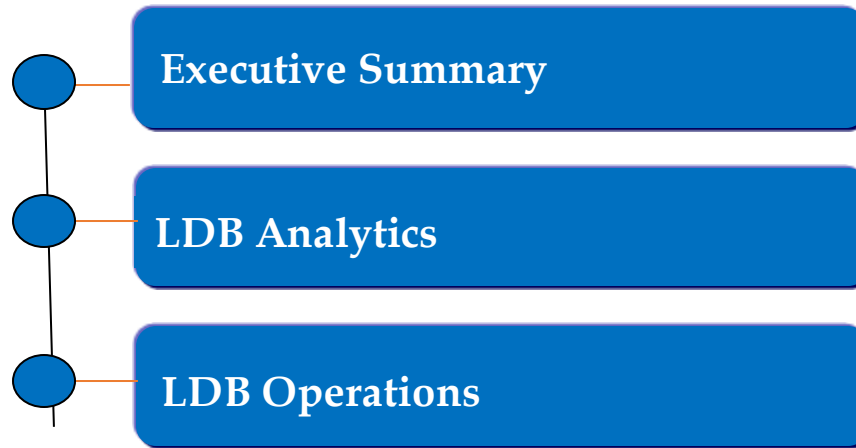


DLDS LDB Analytics Report for JNPT

Oct 2017





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 **5 million EXIM Containers of India** in the western corridor starting from the port till the ICD's through a single window.

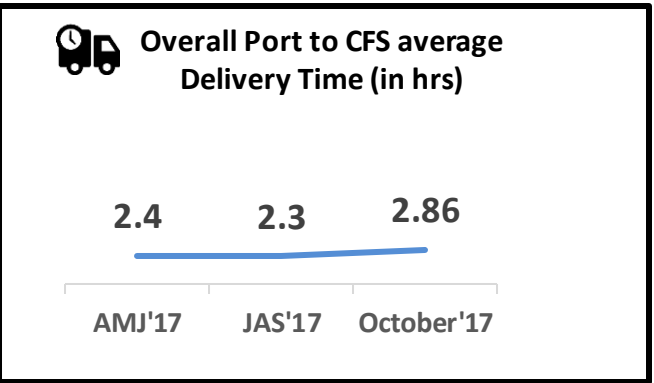
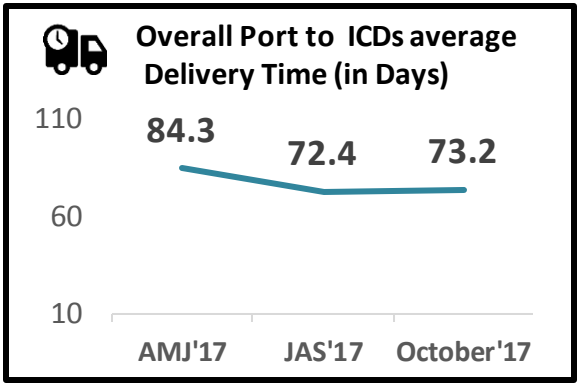
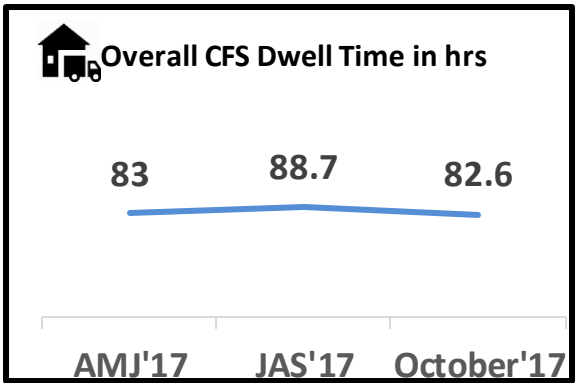
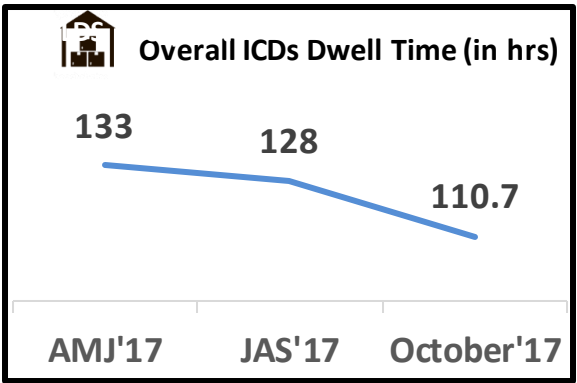
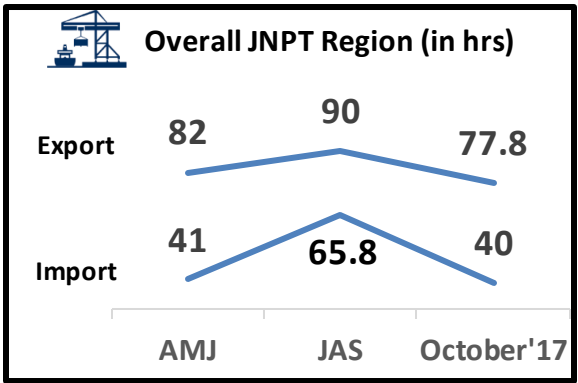
DLDS Analytics Report which is being published for the trade has been able to provide insights to the stakeholders in terms of identification of various challenges leading to increase in Time & Inefficiencies/ bottlenecks .The Performance Benchmarking has helped in inculcating competition to provide better services.

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

- The Export Dwell Time of Port terminals of JNPT region (JNPCT, APM, NSICT, NSIGT) which was around **91 hours during the July-Aug-Sep (JAS 2017) quarter** saw an **improvement of 14 %** in October 2017.
- The Import Dwell Time of Port terminals of JNPT region (JNPCT, APM, NSICT, NSIGT) which had increased to **65.8 hours during the July-Aug-Sep (JAS 2017) quarter due to monsoon and Ransomware attack on APM terminals** saw an **improvement of 40 %** in Oct 2017.
- Performance Benchmarking reports are helping inculcate competition among the stakeholders in providing better Logistics Services.



Executive Summary- JNPT Performance Trend



- Continued improvement in Dwell Time of Inland Container Depots(13% improvement in comparison to Jul-Aug-Sep 2017) & Container Freight Stations (7 % Improvement in comparison to Jul-Aug-Sep 2017).
- Port to ICD delivery time has improved by 17% in comparison to Apr-May-Jun 2017 qtr, however the Port-CFS delivery time has seen a slight dip for the month of Oct 2017.



Railway Related Challenges

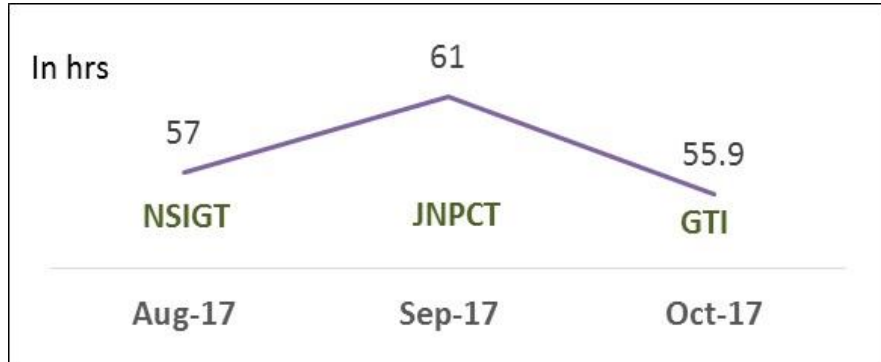
- Early arrival of Train bound Container movement (Export) at JNPT Port terminals leading to high Dwell Time for Port terminals.
- Post Port clearance of Containers , there is higher Container Handling time across railway siding (Import Containers).
- Mixed Container Movement across railway siding is a concern highlighted by various Shipping Lines leading to delays in container movement.
- Rail bound Import containers have a significantly higher Dwell time than Truck bound Import Containers.

Roadways related Challenges

- DLDS has categorized various CFS around the JNPT region in smaller clusters (areas) to help in identifying the clusters with maximum congestions resulting in overall high delivery time and same is being published on a monthly basis to the relevant stakeholders.
- Regular Congestions around certain clusters around JNPT region
 - **Sonari village, JNPT Area**
 - **Bhendkhal area, Khopate road**
 - **Sonari area, JNPT road**



JNPT Region Best Performing Terminal w.r.t Dwell time GTI Port Terminal



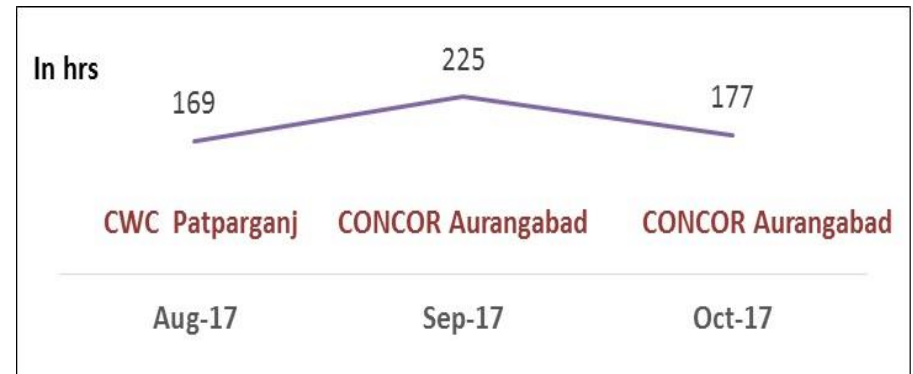
JNPT Region Low Performing Terminal w.r.t Dwell time : NSIGT Port terminal



Best Performing ICD w.r.t Dwell time : CWC Patparganj



Low Performing ICD w.r.t Dwell time : CONCOR Aurangabad



JNPT Region Best Performing CFS w.r.t Dwell time : CWC Dronagiri , Navi Mumbai



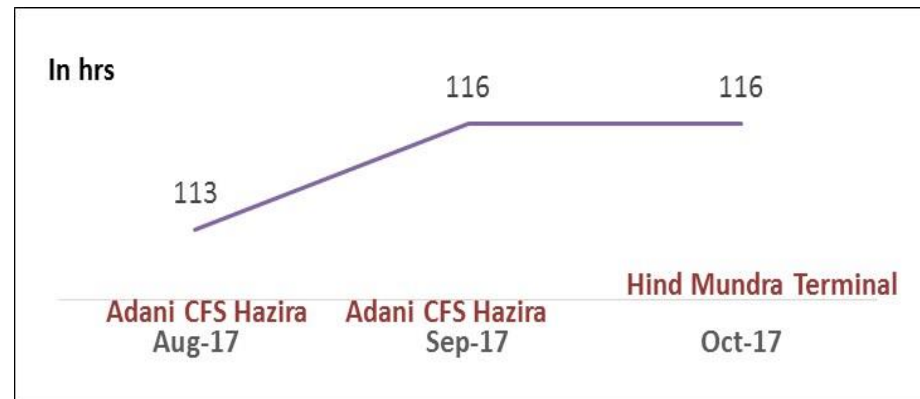
JNPT Region Low Performing CFS w.r.t Dwell time : Take Care Logistics



APSEZ Gujarat Region Best Performing CFS w.r.t Dwell time: CWC CFS Mundra



APSEZ Gujarat Region Low Performing CFS w.r.t Dwell time : Hind Mundra Terminal CFS

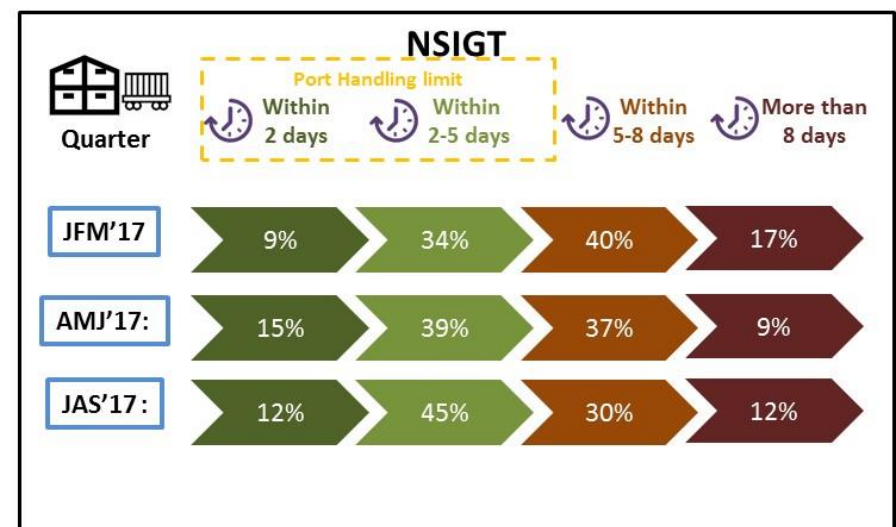
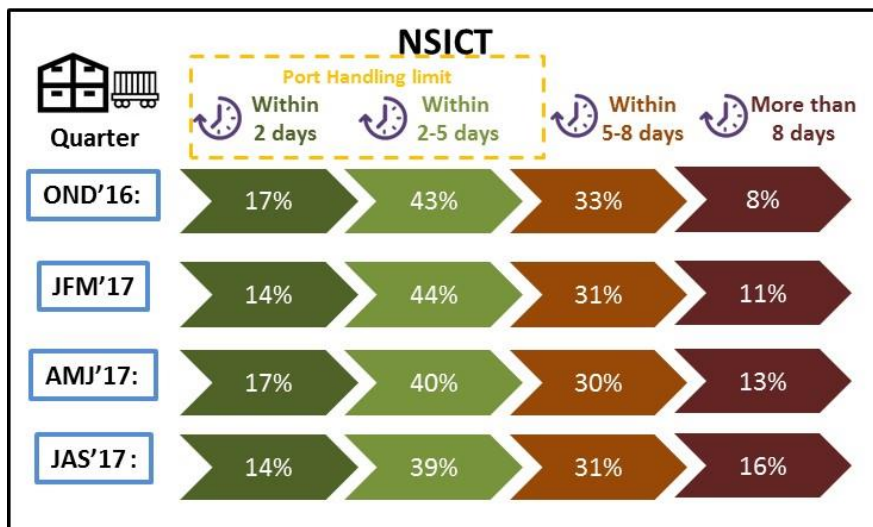
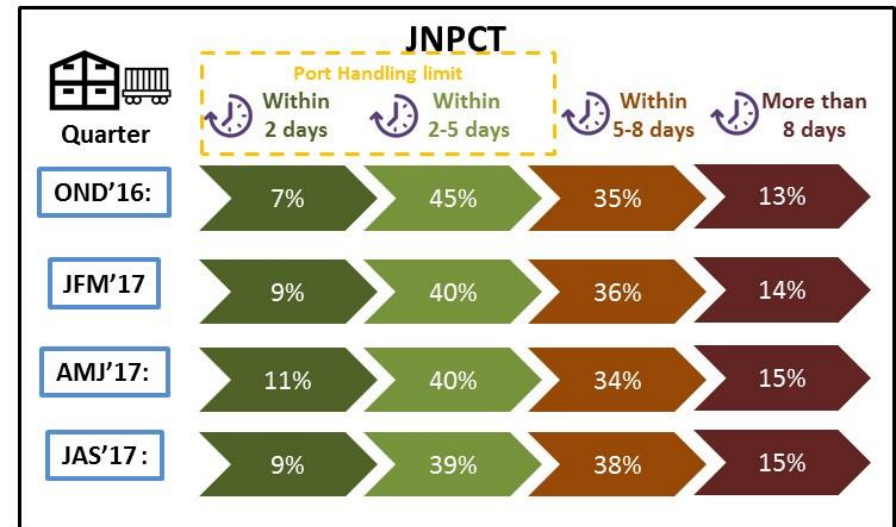
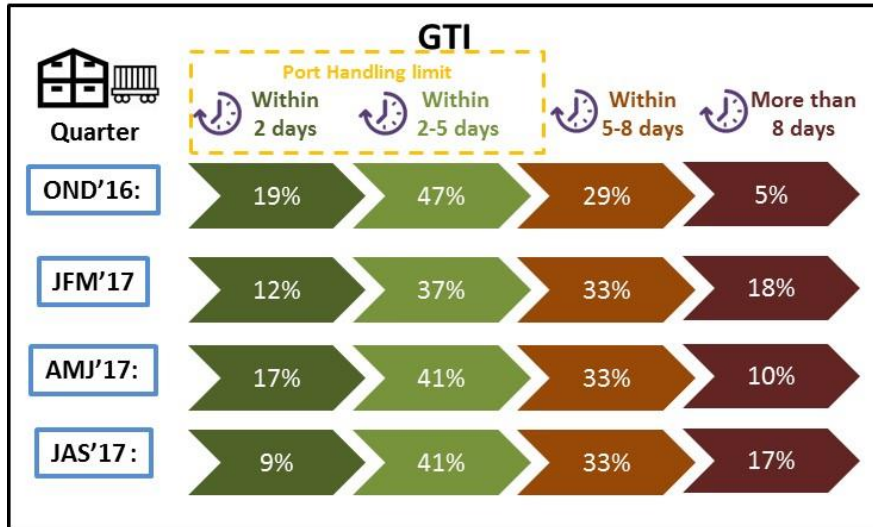




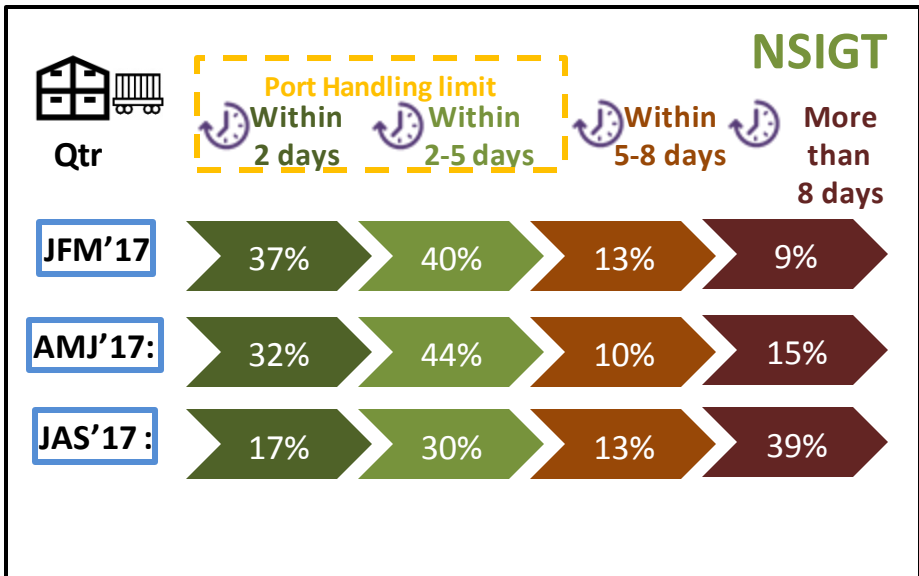
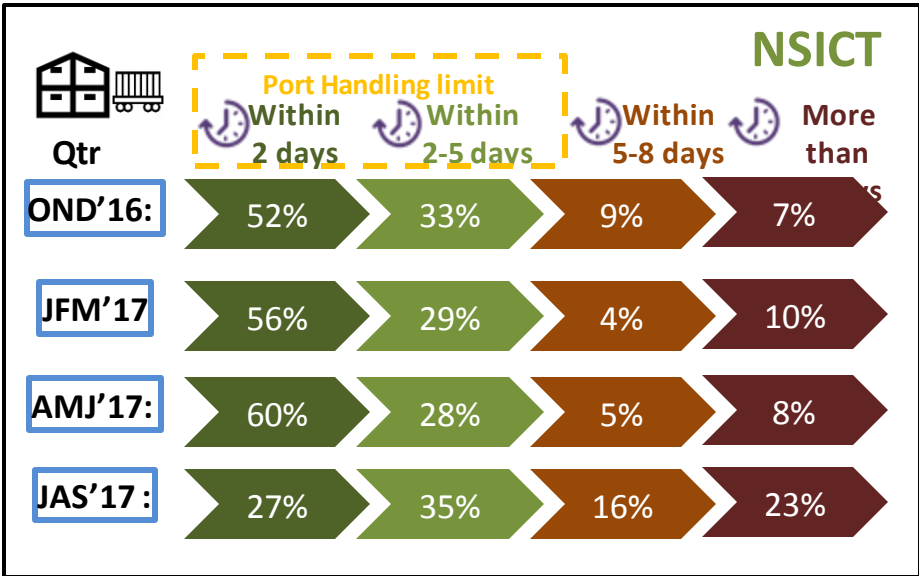
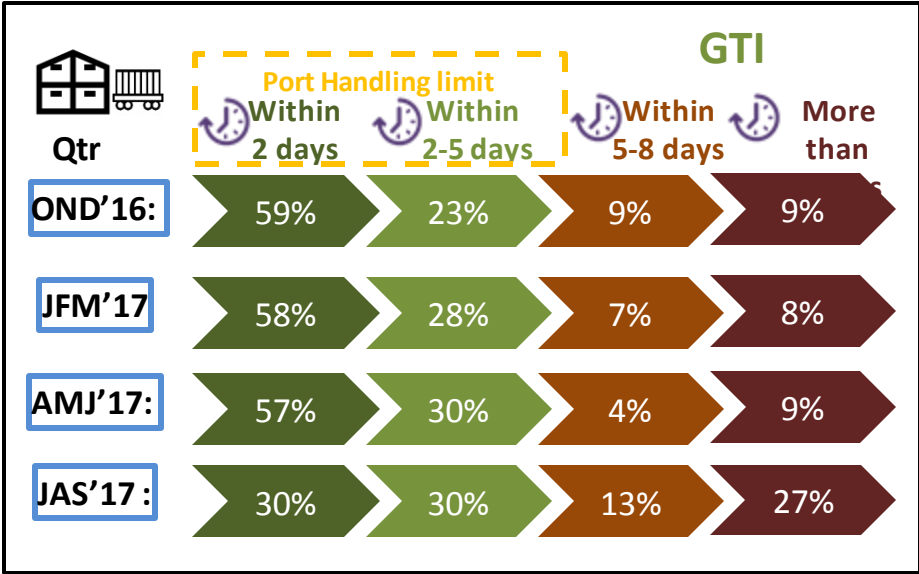
Key Challenges-Railways

Key Challenges-Railway bound Containers (Export)

Even though JNPT is working towards gate time for train bound Containers to be between 4-5 days, the below image depicts the scenario wherein the early arrival of the containers via Train within the Port Premises leading to higher Dwell Time.

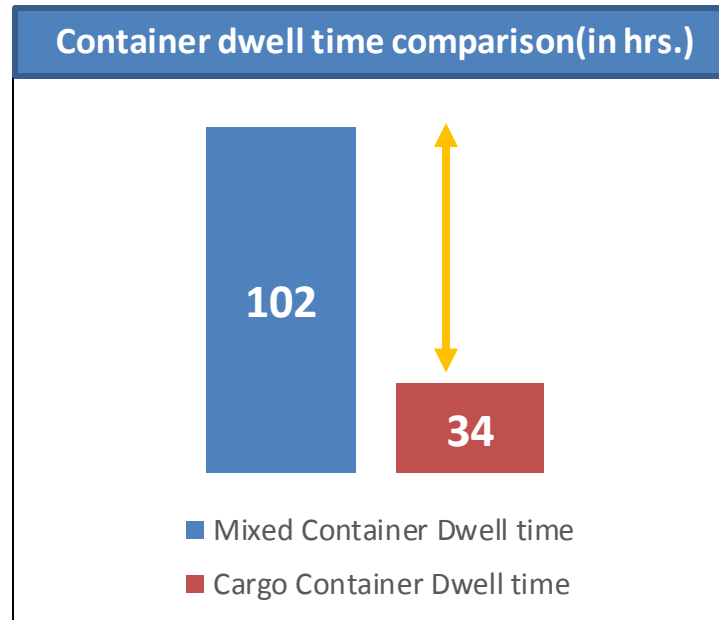


Key Challenges-Railway bound Containers (Import)



Percentage of containers taking more than 5 days time for moving out showcases the delay in Rail bound containers movement within the Port Premises leading to higher Dwell Time

Rail bound Containers arriving at railway siding of a different port terminal within the JNPT premise and then moving to its destination terminal . (For ex: JNPCT to APM, APM to NSICT etc)



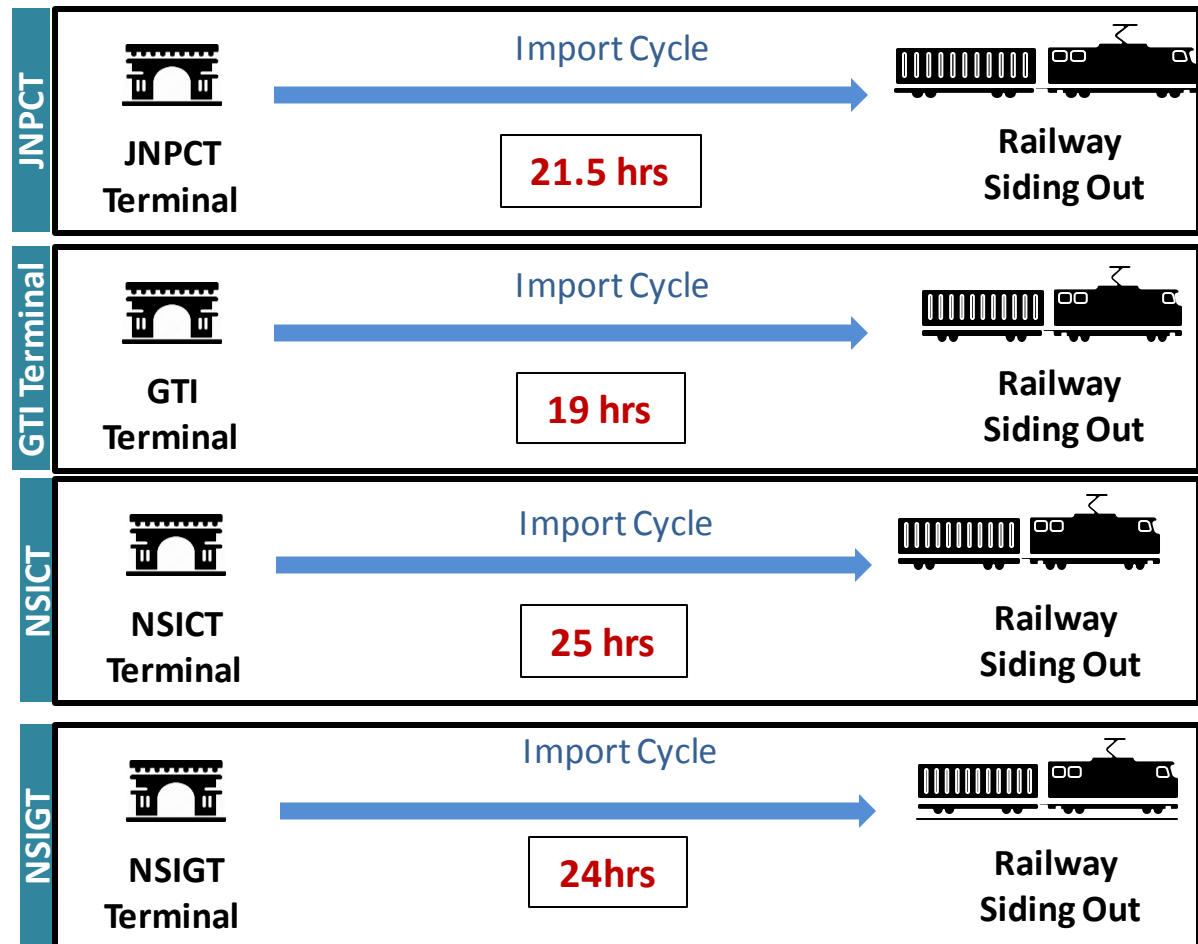
- In terms of Dwell Time, time taken by Mixed containers for clearance at the port terminals is much higher in comparison to the regular movement of Containers.
- Mixed containers stacking at Yard of different terminal leads to challenges in retrieving the same and at times leads to the possibility of containers missing the vessel leading to loss of revenue for shipping lines.

Higher container handling time across rail siding of Port terminals

Import Cycle :

Container handling time for rail bound containers for import cycle for JAS'17

As seen in the figure the average time taken by a container to reach railway siding (JNPT railway station) from the moment it is cleared by Port terminal is very high.



A similar trend exists for Export bound Containers as well

Key Challenges-Roadways

Key Challenges-Congestion around JNPT Region

To identify the congestion areas the Container movement from Port Terminal to the CFS regions based on their Route and location were categorized into eight clusters and accordingly Congestion Analysis was done for the same.

Congestion analysis : AMJ'17 & JAS'17



Clusters with High congestion during the last two quarters i.e. AMJ'17 and JAS'17

- Cluster 1 : Sonari village, JNPT Area
- Cluster 2 : Bhendkhal area, Khopate road
- Cluster 3 : Sonari area, JNPT road

Transit time Analysis between Port Terminal and CFS regions during export and import cycle have helped in identification of congestion areas around JNPT region.

- ★ Cluster with bottleneck
- ★ Cluster
- High Congestion
- Medium Congestion
- Low Congestion

LDB Analytics

LDB User Testimonials

Logistics Databank has helped us in **identifying the challenges across Rail container movement and congestions around the Port area.**

Shri Alok Mishra, Head Operations- APM Port Terminal

LDB's Performance benchmarking reports with respect to the competition is helping us focus on streamlining our processes to be the best in the industry"

Shri DS Bharara, VP Operations ACTL ICD

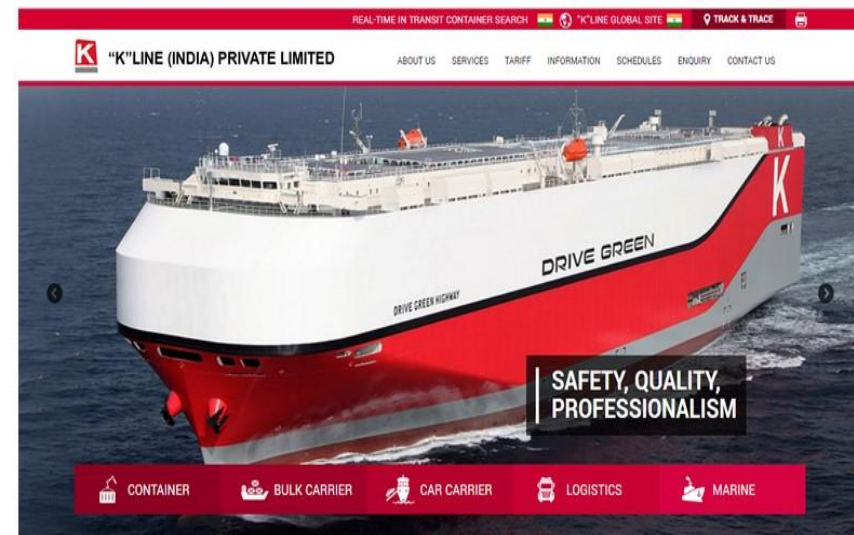
Helped us to track the route and the movement of an container which had met with an accident. This real time tracking was of immense help to all the stakeholders.

Capt Vinod Nair- VP Operations K-Line Shipping Line

LDB Link published in JNPT Website



LDB Link published in K-Line Website



Vessel Turn Around Time & Avg Vessel berthing Volume		
Port	Turn Around Time	Avg. no. of vessel Calling per month
JNPT , Mumbai	2-2.5 days	160
APSEZ ,Mundra	0-1 day	190
Shanghai , China	0-1 day	1500
Singapore	1-2 days	1500
Rotterdam , Netherland	1-2 days	600
Port Klang, Malaysia	0-1 day	1000
Hamburg , Germany	1-2 days	400

Source: Indian Ports Association, Merko Analytics.

Source: LDB Data, Logistics Performance Index, World Bank.

Average Port Dwell Time	
Ports	Dwell Time(in Hrs)
JNPT, India*	48
APSEZ , Mundra*	53
Singapore	31
Jabel Ali, Dubai	29
Hong Kong	17
Port Klang , Malaysia	17
Hamburg , Germany	37
Shanghai , China	20

Global Ranking of Top Container Ports (FY 16)		Indian Container Volume in India (FY 17)	
Countries	Container Handled (IN Million TEU's)	Port	Container Handled (IN Million TEU's)
Shanghai , China	37	JNPT , Mumbai	4.5
Singapore	30.9		
Shenzhen , China	23.9	Adani Port SEZ , Mundra	3.9
Rotterdam , Netherland	12.23		
Port Klang , Malaysia	11.89		
Hamburg , Germany	8.8		

Source: Indian Ports Association, Logistics Performance Index

Port	Average Lead Time (In Days)
Shanghai , China	6.5
JNPT , Mumbai*	14
APSEZ , Mundra*	14

Source: LDB Data, Logistics Performance Index

Container Ports of India vis-à-vis Asia for the year 2016	
Port Custom Clearance Time (2016)	
Port	Port Custom Clearance Time
Singapore	10 minutes
Indonesia(Tanjung Priok)	0.6 days
JNPT	4 days

Source : Marine and port authority of Singapore , Central Board of Exercise and Custom, The Jakarta Post

Arrival v/s Departure handling time for rail bound containers (Port/ICD rail bottleneck in Hrs.)			
Port Terminal	Arrival handling duration	Departure handling duration	Difference
ICDs, Dadri	3.0	5.9	2.9
JNPT, Mumbai	3.1	7.7	4.6
APSEZ, Mundra	6.5	8.0	1.5

Source: LDB Data

Performance Index- JNPT Port Terminals

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 October'17. The Quadrant II represents the high performing ports with high frequency Index i.e. high container volume at lower dwell time

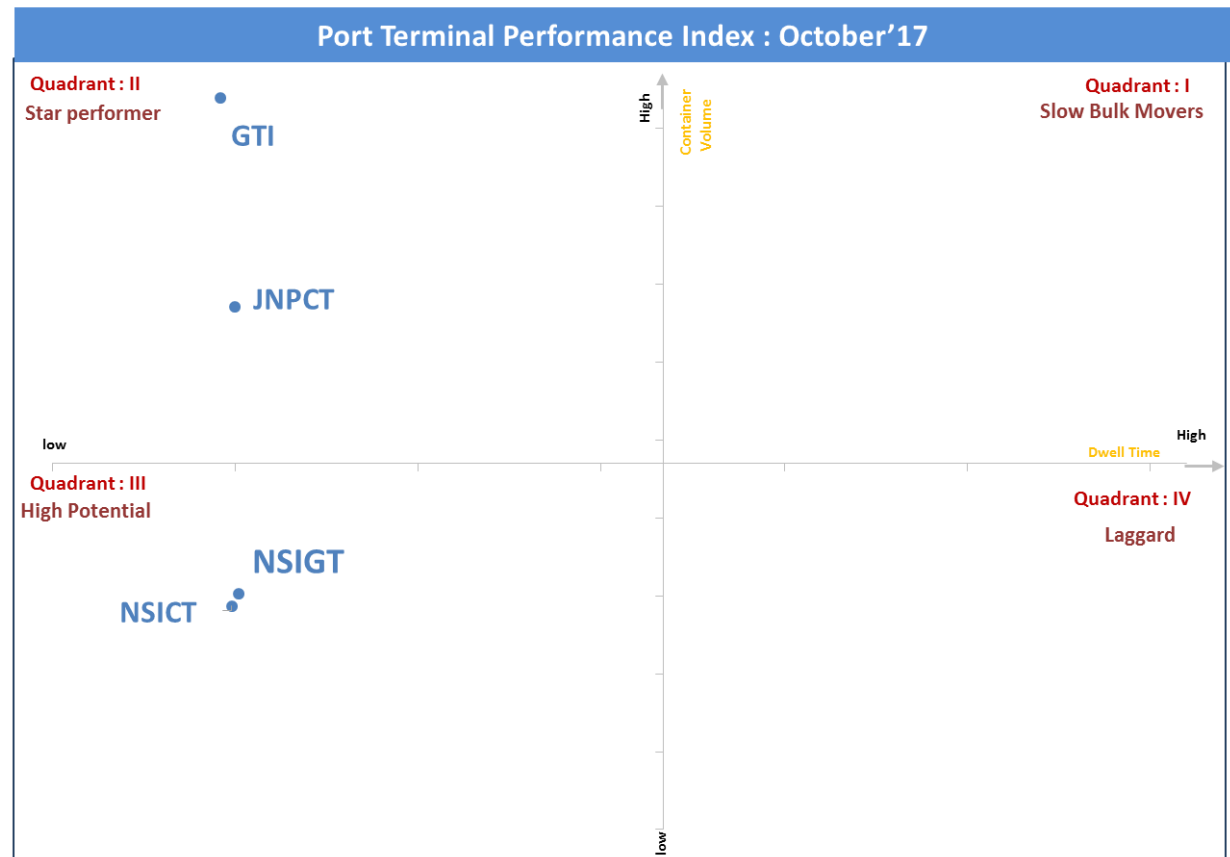
Slow Bulk Movers : consist of Ports which have catered higher container volume at higher dwell time

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

Growth Trend		
Terminal	Previous Trend	October'17
JNPCT	Q1	Q2
NSICT	Q4	Q3
NSIGT	Q4	Q3
GTI	Q1	Q2



Performance Index- JNPT Container Freight Stations

CFS Performance Index for October '17

Quadrant : II
Star performer

Quadrant : I
Slow Bulk Movers

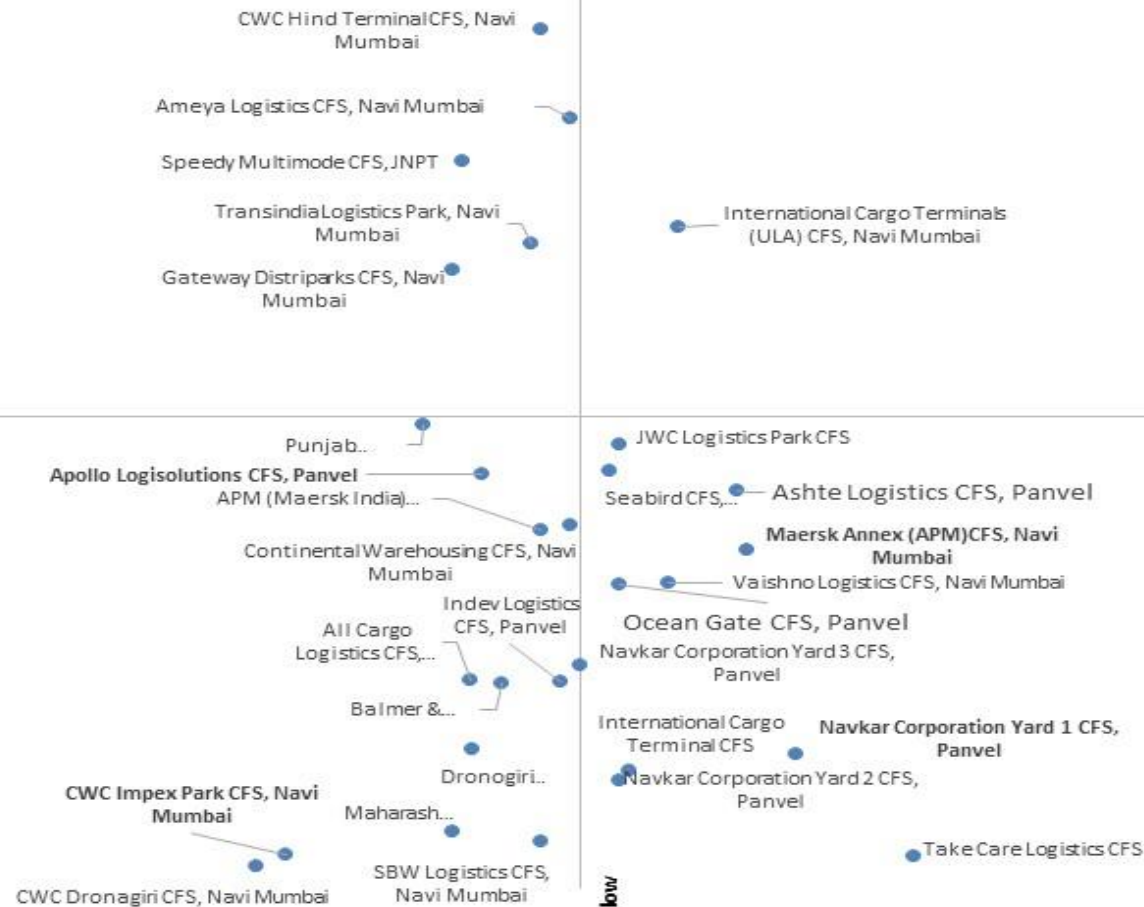
High
Container
Volume

low

High

Quadrant : III
High Potential

High
Dwell Time
Quadrant : IV
Laggard

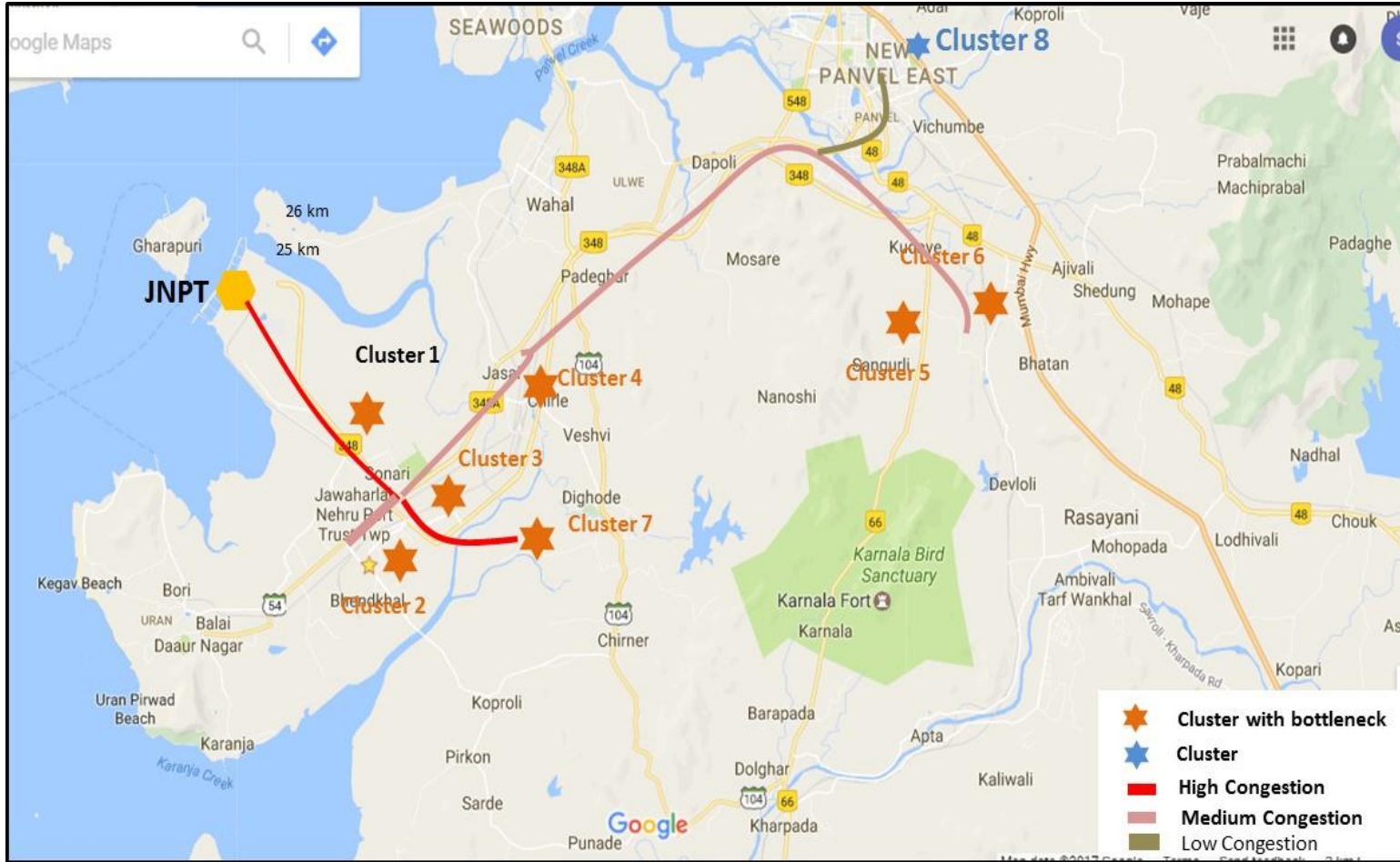


Performance Index- Inland Container Depots

ICD Performance Index for October '17



Congestion Analysis-JNPT 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

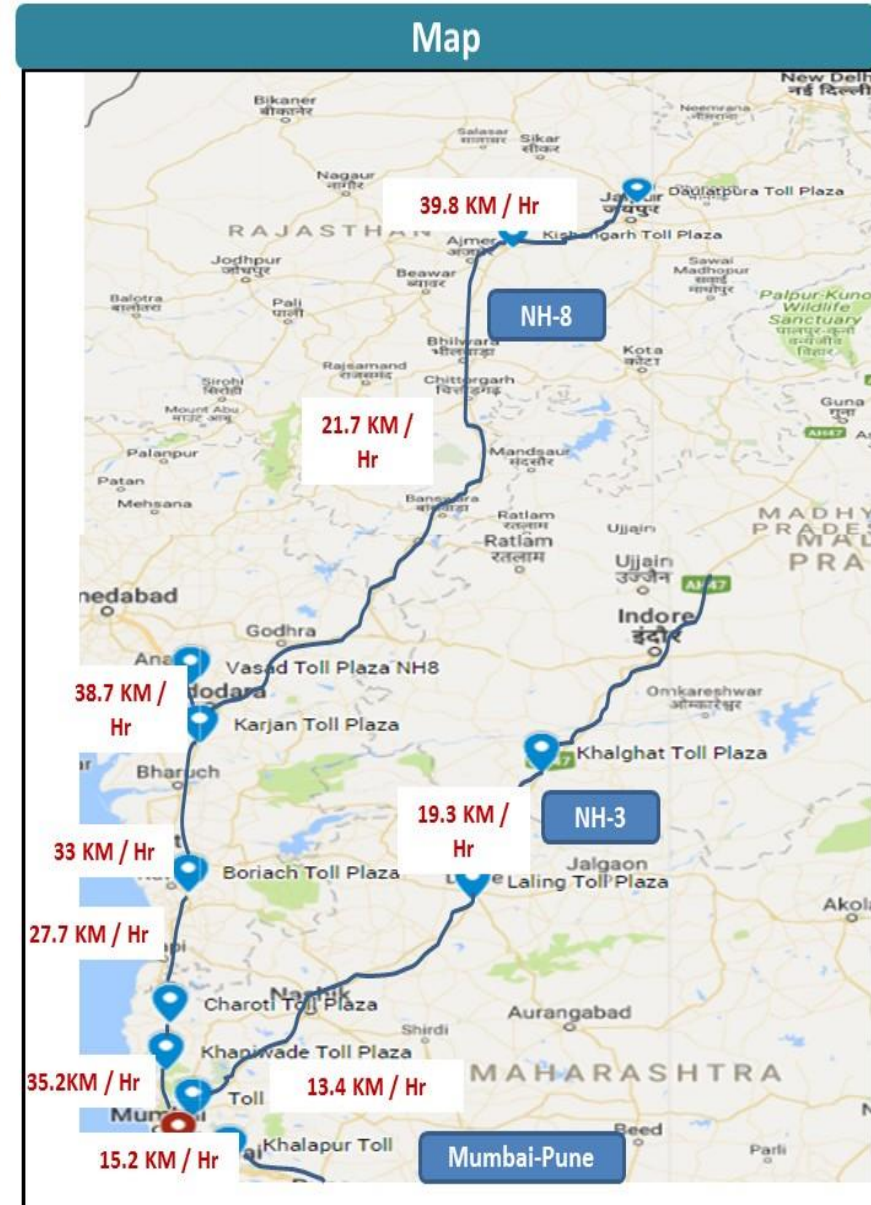
Note : Please find the respective CFS in each cluster in annexure section

GTI Terminal	JNPCT Terminal	NSICT Terminal	NSIGT Terminal
Congestion Level	Congestion Level	Congestion Level	Congestion Level
Export Cycle :-	Export Cycle :-	Export Cycle :-	Export Cycle :-
Import Cycle :-	Import Cycle :-	Import Cycle :-	Import Cycle :-

Congestion Analysis-Toll Plaza

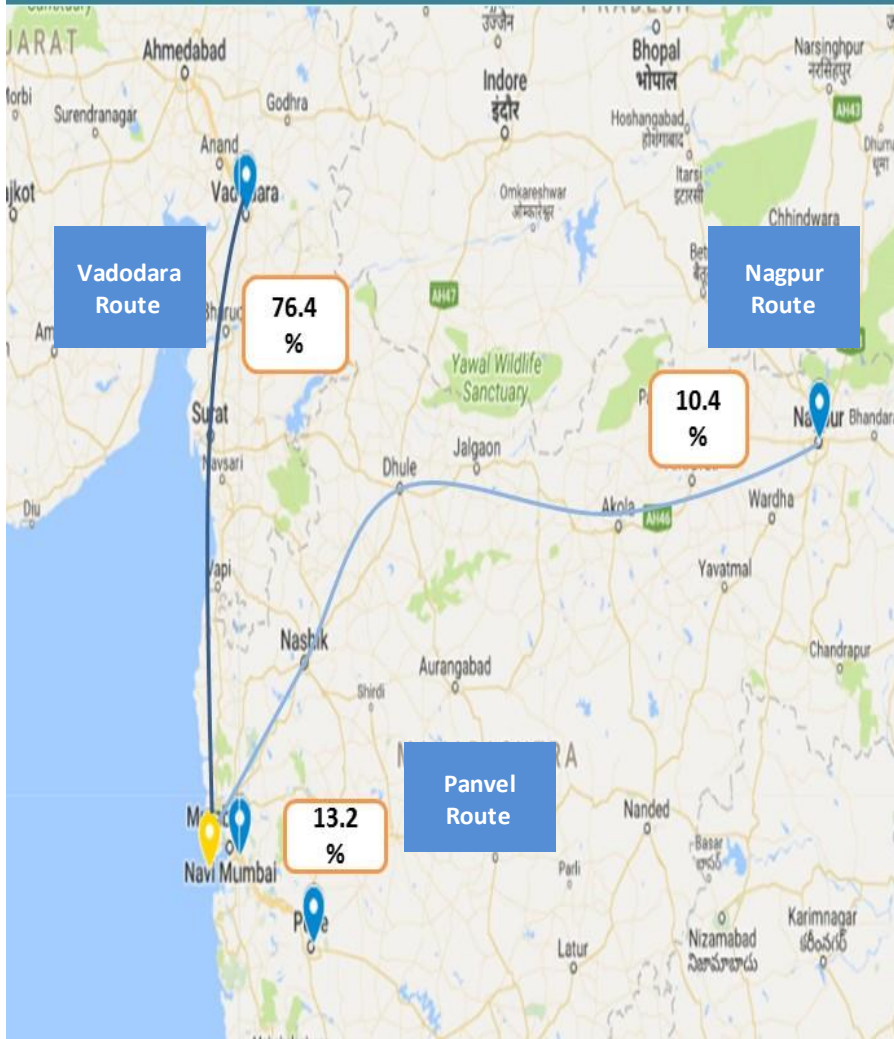
Avg. Travel Time & Speed between Toll Plazas (OCTOBER'17)

Source	Destination Toll Plaza	Inter Distance (Km)	Avg. Travel Time (Hr)	Avg. Speed (Km/Hr)	Previous month Avg. speed (km/hr)
JNPT	Khaniwade	94	7.0	13.4	13
JNPT	Khalapur	60	4.0	15.2	15
Khaniwade	Charoti	50	1.4	35.2	36
Charoti	Boriach	126	4.6	27.7	27
Boriach	Bharthan	142	4.3	33.0	32
Bharthan	Kishangarh	686	31.6	21.7	20
Bharthan	Vasad	60	1.6	38.7	38
Kishangarh	Daulatpura	128	3.2	39.8	38
Dhule	Khalghat	186	9.7	19.3	23

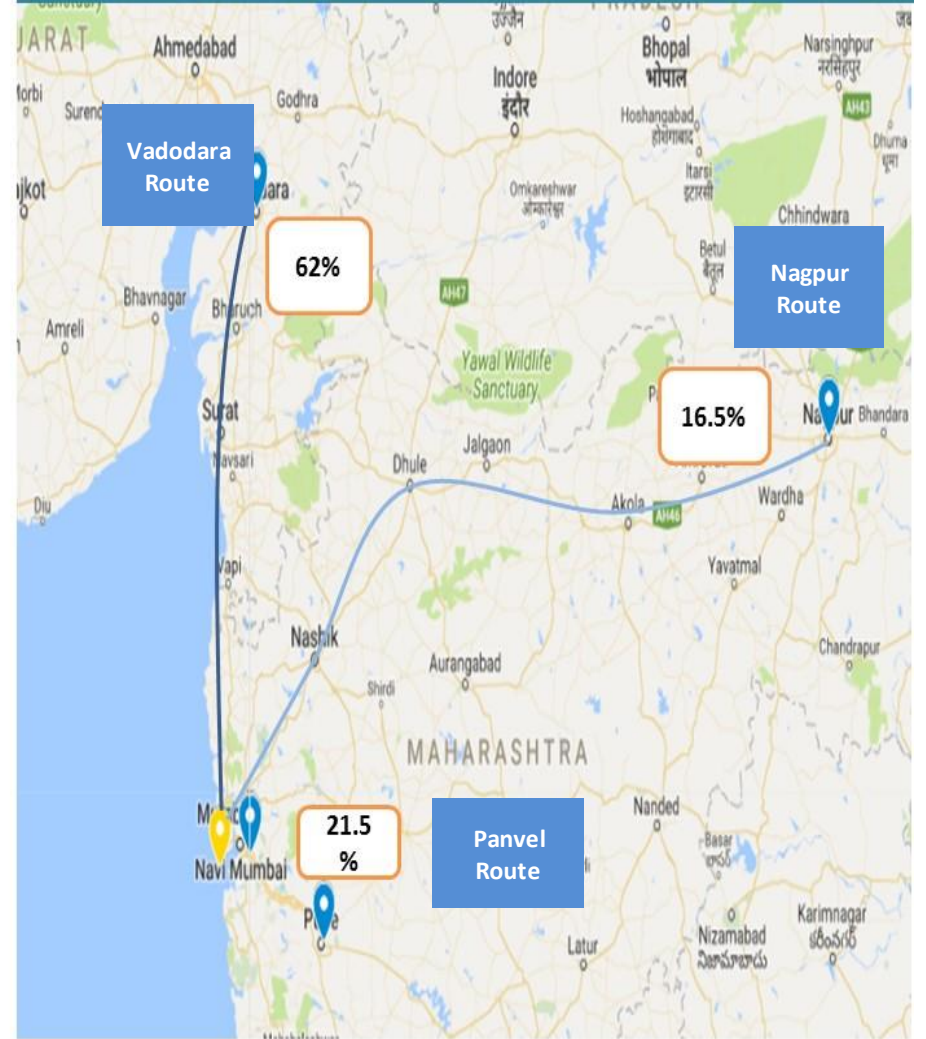


Container Heatmap- JNPT Train

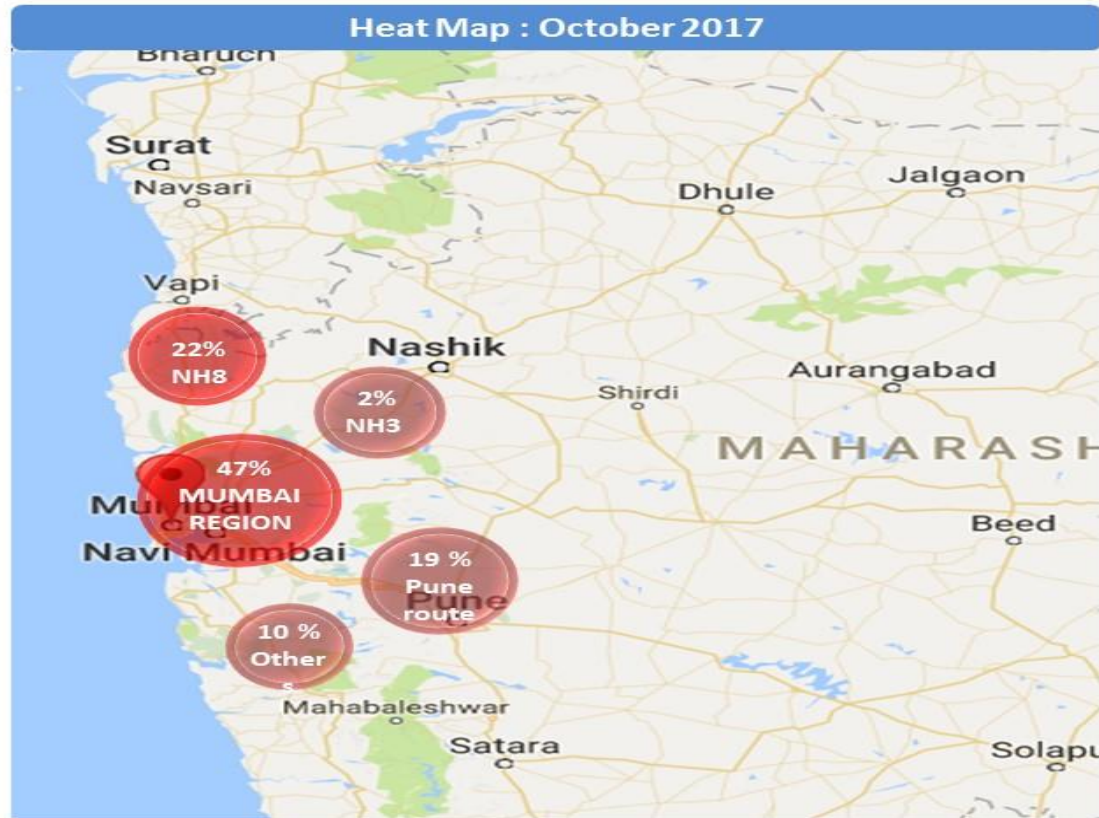
IMPORT CYCLE



EXPORT CYCLE



HEAT MAP : Overall Mumbai region




Region	October'17
Mumbai Region	47%
Pune	19%
NH8	22%
NH3	2%
Others	10%

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

LDB Operations

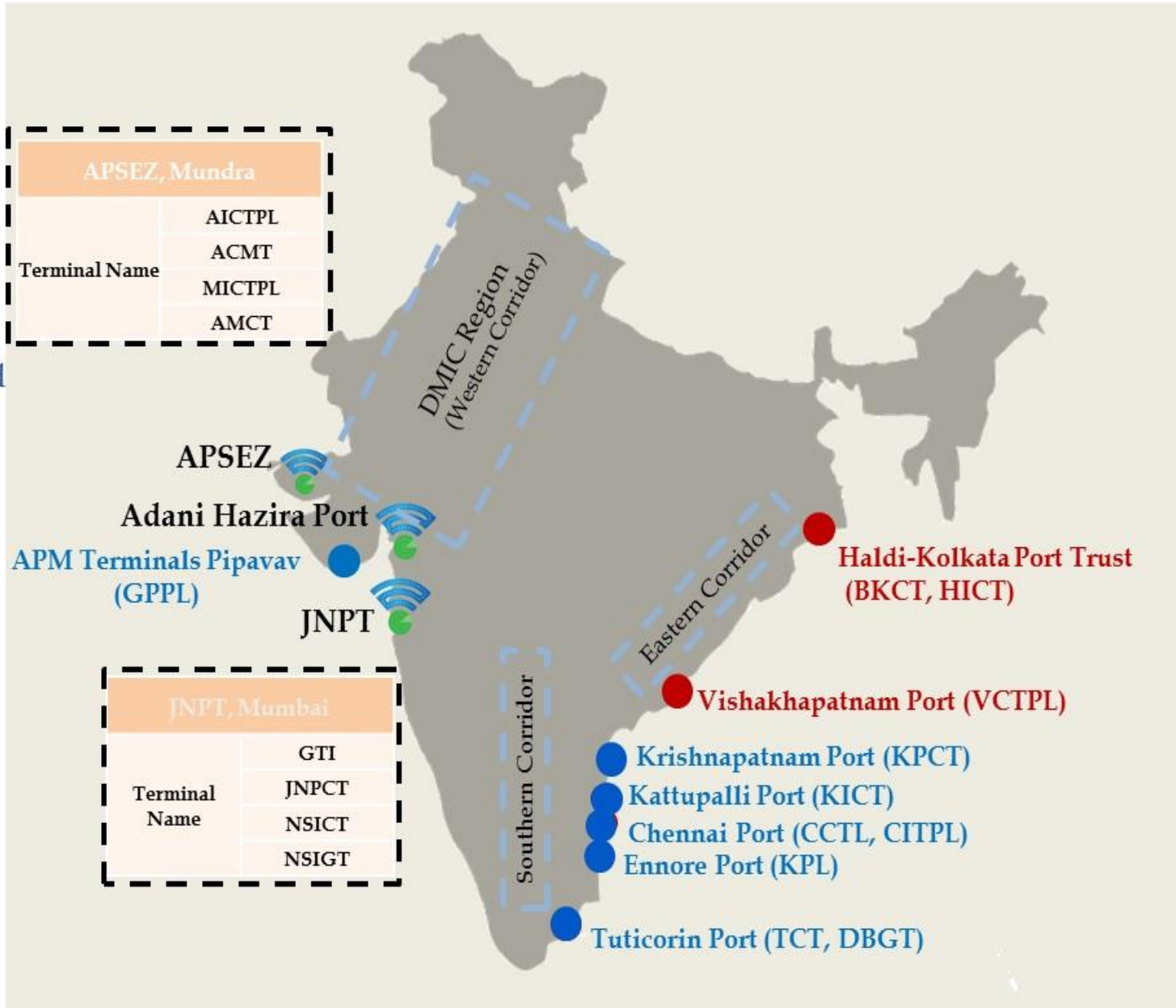
LDB Coverage

 Ports where LDB service is Operational

 Ports to be covered in next phase

 Ports to be covered in the Final Phase

Port terminals covered under DLDS



IMPLEMENTATION

- 4 Port Terminals at JNPT
- 4 Port Terminals at Mundra
- 1 Port Terminal at Hazira
- 29 CFSs at Mumbai Region, 12 CFSs at Mundra and 4 CFSs at Hazira
- 8 ICDs near NCR
- 13 Toll Plazas
- 280 Operator at Ports

All Implementation are as per plan and ahead of schedule
(~400 RFID Readers)

INTEGRATION

- Integrated with 9 Port System
- Integrated with FOIS (Railways)

Providing Truck and Train based end to end Container Visibility Services.

SERVICES

- Basic Search through a single window for end to end tracking
- Basic Analytics (Dwell Time, Transit Time, Efficiency , Average Delivery Time, SMS/ Email Alerts, Google Map View etc.)
- Detailed Analytics (Container Heat Map, Average Speed , Congestion Analysis, etc.)

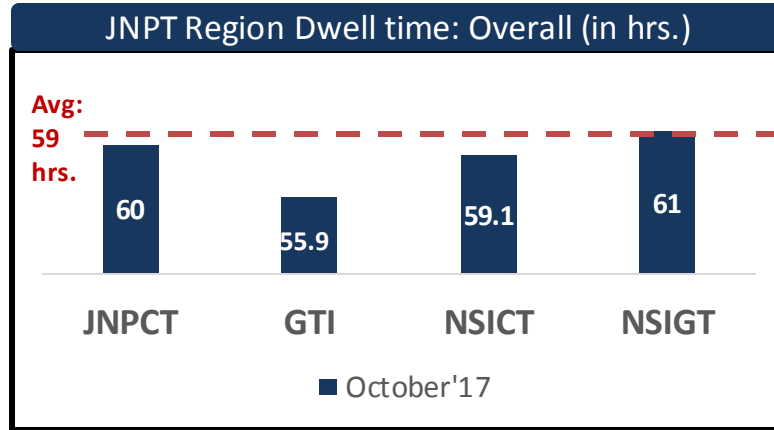
- Visibility services for 70% of India's Container Volume.
- Performance Benchmarking
- More than 5 Mn container handled (planned for more than 5.5 Mn this year)

ANNEXURE

JNPT REGION : TRADE PERFORMANCE

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 month of October'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

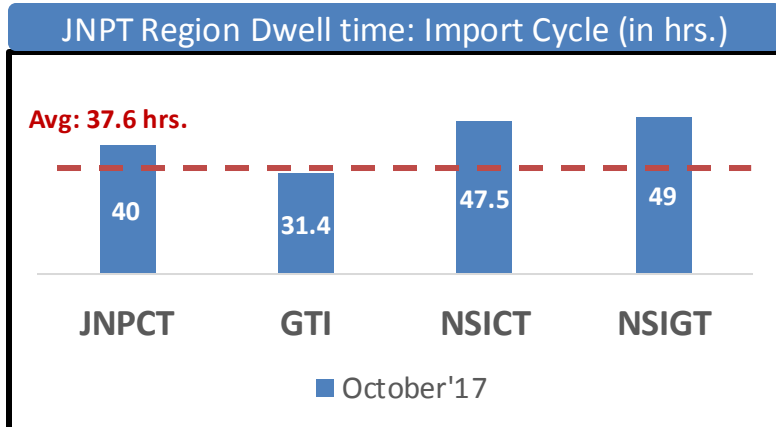


The **Average line** represent the JNPT region average dwell time with respect to the individual component (i.e. Overall Dwell time, Import and Export cycle) for the present month

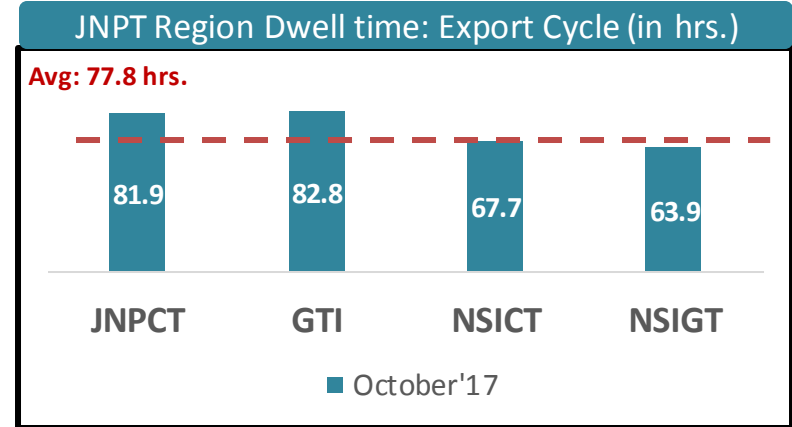
The below tables showcase the Import and Export cycle dwell time for both rail and truck bound containers for month of October'17



JNPT Import cycle Trend



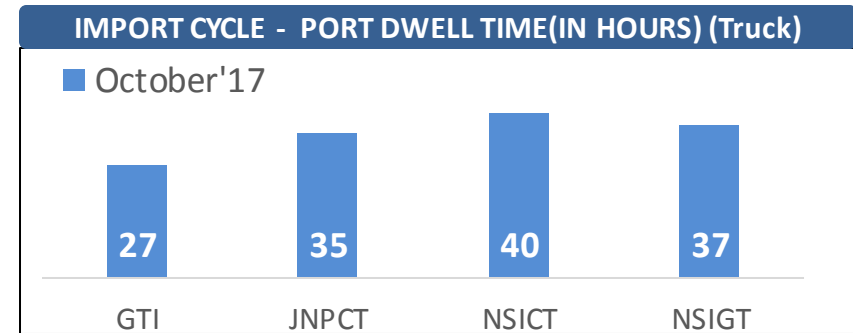
JNPT Export cycle Trend



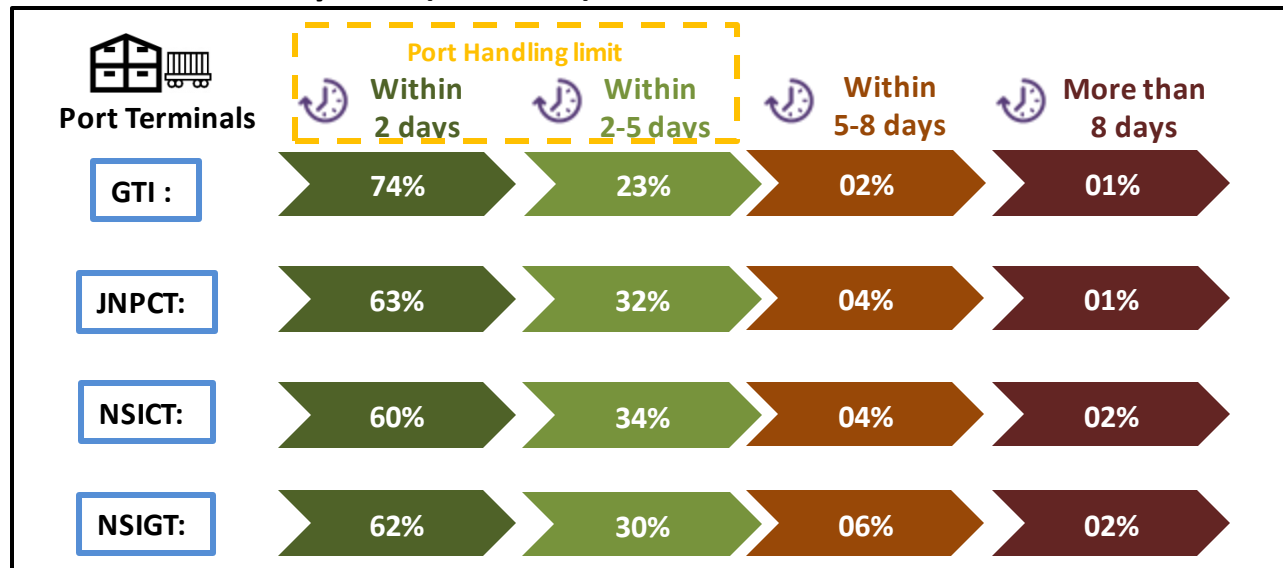
PORT IMPORT via TRUCK

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	September'17 (in Hrs)	October'17 (in Hrs)
GTI	40	27
JNPCT	36	35
NSICT	37	40
NSIGT	38	37



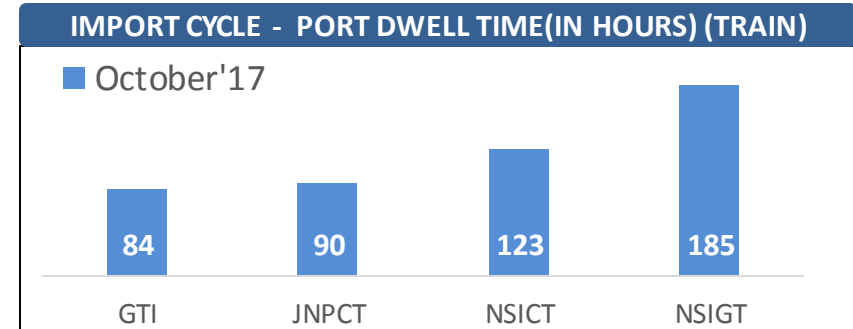
Container Volume Handled : Day wise (via Truck)



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	September'17 (in Hrs)	October'17 (in Hrs)
GTI	107	84
JNPCT	93	90
NSICT	102	123
NSIGT	89	185



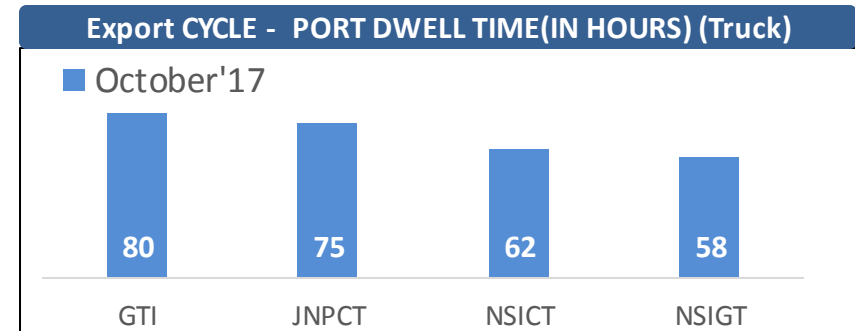
Container Volume Handled : Day wise (via train)



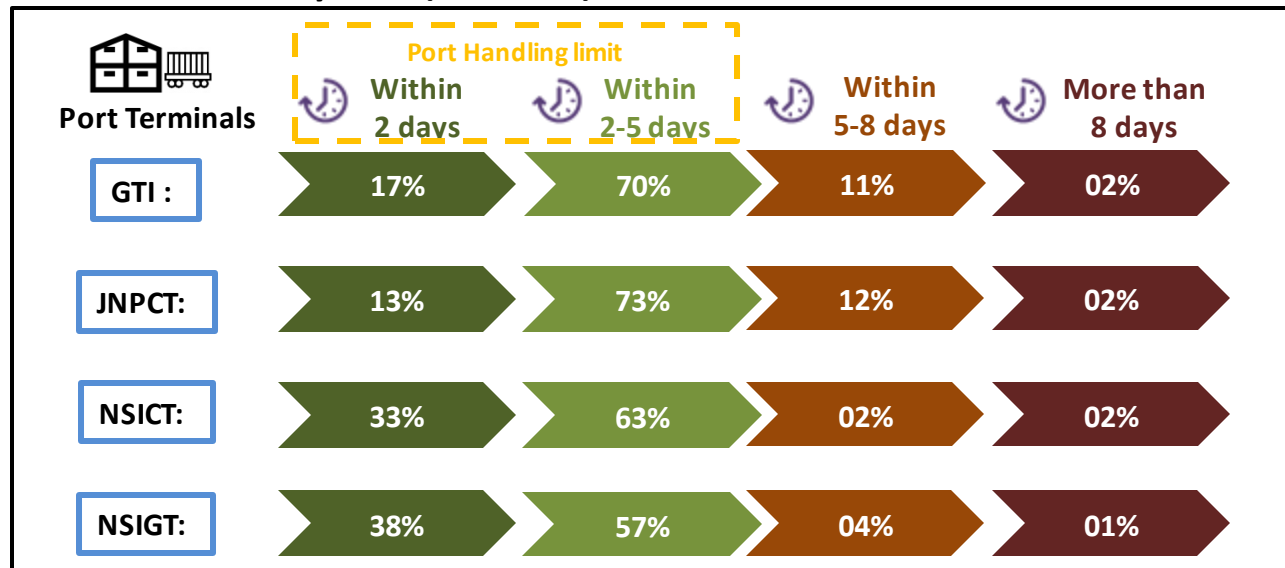
PORT EXPORT via TRUCK

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	September'17 (in Hrs)	October'17 (in Hrs)
GTI	81	80
JNPCT	73	75
NSICT	70	62
NSIGT	77	58



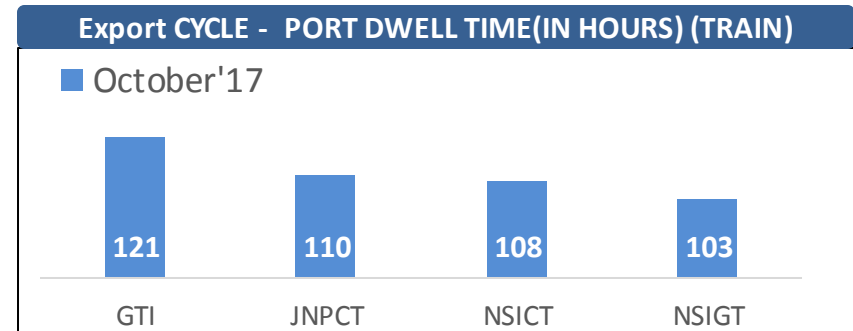
Container Volume Handled : Day wise (via Truck)



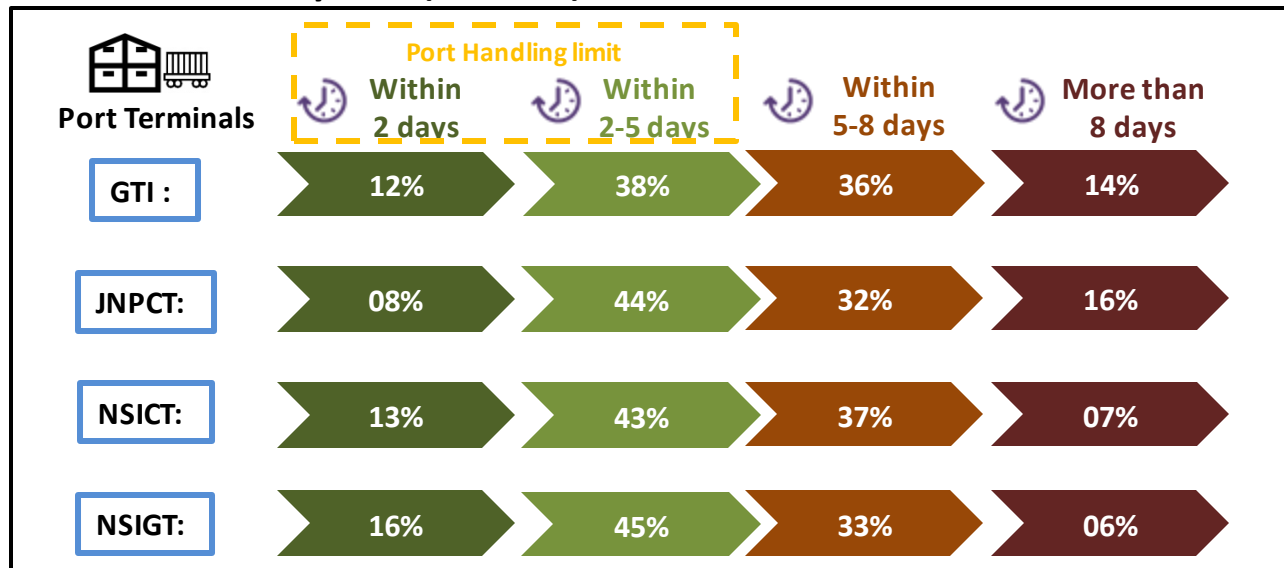
PORT EXPORT via TRAIN

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	September'17 (in Hrs)	October'17 (in Hrs)
GTI	118	121
JNPCT	123	110
NSICT	115	108
NSIGT	106	103

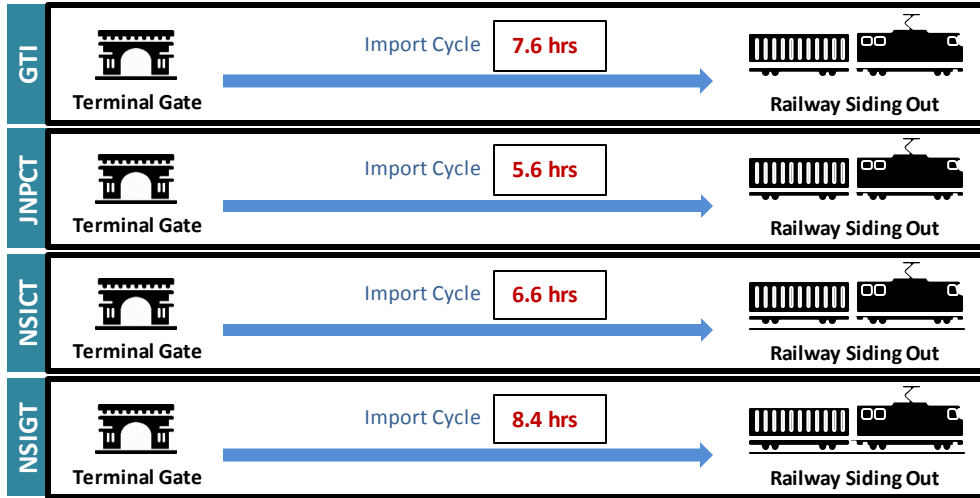


Container Volume Handled : Day wise (via train)



Container Handling time : Import Cycle

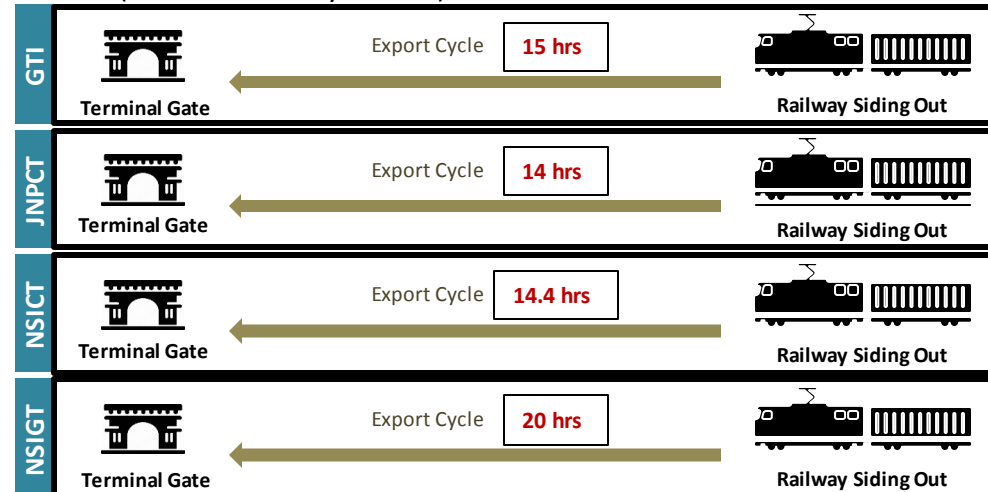
Container handling time in import cycle refers to the time taken by container to reach 1st railway station (i.e. JNPT railway station) from the moment they have been cleared from Port (i.e. Port Out). The below data is for month of October'17



Total Rail bound containers handled per Terminal (Import)	
Port Terminals	Train bound container volume handled out of total container handled(in %)
GTI	17%
JNPCT	13%
NSICT	22%
NSIGT	26%

Container Handling time : Export Cycle

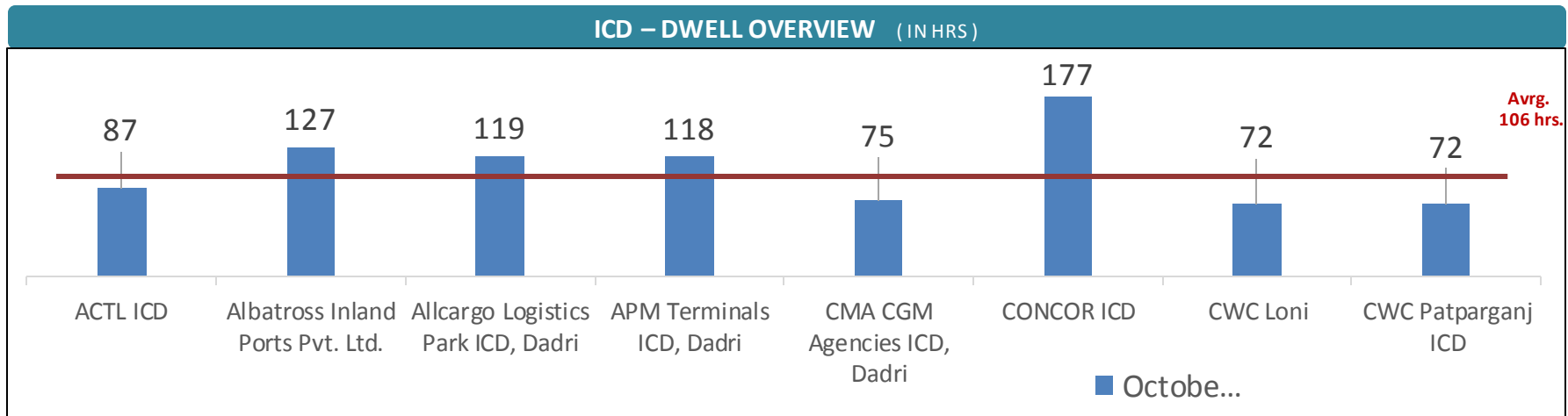
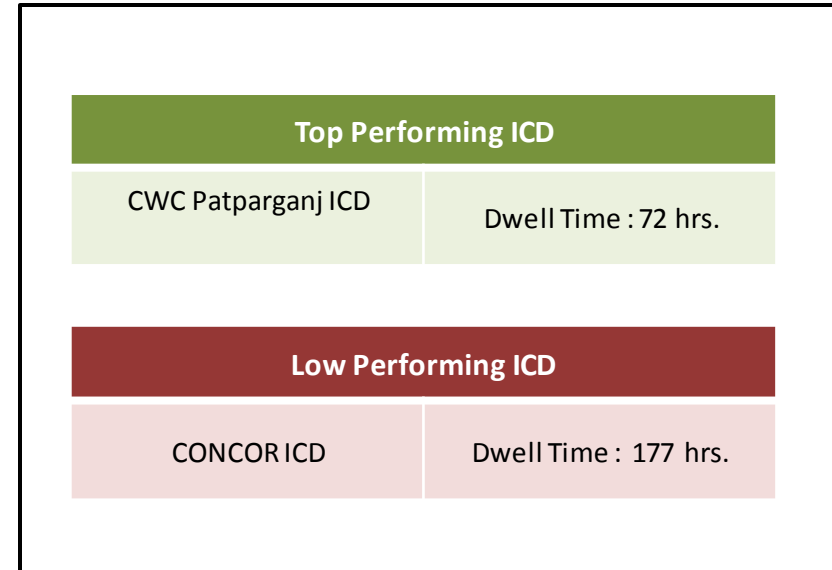
Container handling time in export cycle refers to the time taken by container to reach Port terminal (i.e. Port In) from lastrailway station (i.e. JNPT railway station). The below data is for month of October'17



Total Rail bound containers handled per Terminal (Export)	
Port Terminals	Train bound container volume handled out of total container handled(in %)
GTI	14%
JNPCT	8%
NSICT	19%
NSIGT	24%

The table below depicts the dwell of all ICDs for month of September '17 and October'17.

Dwell Time (in Hrs)		
ICD	September'17	October'17
ACTL ICD	136	87
Albatross Inland Ports Pvt. Ltd.	92	127
Allcargo Logistics Park ICD, Dadri	138	119
APM Terminals ICD, Dadri	130	118
CMA CGM Agencies ICD, Dadri	81	75
CONCOR ICD	225	177
CWC Loni	76	72
CWC Patparganj ICD	117	72



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	October'17
NCR region	3.04 days
Aurangabad	2.68 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	October'17
NCR region	3.15 days
Aurangabad	3.49 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	October'17
NCR region	14 days
Aurangabad	13.6 days

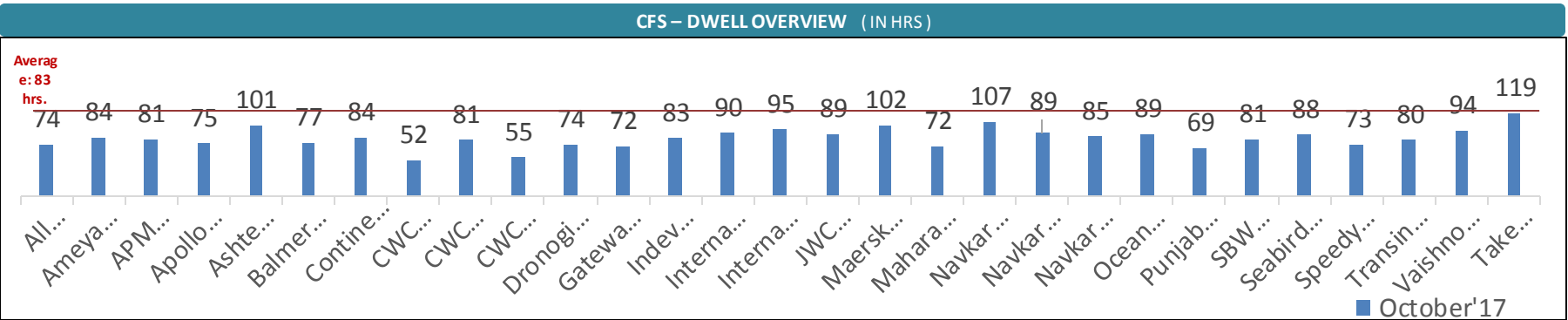
Calculation:

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

CFS ANALYSIS : DWELL TIME

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

CFS Dwell Time (in hrs)					
CFS	September'17	October'17	CFS	September'17	October'17
All Cargo Logistics CFS, Navi Mumbai	52	74	International Cargo Terminals (ULA) CFS, Navi Mumbai	87	95
Ameya Logistics CFS, Navi Mumbai	92	84	JWC Logistics Park CFS	92	89
APM (Maersk India) CFS, Navi Mumbai	81	81	Maersk Annex (APM)CFS, Navi Mumbai	99	102
Apollo Logisolutions CFS, Panvel	76	75	Maharashtra State Corp CFS	76	72
Ashte Logistics CFS, Panvel	98	101	Navkar Corporation Yard 1 CFS, Panvel	94	107
Balmer & Lawrie CFS, Navi Mumbai	75	77	Navkar Corporation Yard 2 CFS, Panvel	87	89
Continental Warehousing CFS, Navi Mumbai	85	84	Navkar Corporation Yard 3 CFS, Panvel	91	85
CWC Dronagiri CFS, Navi Mumbai	66	52	Ocean Gate CFS, Panvel	81	89
CWC Hind Terminal CFS, Navi Mumbai	92	81	Punjab Conware CFS, Navi Mumbai	71	69
CWC Impex Park CFS, Navi Mumbai	74	55	SBW Logistics CFS, Navi Mumbai	84	81
Dronogiri Rail Terminal CFS, Navi Mumbai	68	74	Seabird CFS, Navi Mumbai	100	88
Gateway Distriparks CFS, Navi Mumbai	69	72	Speedy Multimode CFS, JNPT	75	73
Indev Logistics CFS, Panvel	87	83	Transindia Logistics Park, Navi Mumbai	91	80
International Cargo Terminal CFS	92	90	Vaishno Logistics CFS, Navi Mumbai	95	94
			Take Care Logistics CFS	NA	119



Below table shows the top performing CFS's

Top Performing CFS's w.r.t Dwell time (October 2017)	
CWC Dronagiri CFS, Navi Mumbai	Dwell Time : 52 Hrs
CWC Impex Park CFS, Navi Mumbai	Dwell Time : 55 Hrs

Below table shows the low performing CFS's

Low Performing CFS's w.r.t Dwell time (October 2017)	
All Cargo Logistics CFS, Navi Mumbai	Dwell Time : 74 Hrs
Navkar Corporation Yard 1 CFS, Panvel	Dwell Time : 107 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	October'17
Speedy Multimode Ltd CFS	1.6
Balmer & Lawrie & Co. Ltd.,CFS	2.0
Gateway Distriparks Ltd	3.2
APM (Maersk India Pvt. Ltd)CFS	2.2
Continental Warehousing (Nhava Sheva) Ltd.	1.6
Seabird Marine Services Pvt Ltd.	2.6
JWC Logistics Park Ltd CFS	3.4
Ameya Logistics Pvt. Ltd.	2.9
Ashte Logistics Pvt. Ltd.	3.5
NAVAKAR CORPORATION LTD.,YARD-1 CFS	4.1
Apollo Logisolutions Ltd.	6.4
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.2
Indev Logistics Pvt. Ltd.CFS	4.1
Transindia Logistics Park Pvt, Ltd CFS	2.5
CWC IMPEX PARK CFS	1.6
All Cargo Logistics Ltd., CFS	2.0
Vaishno Logistics Yard CFS	2.2
NAVKAAR CORPORATION LTD.,YARD-II CFS	3.4
PUNJAB CONWARE (PW)	1.9
DRONAGIRI RAIL TERMINAL	1.7
MAHARASHTRA STATE WARE. CORP. CFS	2.9
CWC LOGISTIC PARK - Opr.Hind Trmnl.	1.8
NAVKAAR CORPORATION LTD.YARD-III CFS	3.3
International Cargo Terminal CFS	2.3
Maersk Annex (APM)CFS	3.4
International Cargo Terminal CFS	2.1
SBW Logistics CFS , Navi Mumbai	3.2

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	October'17
Speedy Multimode Ltd CFS)	1.5
Balmer & Lawrie & Co. Ltd.,CFS	2.6
Gateway Distriparks Ltd	3.3
APM (Maersk India Pvt. Ltd)CFS	2.3
Continental Warehousing (Nhava Sheva) Ltd.	2.0
Seabird Marine Services Pvt Ltd.	2.4
JWC Logistics Park Ltd CFS	4.4
Ameya Logistics Pvt. Ltd.	3.6
Ashte Logistics Pvt. Ltd.	3.7
NAVAKAR CORPORATION LTD.,YARD-1 CFS	3.8
Apollo Logisolutions Ltd.	7.0
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.2
Indev Logistics Pvt. Ltd.CFS	4.5
Transindia Logistics Park Pvt, Ltd CFS	2.8
CWC IMPEX PARK CFS	1.7
CWC Dronagiri CFS	16.6
All Cargo Logistics Ltd., CFS	2.1
Vaishno Logistics Yard CFS	1.8
NAVKAAR CORPORATION LTD.,YARD-II CFS	3.4
PUNJAB CONWARE (PW)	1.9
DRONAGIRI RAIL TERMINAL	2.1
MAHARASHTRA STATE WARE. CORP. CFS	1.7
CWC LOGISTIC PARK - Opr.Hind Trmnl.	2.1
NAVKAAR CORPORATION LTD.YARD-III CFS	3.7
International Cargo Terminal CFS	2.5
Maersk Annex (APM)CFS	4.0
International Cargo Terminal CFS	2.5
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	October'17
Speedy Multimode Ltd CFS	1.5
Balmer & Lawrie & Co. Ltd.,CFS	1.8
Gateway Distriparks Ltd	3.8
APM (Maersk India Pvt. Ltd)CFS	2.3
Continental Warehousing (Nhava Sheva) Ltd.	1.8
Seabird Marine Services Pvt Ltd.	3.2
JWC Logistics Park Ltd CFS	3.0
Ameya Logistics Pvt. Ltd.	3.1
Ashte Logistics Pvt. Ltd.	3.6
NAVAKAR CORPORATION LTD.,YARD-1 CFS	3.2
Apollo Logisolutions Ltd.	4.6
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.6
Indev Logistics Pvt. Ltd.CFS	3.7
Transindia Logistics Park Pvt, Ltd CFS	3.1
CWC IMPEX PARK CFS	7.5
CWC Dronagiri CFS	7.0
All Cargo Logistics Ltd., CFS	1.5
Vaishno Logistics Yard CFS	1.8
NAVAKAR CORPORATION LTD.,YARD-II CFS	3.6
PUNJAB CONWARE (PW)	1.9
DRONAGIRI RAIL TERMINAL	4.7
MAHARASHTRA STATE WARE. CORP. CFS	1.3
CWC LOGISTIC PARK - Opr.Hind Trmnl.	2.0
NAVAKAR CORPORATION LTD.YARD-III CFS	4.6
International Cargo Terminals CFS	2.0
Maersk Annex (APM)CFS	3.5
International Cargo Terminal CFS	2.0
SBW Logistics CFS , Navi Mumbai	4.6

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	October'17
Speedy Multimode Ltd CFS	1.6
Balmer & Lawrie & Co. Ltd.,CFS	2.6
Gateway Distriparks Ltd	3.1
APM (Maersk India Pvt. Ltd)CFS	2.4
Continental Warehousing (Nhava Sheva) Ltd.	1.8
Seabird Marine Services Pvt Ltd.	2.9
JWC Logistics Park Ltd CFS	3.9
Ameya Logistics Pvt. Ltd.	3.0
Ashte Logistics Pvt. Ltd.	3.9
NAVAKAR CORPORATION LTD.,YARD-1 CFS	4.6
Apollo Logisolutions Ltd.	5.9
Ocean Gate Container Terminals Pvt. Ltd.CFS	4.2
Indev Logistics Pvt. Ltd.CFS	5.4
Transindia Logistics Park Pvt, Ltd CFS	3.8
CWC IMPEX PARK CFS	1.3
All Cargo Logistics Ltd., CFS	2.0
Vaishno Logistics Yard CFS	2.3
NAVAKAR CORPORATION LTD.,YARD-II CFS	4.1
PUNJAB CONWARE (PW)	2.4
DRONAGIRI RAIL TERMINAL	1.1
MAHARASHTRA STATE WARE. CORP. CFS	1.5
CWC LOGISTIC PARK - Opr.Hind Trmnl.	2.0
NAVAKAR CORPORATION LTD.YARD-III CFS	10.2
International Cargo Terminals CFS	2.5
Maersk Annex (APM)CFS	2.9
International Cargo Terminal CFS	2.6
SBW Logistics CFS , Navi Mumbai	4.8

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

Month of October'17

CFS Out Port in (Export Cycle in Hrs)

CFS	JNPCT	GTI	NSICT	NSIGT
Apollo Logisolutions Ltd.	6.3	8.2	11.4	8.7
Jawaharlal Nehru Port CFS (Speedy Multimode Ltd CFS)	2.0	3.3	3.3	4.3
NAVKAR CORPORATION LTD.YARD-III CFS	7.3	8.5	8.3	8.0
MAHARASHTRA STATE WARE. CORP. CFS	2.6	4.3	3.7	5.5
PUNJAB CONWARE (PW)	2.9	3.8	4.0	5.1
All Cargo Logistics Ltd., CFS	4.8	5.0	4.5	14.7
DRONAGIRI RAIL TERMINAL	2.8	3.6	3.3	8.1
Ameya Logistics Pvt. Ltd.	5.9	4.9	4.7	7.5
CWC IMPEX PARK CFS	2.6	6.3	4.7	4.7
Balmer & Lawrie & Co. Ltd.,CFS	3.9	3.9	6.0	7.8
Continental Warehousing (Nhava Sheva) Ltd.	3.0	2.8	3.9	3.8
Transindia Logistics Park Pvt, Ltd CFS	4.4	4.5	4.2	14.4
JWC Logistics Park Ltd CFS	4.5	4.6	4.7	8.3
CWC Dronagiri CFS	3.8	6.2	9.8	6.9
Vaishno Logistics Yard CFS	3.4	5.1	3.7	7.2
Gateway Distriparks Ltd	3.8	4.7	5.5	6.6
CWC LOGISTIC PARK - Opr.Hind Trmnl.	3.3	3.8	4.2	9.2
International Cargo Terminals & Infrastructure Private Limited-CFS	5.6	8.0	8.6	10.7
Ashte Logistics Pvt. Ltd.	4.5	6.3	11.4	16.2
APM (Maersk India Pvt. Ltd)CFS	2.8	3.3	4.3	4.5
Maersk Annex (APM)CFS	18.1	24.6	NA	NA
Seabird Marine Services Pvt Ltd.	2.2	4.5	7.3	10.5
NAVKAR CORPORATION LTD.,YARD-II CFS	7.7	8.3	11.4	14.8
Indev Logistics Pvt. Ltd.CFS	5.6	5.1	6.4	5.5
Ocean Gate Container Terminals Pvt. Ltd.CFS	3.4	5.2	3.6	3.7
SBW Logistics CFS , Navi Mumbai	10.1	7.3	10.4	13.2
International Cargo Terminal CFS	3.6	3.1	3.9	4.7
NAVAKAR CORPORATION LTD.,YARD-1 CFS	NA	5.0	NA	13.1

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, cluster 6
- In import cycle the movement of traffic towards cluster 6 is facing congestion

GTI terminal for month of October'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	3.3
Cluster 2	6	13	2.1	3.9
Cluster 3	6	11	1.8	4.4
Cluster 4	1	13	2.2	5.0
Cluster 5	2	25	3.3	4.9
Cluster 6	6	25	3.7	7.2
Cluster 7	4	12	2.2	4.6
Cluster 8	1	34	3.2	7.3

CFS Cluster : JNPCT Terminal

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

JNPCT terminal for month of October'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	1.9
Cluster 2	6	13	2.5	3.8
Cluster 3	6	11	1.8	2.7
Cluster 4	1	13	1.8	3.4
Cluster 5	2	25	3.8	3.9
Cluster 6	6	25	3.7	6.2
Cluster 7	4	12	2.4	4.6
Cluster 8	1	34	3.6	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 October'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	3.2
Cluster 2	6	13	2.0	4.9
Cluster 3	6	11	3.9	4.3
Cluster 4	1	13	1.8	3.6
Cluster 5	2	25	3.3	4.1
Cluster 6	6	25	3.6	11.3
Cluster 7	4	12	2.4	4.3
Cluster 8	1	34	4.6	10.4

CFS Cluster : NSIGT Terminal

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

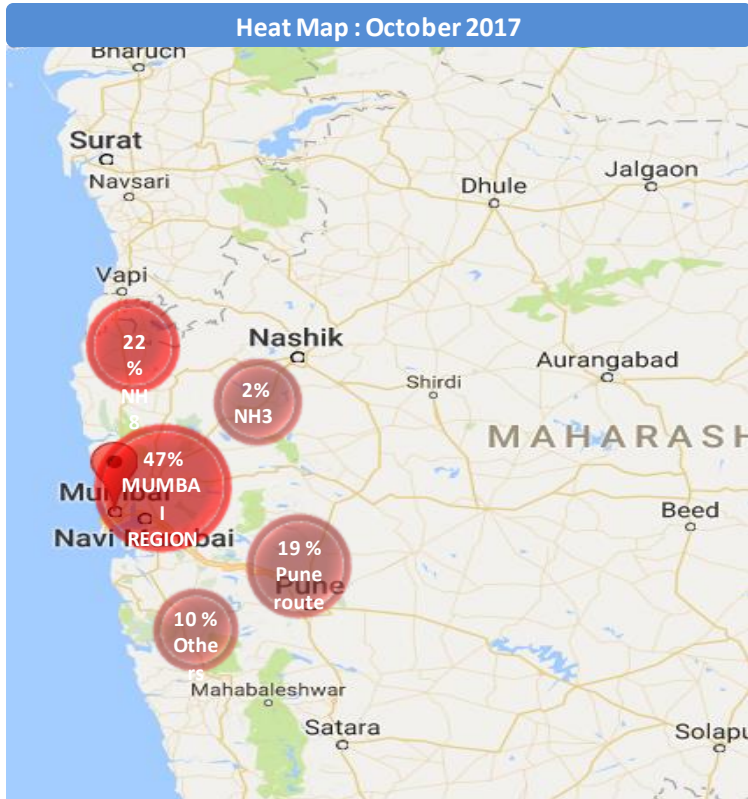
NSIGT terminal for month of October'17

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	4.2
Cluster 2	6	13	2.5	7.1
Cluster 3	6	11	1.4	6.22
Cluster 4	1	13	2.2	7.19
Cluster 5	2	25	4.0	5.98
Cluster 6	6	25	5.0	10.91
Cluster 7	4	12	2.5	10.95
Cluster 8	1	34	4.7	13.2

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**

Container movement around JNPT region via Truck

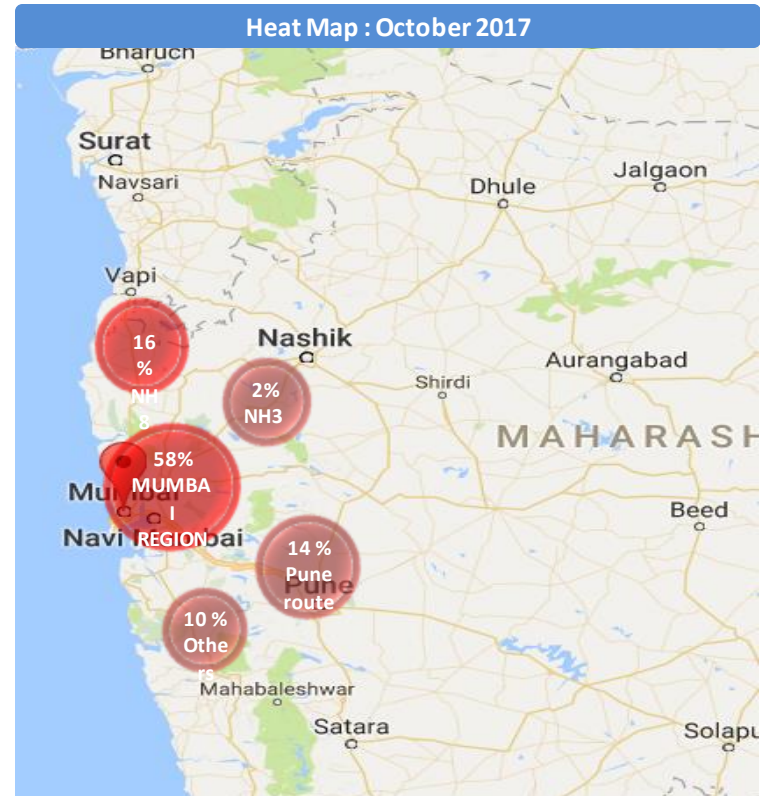
HEAT MAP : Overall Mumbai region



Region	October'17
Mumbai Region	47%
Pune	19%
NH8	22%
NH3	2%
Others	10%

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

HEAT MAP : GTI Port Terminal

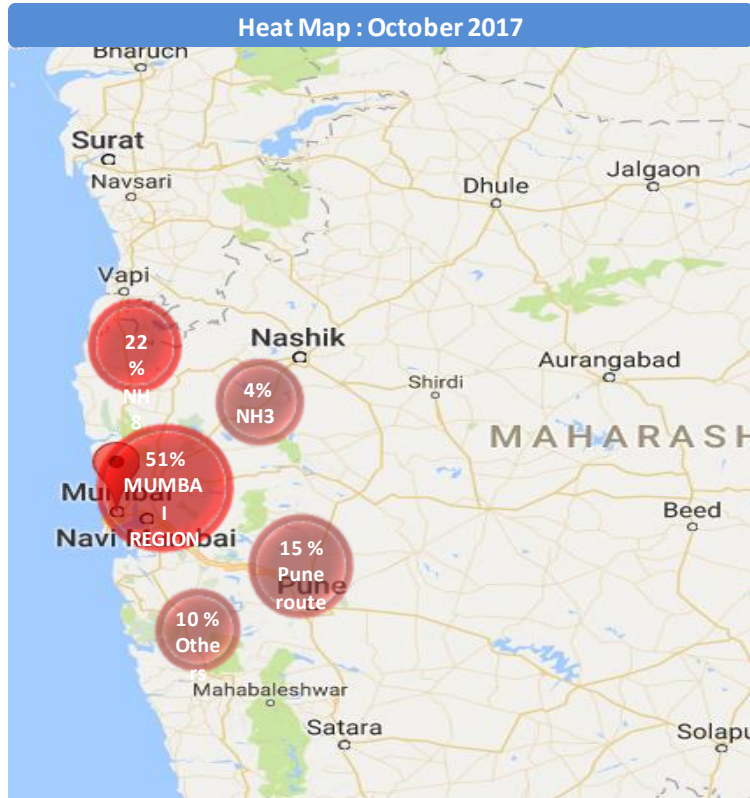


Region	October'17
Mumbai Region	58%
Pune	14%
NH8	16%
NH3	2%
Others	10%

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

Container movement around JNPT region via Truck

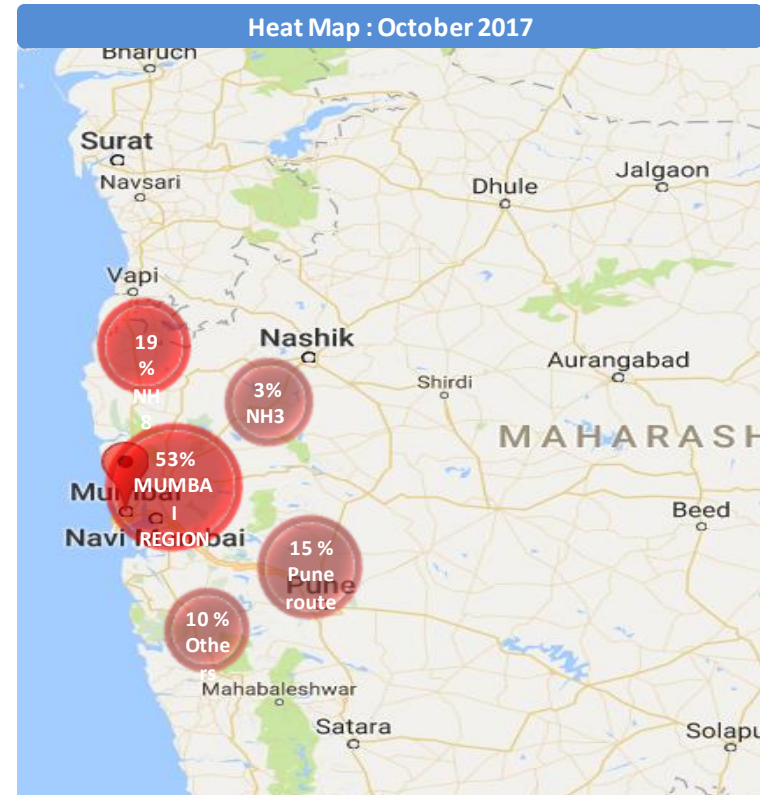
HEAT MAP : JNPT Port Terminal



Region	October'17
Mumbai Region	51%
Pune	15%
NH8	22%
NH3	2%
Others	10%

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

HEAT MAP : NSICT Port Terminal



Region	October'17
Mumbai Region	53%
Pune	15%
NH8	15%
NH3	3%
Others	10%

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



Thank You !!