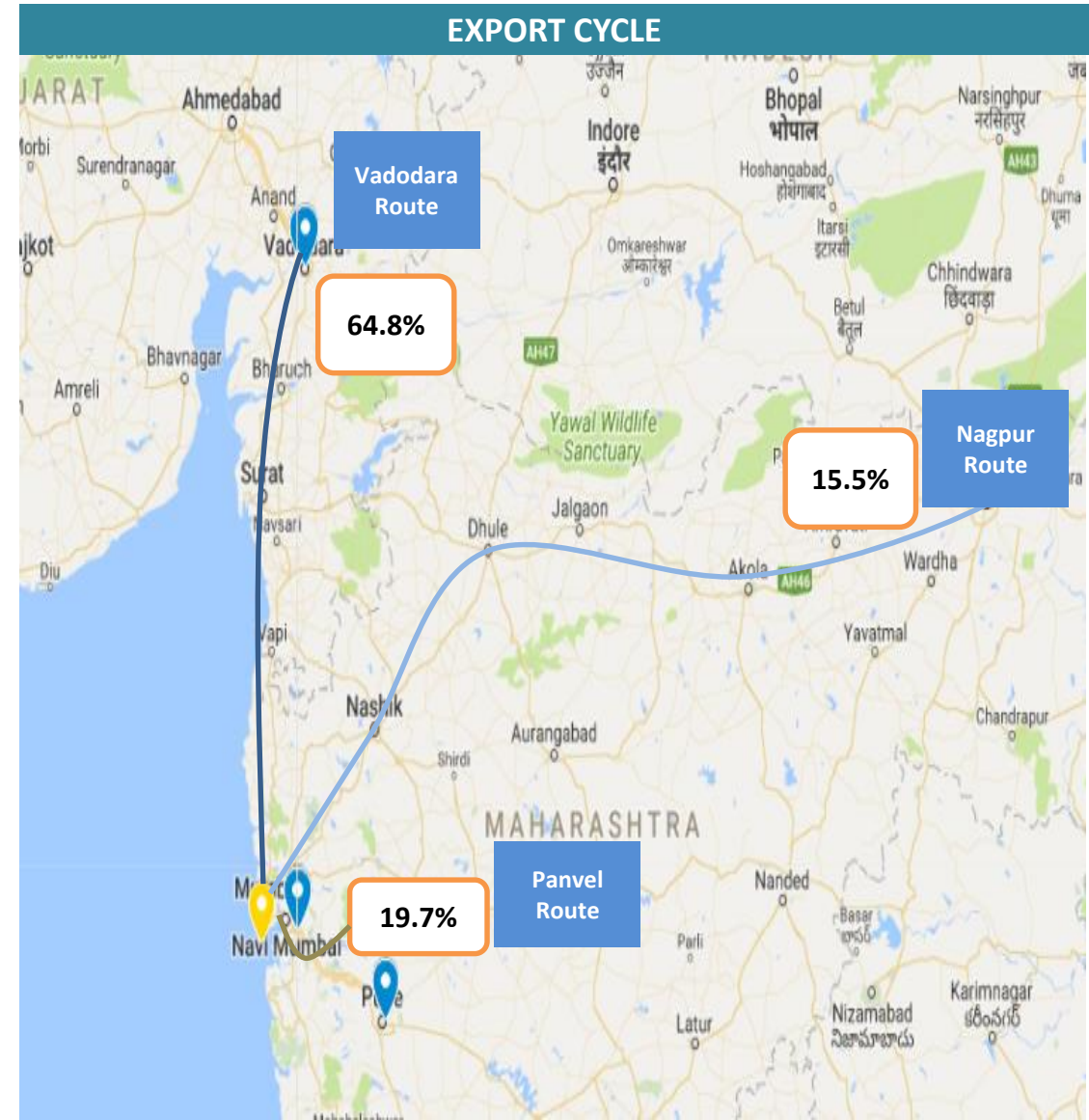
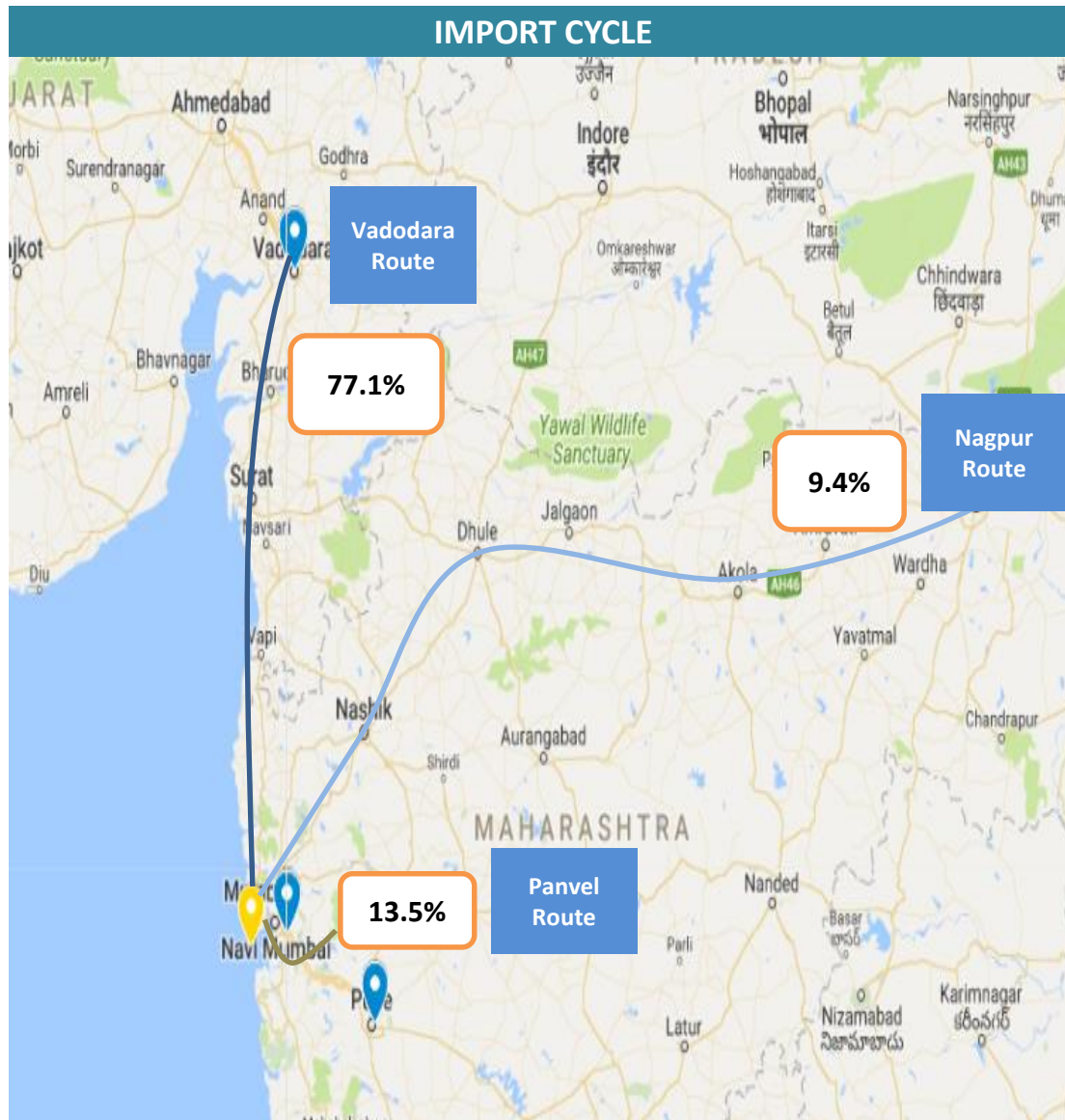
Avg. Travel Time & Speed between Toll Plazas (OND'17)					
Source	Destination Toll Plaza	Inter Distance (Km)	Avg. Travel Time (Hr)	OND'17 Avg. Speed (Km/Hr)	JAS'17 Avg. speed (km/hr)
JNPT	Khaniwade	94	6.9	13.7	13
JNPT	Khalapur	60	3.9	15.6	18.4
Khaniwade	Charoti	50	1.4	35.7	34
Charoti	Boriach	126	4.5	28	27.8
Boriach	Bharthan	142	4.3	33	33.3
Bharthan	Kishangarh	686	32.5	21.1	23.8
Bharthan	Vasad	60	1.6	37.5	36.5
Kishangarh	Daulatpura	128	3.2	40	36.3
Dhule	Khalghat	186	14	13.2	25.3



Heat Map: JNPT Region

Container Movement around JNPT region via Train

The map shows the volume wise container movement through different railway routes in export and import cycle for OND'17



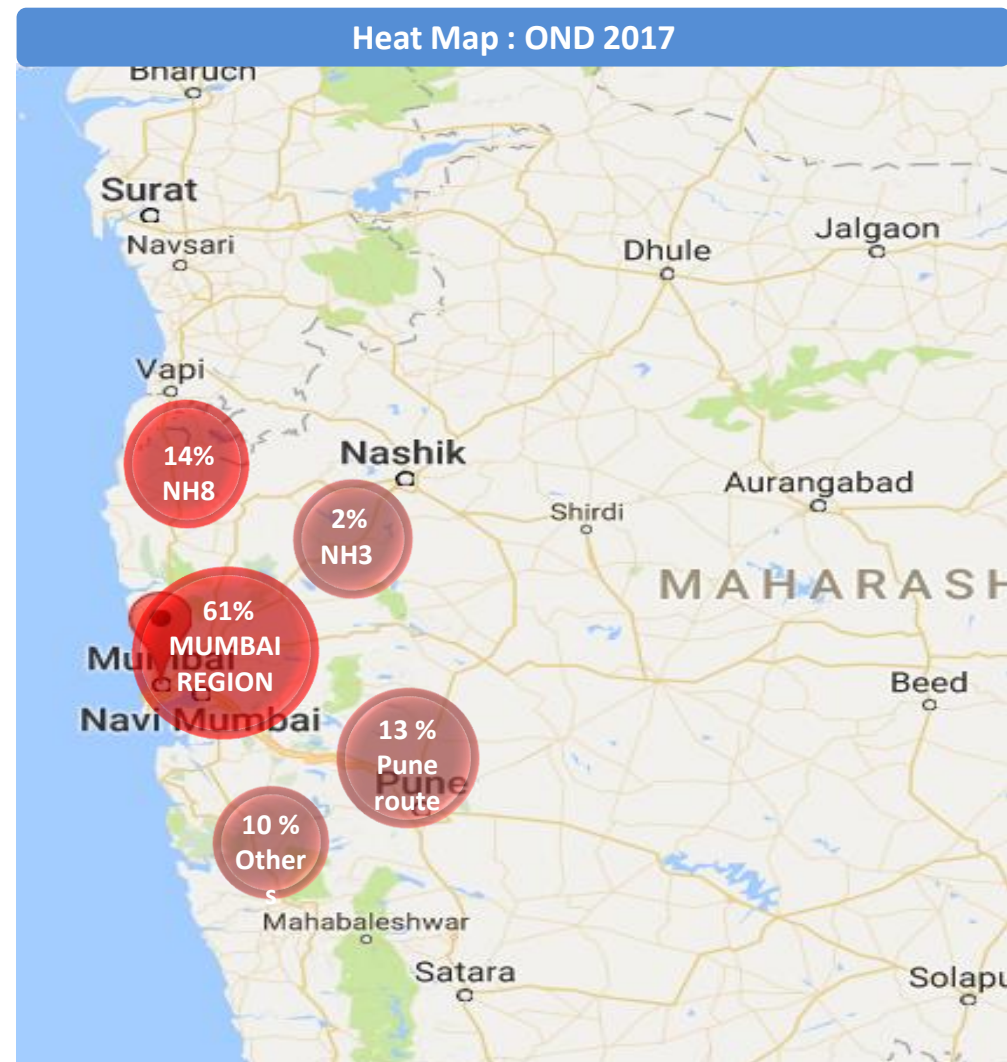
HEAT MAP : Overall Mumbai region



Region	JAS'17	OND'17
Mumbai Region	31%	57%
Pune	29%	14%
NH8	25%	17%
NH3	5%	2%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.

HEAT MAP : GTI Port Terminal



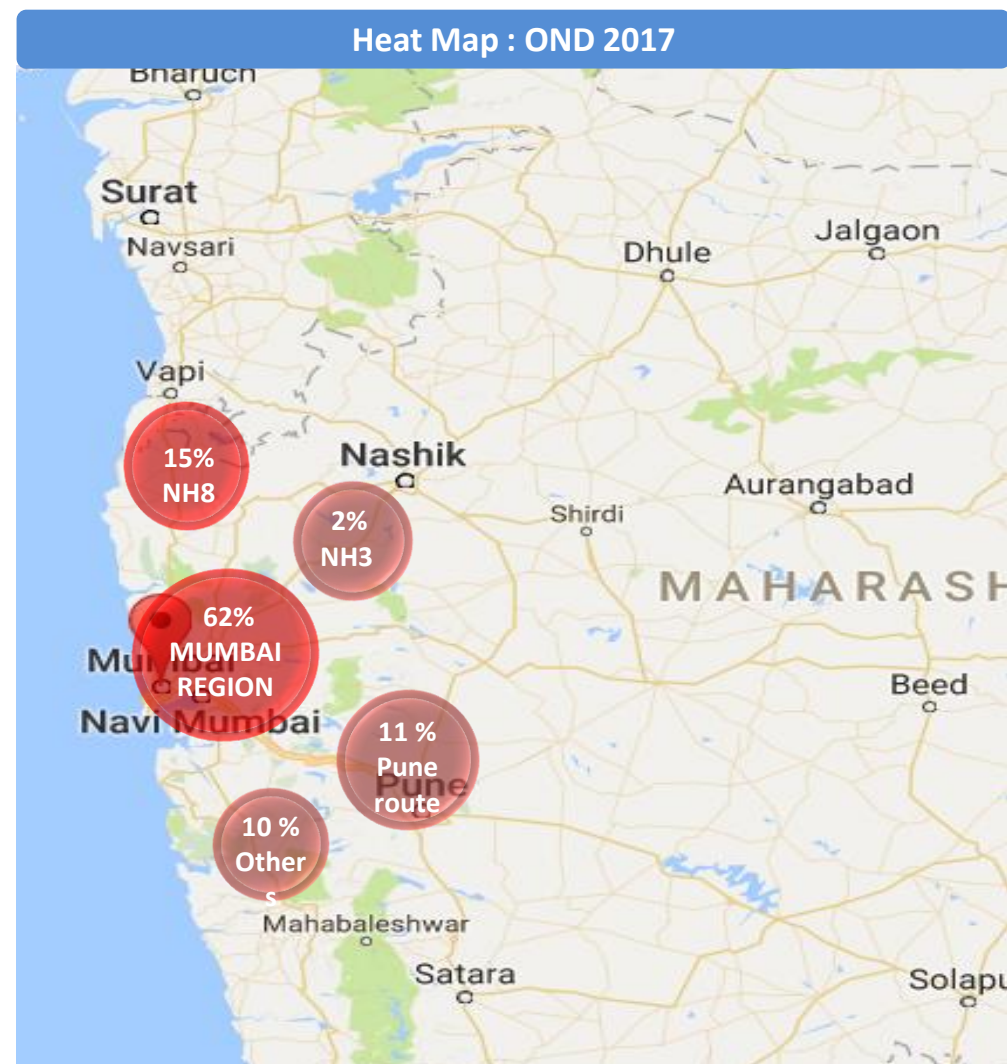
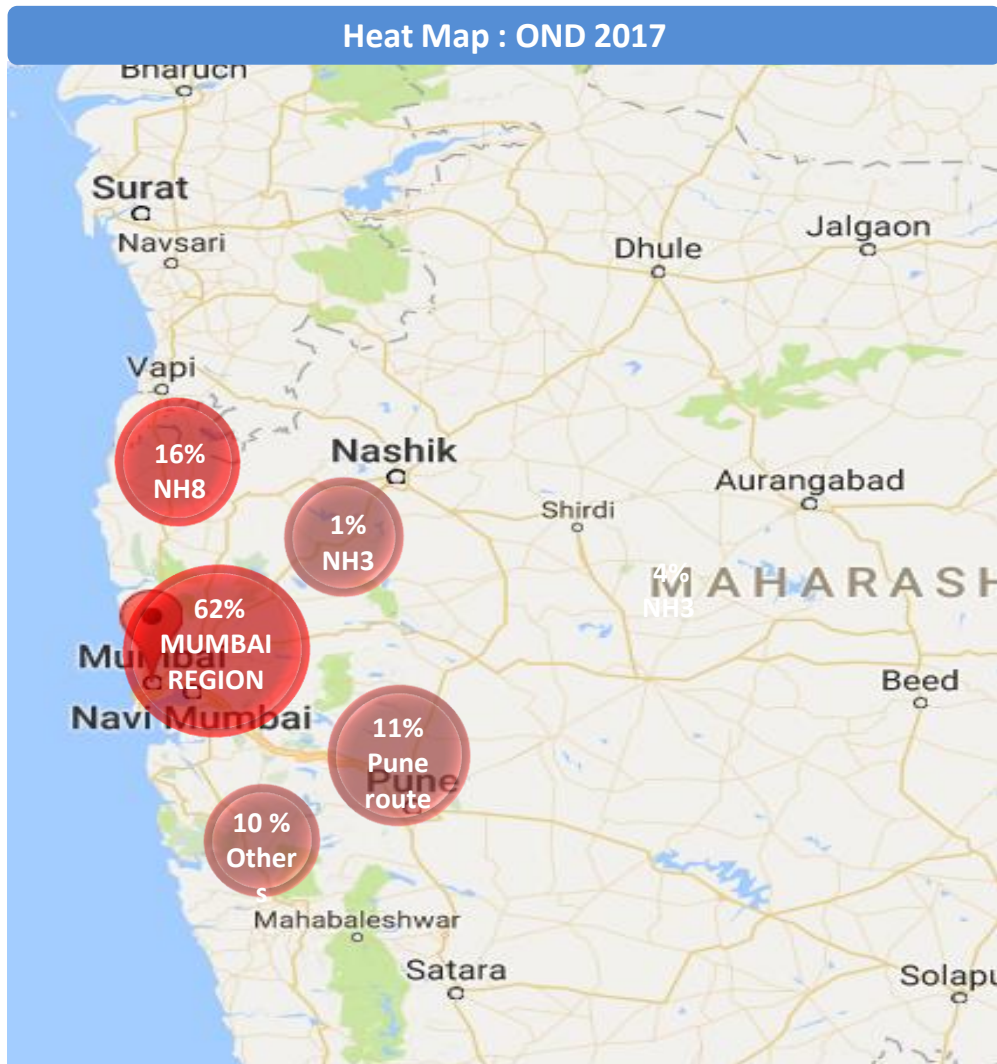
Region	JAS'17	OND'17
Mumbai Region	23%	61%
Pune	35%	13%
NH8	27%	14%
NH3	5%	2%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.



HEAT MAP : JNPCT Port Terminal

HEAT MAP : NSICT Port Terminal



Region	JAS'17	OND'17
Mumbai Region	54%	62%
Pune	17%	11%
NH8	16%	16%
NH3	3%	1%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.

Region	JAS'17	OND'17
Mumbai Region	47%	62%
Pune	22%	11%
NH8	17%	15%
NH3	4%	2%
Others	10%	10%

The heat map above depicts the movement of containers in and around the Mumbai region.





Thank You !!