Logistics Redefined

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DMICDC LOGISTICS DATA SERVICES LTD

DLDS
Monthly Report
JNPT

August 2017

Agenda

Executive Summary

LDB Analytics

LDB Operations

LDB Service Roadmap

Executive Summary

DLDS's Logistics Databank Project 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 **4 million EXIM Containers of India** in the western corridor starting from the port till the ICD's through a single window.

The performance trend across the JNPT region has shown improvements across various areas like Dwell time of Port terminals, CFs as well as Port to CFS/ ICD Delivery time. APM terminals performance which had gone bit down due to Ransomware attack has again improved this month.

There has been an increase in Container traffic at JNPT Terminals for the month of August 2017.

In pursuance to the meeting held with Container Shipping Lines Association ,DLDS team has initiated discussions with various shipping lines to enable them leverage LDB system effectively.
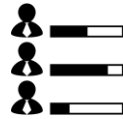
On going discussions with the Container handling Port terminals in Southern India to extend the LDB services which would help to create a **"Single container tracking system"** for the users on the Pan-India basis.
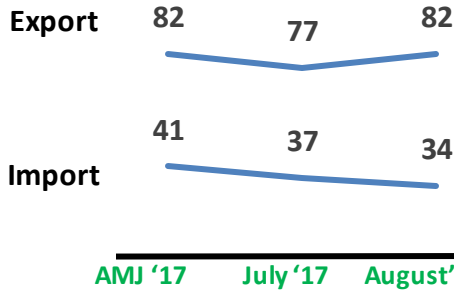
LDB Performance Trend Across JNPT Region

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Performance Benchmarking	Performance Index	Container Clearance Time analysis

Overall JNPT Region

Export
82   77   82

Import
41   37   34

AMJ '17   July '17   August' '17

Overall ICDs Dwell Time

133   149   128

AMJ '17   July '17   August' '17

Overall CFS Dwell Time

83   95   87

AMJ '17   July '17   August' '17
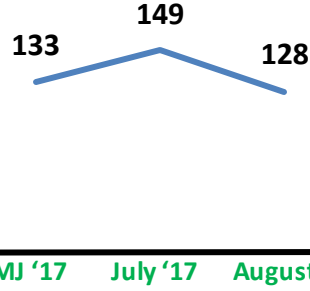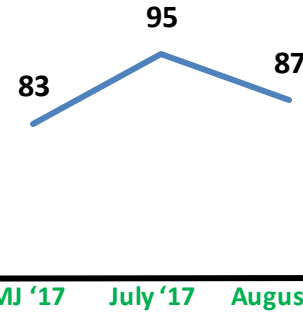
Bringing in Visibility and transparency across the channel

Congestion Analysis	Bottleneck Identification

Overall Port to ICDs average Delivery Time (in Days)

3.53   3.9   3.6

June '17   July '17   August' '17
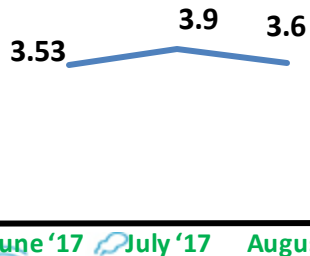
Overall Port to CFS average Delivery Time (in hrs)

1.9   3   2.8

June '17   July '17   August' '17
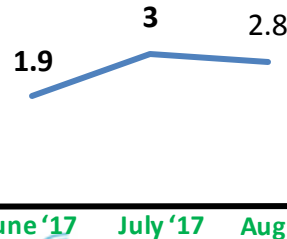
Publishing Performance benchmarking and Congestion analysis with individual stakeholders to help them improve their performance and efficiency

Port Region	No. of Port Terminals
JNPT Region	4

Aurangabad ICD
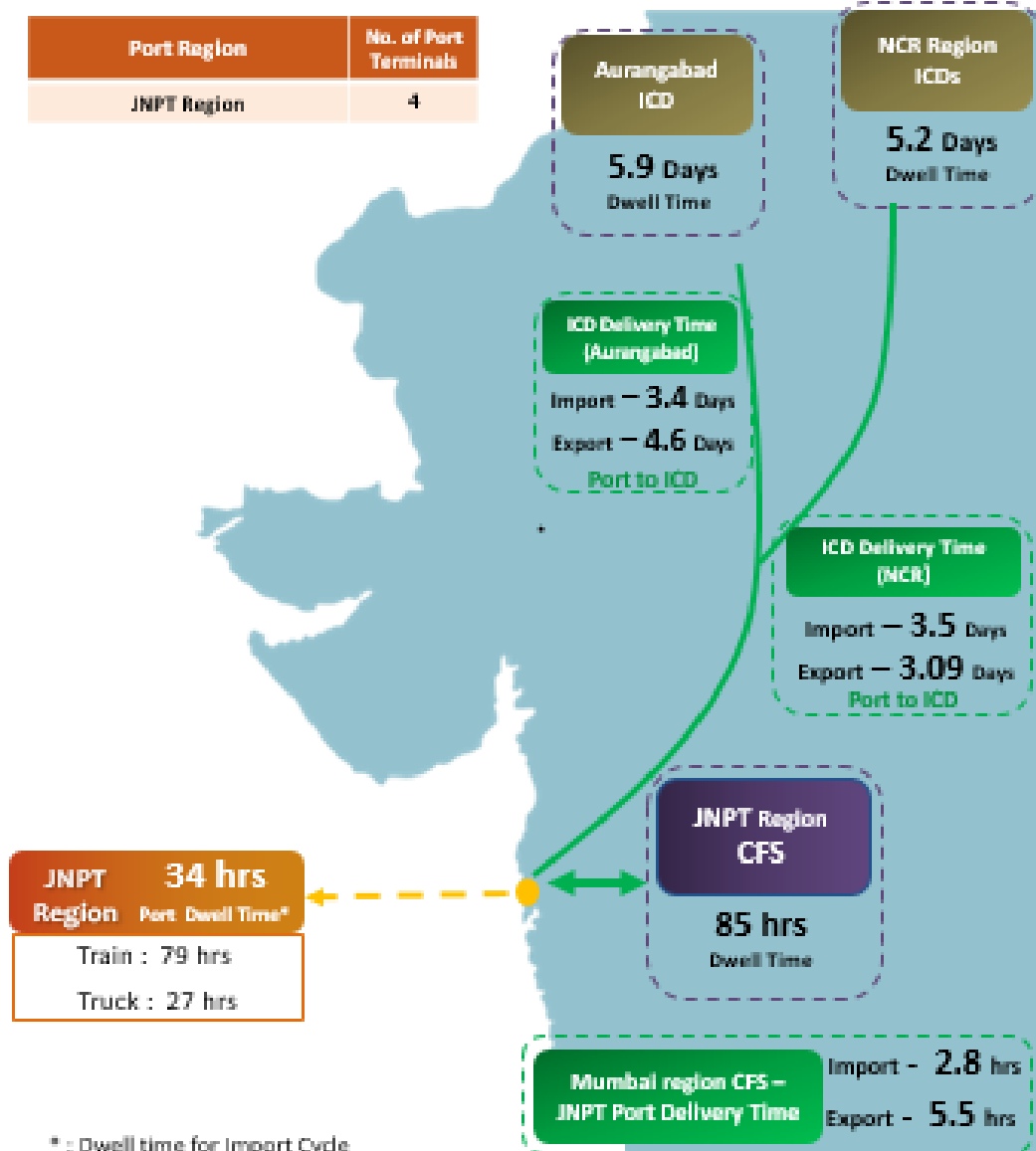5.9 Days
Dwell Time

NCR Region ICDs
5.2 Days
Dwell Time

ICD Delivery Time (Aurangabad)
Import – 3.4 Days
Export – 4.6 Days
Port to ICD

ICD Delivery Time (NCR)
Import – 3.5 Days
Export – 3.09 Days
Port to ICD

JNPT Region CFS
85 hrs
Dwell Time

JNPT Region 34 hrs
Port Dwell Time*
Train : 79 hrs
Truck : 27 hrs

Mumbai region CFS – JNPT Port Delivery Time
Import – 2.8 hrs
Export – 5.5 hrs

* : Dwell time for Import Cycle

LDB Analytics

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

Challenges

- Mixed Container Movement across railway sidings
- Higher Container Handling time across railway siding
- Higher Port Dwell time for rail bound containers
- Congestions around certain clusters around JNPT region
- Higher Dwell time for Truck bound Export containers
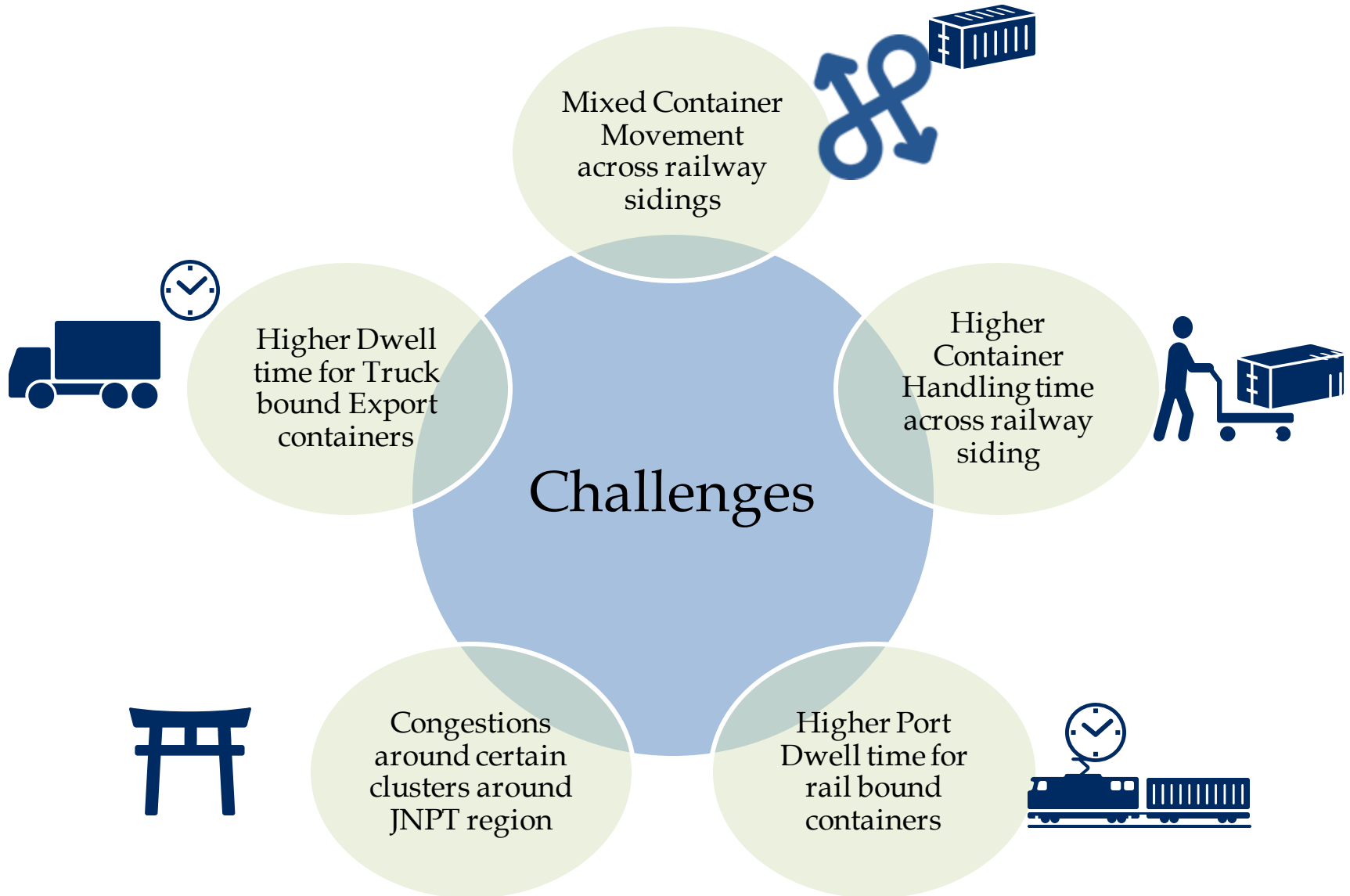
JNPT Challenge-Mixed Container Movement

Rail bound Containers arriving at rail siding of a different port terminal within the JNPT premise and then moving to its destination terminal .

Container dwell time comparison(in hrs.)

102 — Mixed Container Dwell time

34 — Cargo Container Dwell time
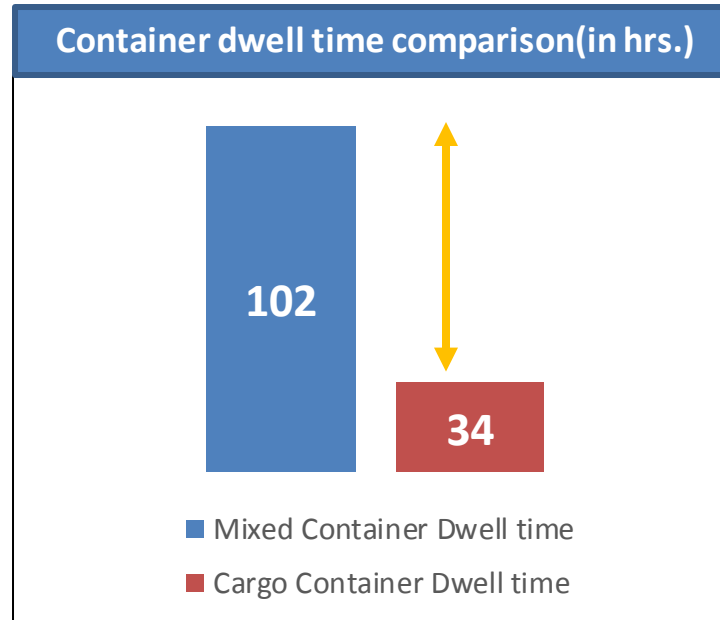
- In terms of Dwell Time, time taken by Mixed containers for clearance at the port terminals is much higher in comparison to the regular movement of Containers.

- 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.

JNPT Challenge...Contd

High Port Dwell time via Truck in Export Cycle

Port Dwell time via Truck

■ **July**   ■ **August**   (in hrs)

63%

33   27.5   **71**   75

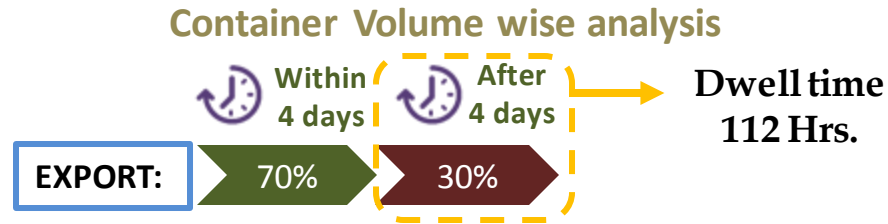**Import**   **Export**
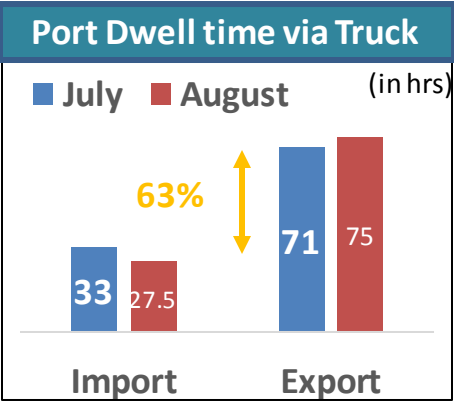
30% of containers are taking > 4 days for clearance and having a dwell time of 112 hrs leading to overall export port dwell time

Container Volume wise analysis

Within 4 days   **After 4 days**   → **Dwell time 112 Hrs.**

EXPORT: 70%   30%

Pre-arrival of the Containers at for Export journey leading to increase in Port dwell time

Higher Container Handling time across Rail siding of Port terminals

Below figure depicts the container handling time for rail bound containers in export and import cycle

JNPT

Import Cycle   **30 hrs** →

← Export Cycle   **19.5 hrs**

Railway Siding Out

Average time taken

JNPT Challenge...Contd
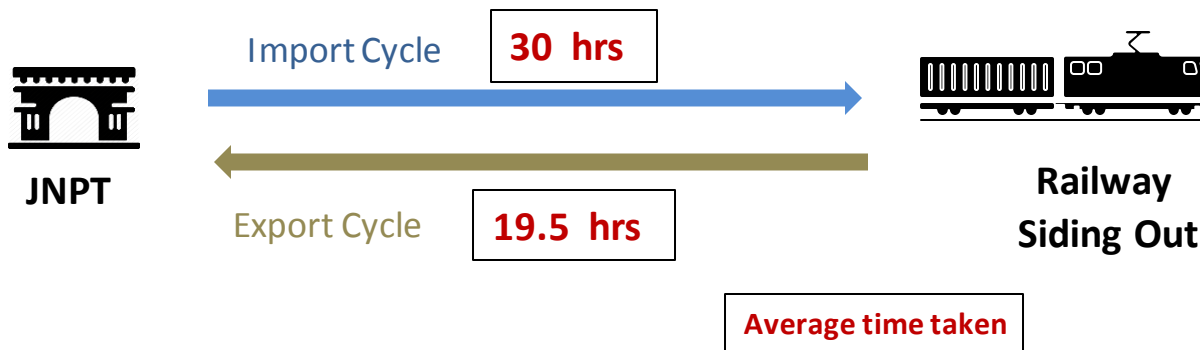
High CFS to Port delivery time caused by congestion

Cluster with high congestion from last 4 months (May'17 to August'17)

Bhendkhal area, Khopate road

Sonari area,JNPT road

Salva apta rd area, Bangalore highway

Congestion in Export cycle		
JNPT Terminal	July'17	August'17
GTI	High	High
JNPCT	Medium	High
NSICT	Medium	High
NSIGT	High	High

High Port Dwell time via Train

Port Dwell time for August'17 (in hrs)

■ Train ■ Truck

	Train	Truck
Import	97	27.5
Export	113	75

Container Volume wise analysis

Overall JNPT

	Within 5 days	After 5 days
EXPORT:	54.7%	44.3%
IMPORT	67%	33%
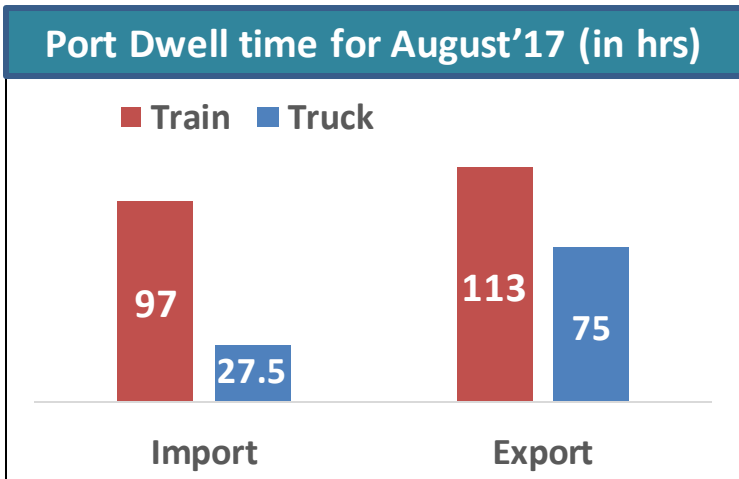
More than 50% of containers taking > 5 days for clearance

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5 % of rail bound containers leading to high container handling time at GTI terminal in JNPT

GTI terminal's container handling time of rail bound containers is as below

GTI Terminal

GTI Terminal → Import Cycle → Railway Siding Out

Average Time : 31 hrs
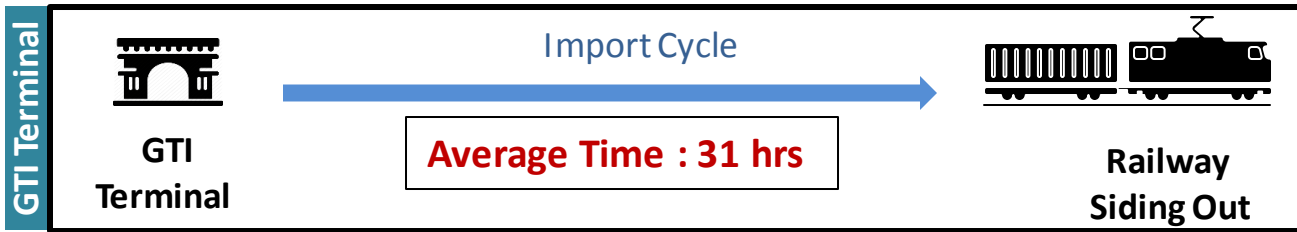
Container volume handled :
Hour wise

95 %

5 %
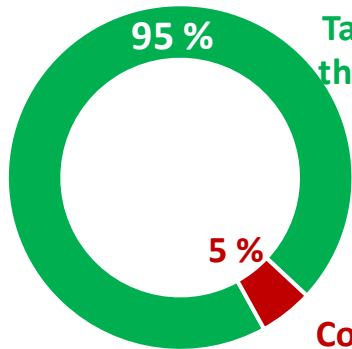
Container Taking less than 70 hrs

For 95% of container

GTI Terminal → Railway Siding Out

Average time
7.3 hrs

Containers Taking More than 70 hrs

For 5% of container

GTI Terminal → Railway Siding Out

Average time
477 hrs
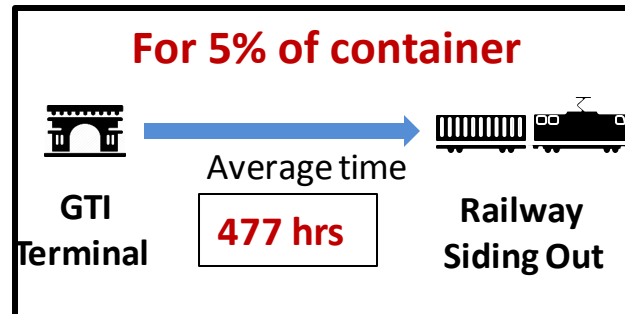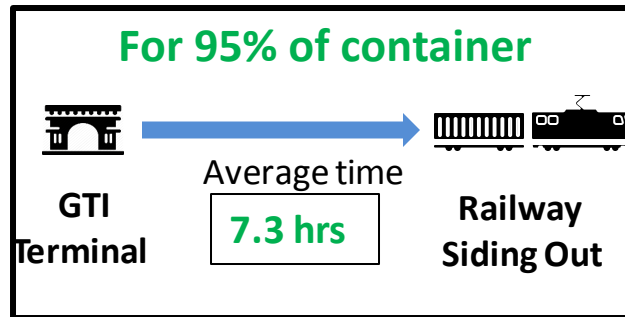
Key Findings- Avg Lead time improved- Aurangabad region

The ICD lead time for import cycle for Aurangabad region has improved by 15 % as compared to the previous month

ICD Lead time (Import)

16.1 (July'17) → 13.7 (August'17) — **15%**

■ July'17 ■ August'17

Port Dwell Time Impoved by **24%**

Port to ICD Delivery Time improved by **36%**

ICD Dwell Time improved by **8%**

Contributing Factors
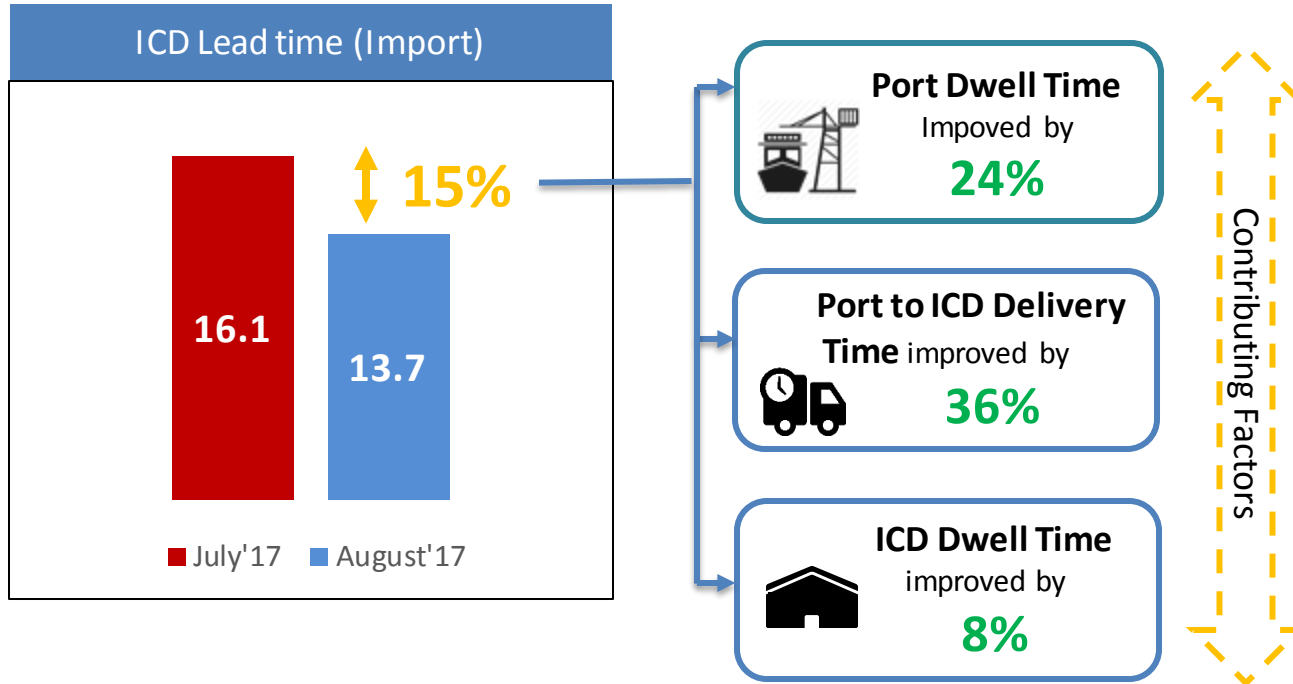
A major improvement of 36% is observed in the Port to ICD Delivery time of this month when compared to the previous month.

Calculation :

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

NSICT & NSIGT Port dwell **NSICT** **12.5%** **NSIGT** **28%**	NSICT terminal port dwell time via truck reduced to 28 hrs this month from 32 hrs last month and NSIGT dwell time reduced to 28 hrs from 39 hrs last month
JNPT Port terminals container clearance via train,	Port container clearance process via train has improved its performance from last month, 67% of the containers in export cycle while 54.7% of containers in import cycle were cleared before 5 days
Top Performers	Port Terminals : Adani Mundra Container Terminal (AMCT) – Dwell time 24 hrs CFS : MICT CFS, Mundra– Dwell time 52 hrs ICD : CMA CGM Agencies ICD, Dadri – Dwell Time 92 Hrs

Congestion Index	• There has been a decrease in traffic congestion around
	   • **Plaspa area by 70 %**
	   • **Salva apta rd area,** by **21%**
	   from past month in import cycle

Speed Index	Speed between two toll plaza has increased this month at 5 points • JNPT - Khalapur - **5%** • Charoti - Boriach - **3.5%** • Kishangarh – Daulatpura **-2.8%** • Dhule - Khalghat - **3.8%**

Low Performers for month of Aug'17

Low performer of month of Aug'17 Dwell Time

Port Terminal : NSICT	61 hrs
CFS : Honey Comb CFS, Mundra	118 hrs
ICD : CWC Patparganj ICD	169 hrs

NSIGT Port terminal container clearance via train,

At NSIGT port terminal, 45% of the containers in export cycle while 54% of containers in import cycle were cleared after 5 days

Congestion Index

In import cycle high traffic congestion is spotted around the following areas:
- **Chirle area , JNPT road**

High congestion in Export Cycle

CFS-Port Congestion in export cycle has increased at the following Port terminal:
- JNPCT NSICT

LDB Analytics- Port Dwell Time Analysis

JNPT IMPORT

Port Dwell time – Import Cycle via Train for August 17

Dwell Time : **79** hrs

Port Dwell time – Import Cycle via Truck for August 17

Dwell Time : **27 hrs**

JNPT EXPORT

Port Dwell time – Export Cycle via Train for August 17

Dwell Time : **113** hrs

Port Dwell time – Export Cycle via Truck for August 17

Dwell Time : **79 hrs**

JNPT Terminals: IMPORT

Port Dwell time Import Cycle via Train for August 17

Terminal	Dwell time (in Hrs)
GTI	71
JNPCT	70
NSICT	86
NSIGT	128

Port Dwell time Import Cycle via Truck for August 17

Terminal	Dwell time (in Hrs)
GTI	25
JNPCT	29
NSICT	28
NSIGT	28

JNPT Terminals: EXPORT

Port Dwell time Export Cycle via Train for August 17

Terminal	Dwell time (in Hrs)
GTI	114
JNPCT	117
NSICT	106
NSIGT	116

Port Dwell time Export Cycle via Truck for August 17

Terminal	Dwell time (in Hrs)
GTI	84
JNPCT	78
NSICT	71
NSIGT	66

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JNPT region : Average dwell time of refrigerated container at port terminal - August'17

Refrigerated Container Dwell time (August'17)	
Port Terminals	**Dwell Time (Hrs)**
GTI	71
JNPCT	50
NSICT	52
NSIGT	50

Refrigerated Container Volume (in %)

3.5%	1.9%	8.9%	2.3%
GTI	JNPCT	NSICT	NSIGT
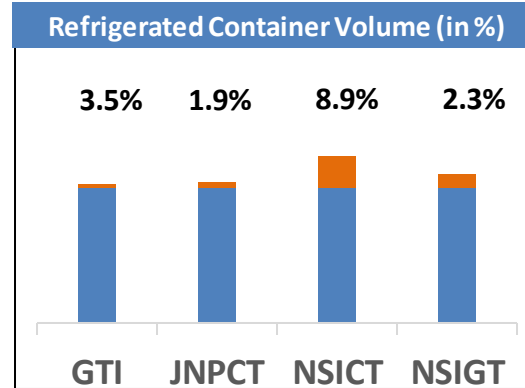
APSEZ region : The below table shows the average dwell time of refrigerated container at port terminal for the month of August'17

Refrigerated Container Dwell time (August'17)	
Port Terminals	Dwell Time (Hrs)
MICT	32
AMCTTL	32.5
AICT	214
AMCT	17.6
AHPPL	411

Refrigerated Container Volume (in %)

1.8%	0.9%	1.5%	1.1%
MICT	AMCTTL	AICT	AMCTTL	AHPPL
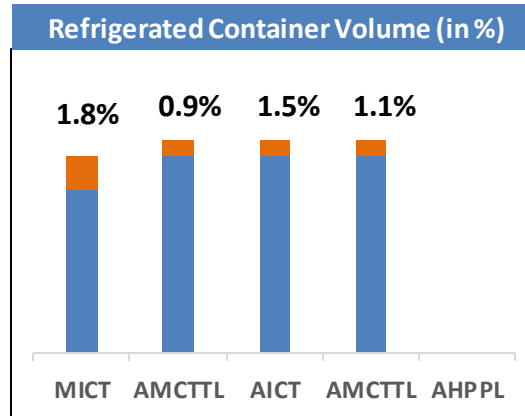
■ Refrigerated container

LDB Analytics- Port Performance Index

Port Terminal Performance Index for August'17

Quadrant : II
High performance quadrant

Quadrant : I

Container Volume — High

GTI

Low

High

Dwell Time

JNPCT

Quadrant : III

low performance quadrant

Quadrant : IV

low
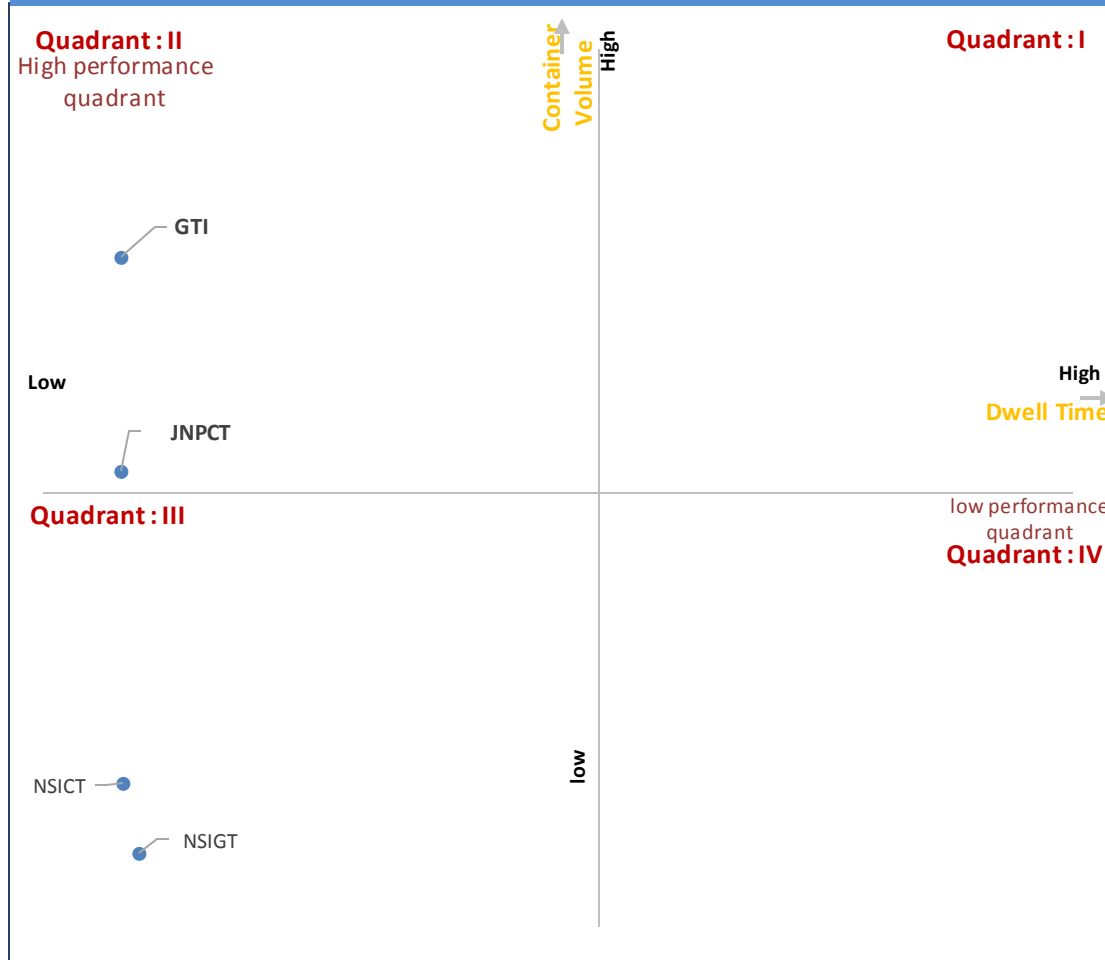
NSICT

NSIGT

NSICT	Nhava Sheva International Container Terminal
JNPCT	Jawaharlal Nehru Port Container Terminal
NSIGT	Nhava Sheva India Gateway Terminal
GTI	Gateway Terminals India

ICD Performance Index for August'17

CFS Performance Index for August'17
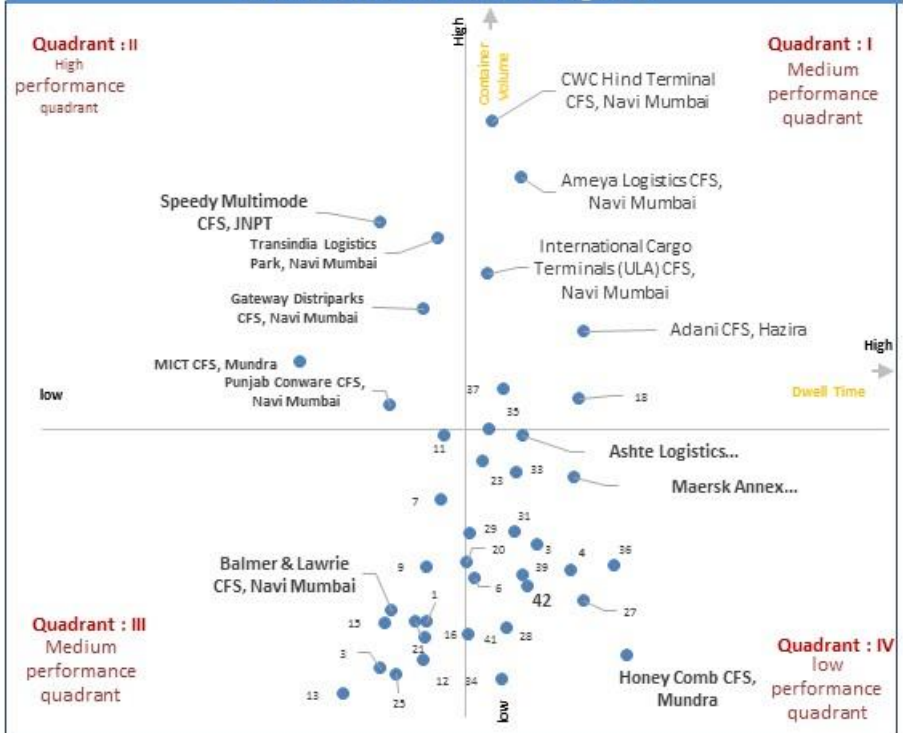
No.	Name	No.	Name
1	Adani CFS Eximyard, Mundra	25	Maharashtra State Corp CFS
3	All Cargo Logistics CFS, Navi Mumbai	27	Mundhra CFS, Mundra
4	AllCargo CFS, Mundra	28	Navkar Corporation Yard 1 CFS, Panvel
6	APM (Maersk India) CFS, Navi Mumbai	29	Navkar Corporation Yard 2 CFS, Panvel
7	Apollo Logisolutions CFS, Panvel	30	Navkar Corporation Yard 3 CFS, Panvel
9	Ashutosh CFS, Mundra	31	Ocean Gate CFS, Panvel
11	Continental Warehousing CFS, Navi Mumbai	32	Punjab Conware CFS, Navi Mumbai
12	CWC CFS, Mundra	33	Saurashtra CFS, Mundra
13	CWC Dronagiri CFS, Navi Mumbai	34	SBW Logistics CFS, Navi Mumbai
15	CWC Impex Park CFS, Navi Mumbai	35	Seabird CFS, Hazira
16	Dronogiri Rail Terminal CFS, Navi Mumbai	36	Seabird CFS, Mundra
17	Gateway Distriparks CFS, Navi Mumbai	37	Seabird CFS, Navi Mumbai
18	Hind Mundra Terminals CFS, Mundra	39	TG Terminals CFS, Mundra
20	Indev Logistics CFS, Panvel	40	Transindia Logistics Park, Navi Mumbai
21	International Cargo Terminal CFS	41	Transworld CFS, Mundra
23	JWC Logistics Park CFS	42	Vaishno logistic yard CFS

LDB Analytics- Congestion Analysis

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

Cluster 8
Taloja, Navi Mumbai

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

Congestion Analysis : Port & CFS Movement

Scale : ■ High Congestion ▨ Medium Congestion ▨ Low Congestion

Note : Congestion is measured w.r.t actual time taken to cover the respective distance between clusters and terminals,

LDB Analytics- Congestion Analysis- Toll Plaza

The below table shows all the toll plazas covered under DLDS , the average speed from **Bharthan to KIshangarh** and **Boriach to Barthan** has decreased from the previous month showing the signs of traffic congestion in the Barthan area. Speed has mostly remain consistent or increased in other areas.

Avg. Travel Time & Speed between Toll Plazas (August'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	6	16	13
JNPT	Khalapur	60	3	20	21
Khaniwade	Charoti	50	1.4	36	31
Charoti	Boriach	126	4.5	28	29
Boriach	Bharthan	142	4	34	34
Bharthan	Kishangarh	686	29	23	22
Bharthan	Vasad	60	1.7	36	36
Kishangarh	Daulatpura	128	3.7	35	36
Dhule	Khalghat	186	7	26	27

LDB Analytics- Container Heatmap Via Truck- JNPT

Heat Map :JNPCT Port Terminal
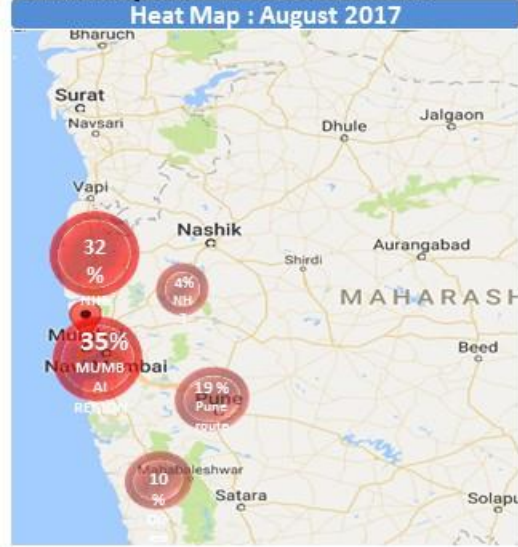
Heat Map : August 2017

Region	July'17	August'17
Mumbai Region	59%	35%
Pune	14%	19%
NH8	14%	32%
NH3	3%	4%
Others	10%	10%

The heat map on the left depicts the movement of containers in and around the Mumbai region. Container movement has increased on NH8 and Pune region.

HEAT MAP : NSICT Port Terminal

Heat Map : August 2017

Region	July'17	August'17
Mumbai Region	51%	23%
Pune	19%	25%
NH8	16%	36%
NH3	4%	6%
Others	10%	10%

The heat map on the left depicts the movement of containers in and around the Mumbai region. Container movement has increased on NH8 and Pune region.

Heat Map: Overall JNPT

Heat Map : August 2017

Heat Map : August 2017
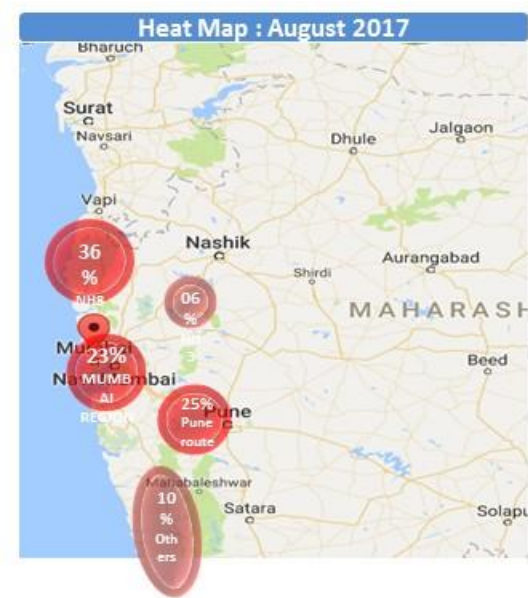
Region	July'17	August'17
Mumbai Region	67%	35%
Pune	12%	25%
NH8	10%	27%
NH3	1%	3%
Others	10%	10%

Heat Map :APM Port Terminal

JNPT

Refrigerated Container Analysis

JNPT region : The below table shows the average dwell time of refrigerated container at port terminal for the month of August'17

Refrigerated Container Dwell time (August'17)	
Port Terminals	Dwell Time (Hrs)
GTI	71
JNPCT	50
NSICT	52
NSIGT	50

Refrigerated Container Volume (in %)

GTI 3.5% JNPCT 1.9% NSICT 8.9% NSIGT 2.3%

LDB Operations

APSEZ, Mundra

Terminal Name	
	AICTPL (CT3)
	AICTPL (CT4)
	MICTPL
	AMCT (CT2)

JNPT, Mumbai

Terminal Name	
	GTI
	JNPCT
	NSICT
	NSIGT
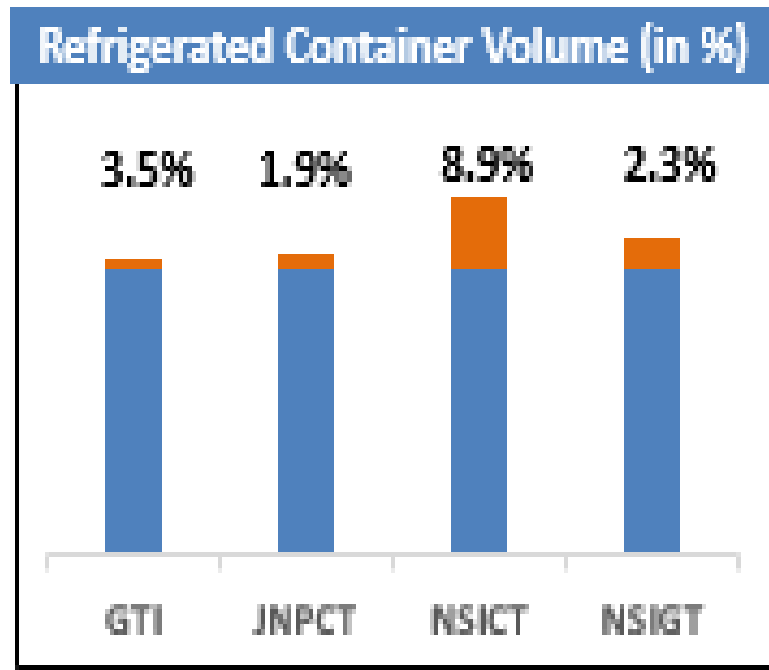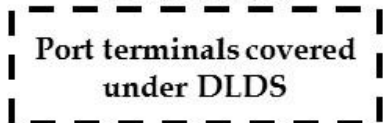
Ports where LDB service is Operational

Ports to be covered in next phase

Ports to be covered in the Final Phase

Port terminals covered under DLDS

Mundra International Container Terminal

Adani Hazira Port

APM Terminals Pipavav

JNPT

Haldia Kolkata Port

Krishnapatnam Port

Kattupalli International container terminal

Chennai Port

Tuticorin Port

DMIC Region (Western Corridor)

Eastern Corridor

Southern Corridor
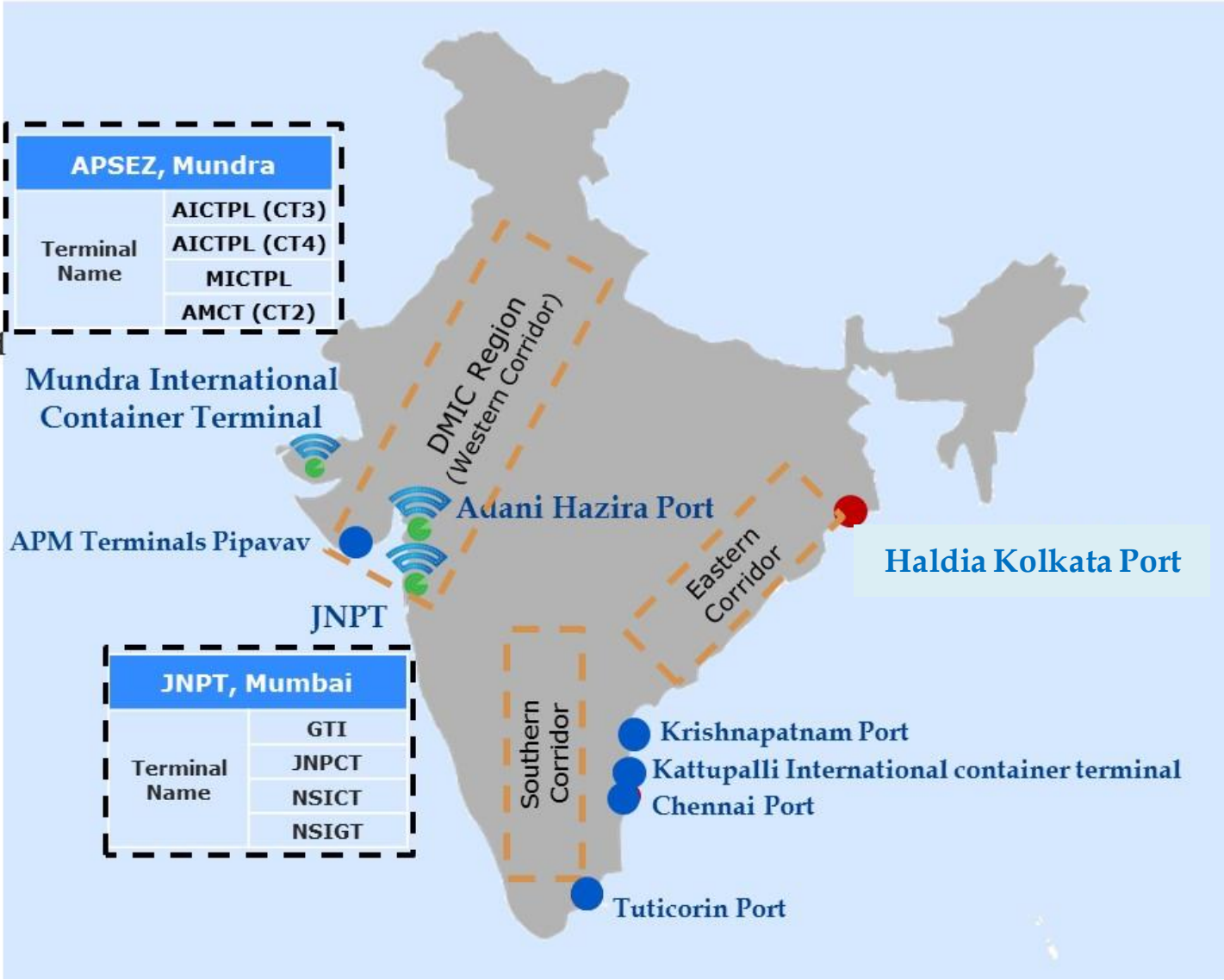
The ICDs and CFSs near JNPT which are currently deployed are shown below:
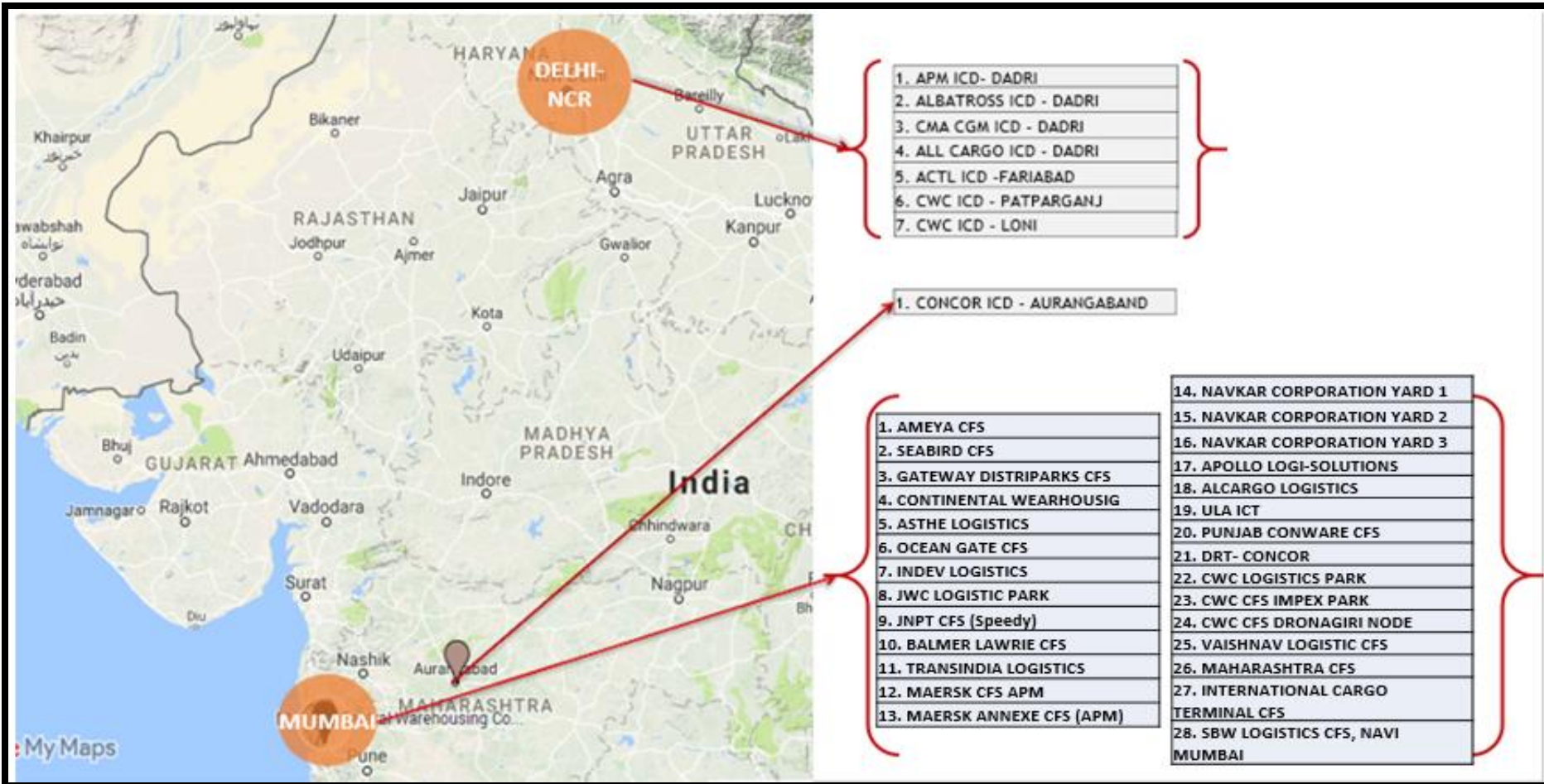
By end of this Quarter we would be covering all the major CFS in and around JNPT.

Container Traffic Movement Trends in JNPT

JNPT Container Volume Data (Based on MUC collection) (July 2016-Aug 2017)
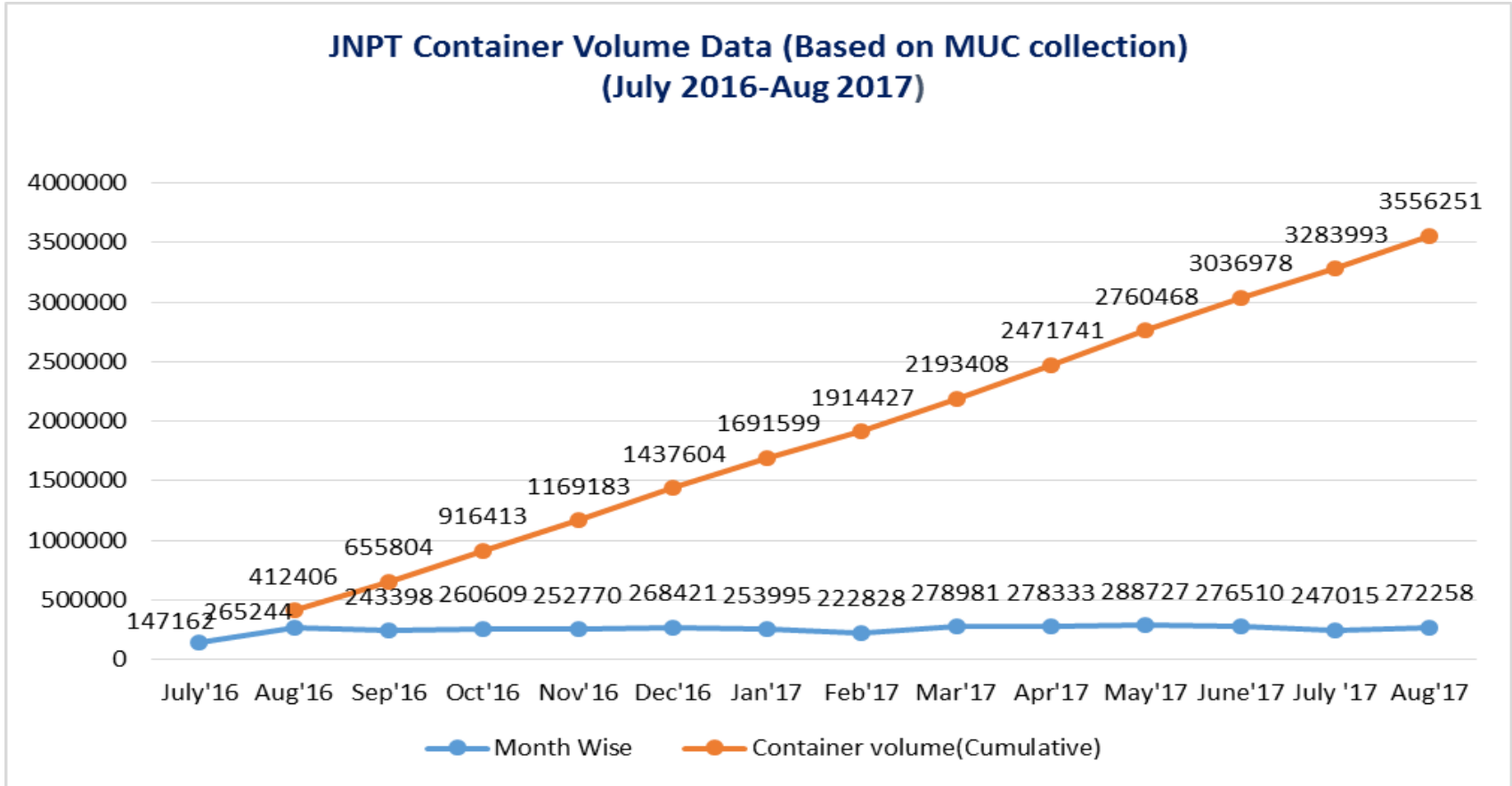
Increase of EXIM container volume across the Port terminals of JNPT for month of August 2017

DLDS Operations-Toll Plazas

All 12 Operational Toll Plazas in western corridor covering NH3,NH8 & Mumbai – Pune expressway Route

Sr. No	Toll Plaza Name	State	NH
1	Charoti	MH	8
2	GVK Kishangarh	Rajasthan	8
3	LnT VBTL	Gujarat	8
4	Daulatpura	Rajasthan	8
5	Boriyach	Gujarat	8
6	Kharegaon (Dismantled)	MH	3
7	Dhule	MH	3
8	Khaniwade	MH	8
9	Khalapur	MH	MSRDC
10	Kalyan	MH	MSRDC
11	Vasad	Gujarat	8
12	Khalghat	MP	3

LDB Service Roadmap

LDB Service Roadmap

- LDB team is in discussion with Port Authorities to expand the LDB services to international maritime water. The integration document for Vessel tracking Integration has been shared with IT team of Port terminals for providing required information.

- Discussion with Shipping Lines to enable them leverage effectively.

ANNEXURE DLDS
AUGUST MONTH

Detailed Analytics

JNPT Analysis

PORT Analysis

ICDs Analysis

CFSs Analysis

Congestion Analysis

HEAT MAP

JNPT Port Import Via Train

PORT IMPORT via TRAIN

The Port Dwell time data for train movement in import cycle is depicted in the following table.

Port	July'17 (in Hrs)	August'17 (in Hrs)
APM	NA	71
JNPCT	66	70
NSICT	64	86
NSIGT	162	128

The below table depicts the average port dwell time in collation with individual dwell time of respective ports. The industry best dwell time for Import cycle is 30 hrs.

IMPORT CYCLE - PORT DWELL TIME(IN HOURS) (TRAIN)

■ August'...

71	70	86	128
APM	JNPCT	NSICT	NSIGT

Industry Best :30 hrs.

Container Volume Handled : Day wise (via train)

Port Terminals

Port Handling limit

	Within 2 days	Within 2-5 days	Within 5-8 days	More than 8 days
GTI :	37%	34%	11%	18%
JNPCT:	31%	39%	12%	18%
NSICT:	28%	36%	16%	19%
NSIGT:	15%	31%	13%	41%
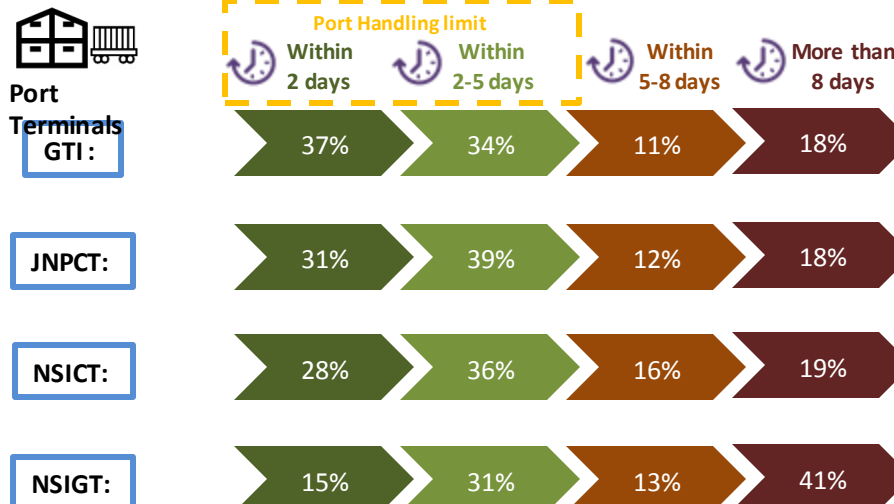
PORT IMPORT via TRUCK

The Port Dwell time for truck movement in import cycle is depicted in the following table.

Port	July'17 (in Hrs)	August'17 (in Hrs)
APM	-	25
JNPCT	29	29
NSICT	32	28
NSIGT	39	28

The below table depicts the average port dwell time in collation with individual dwell time of respective port terminals. The industry best dwell time for Import cycle is 30 hrs.

IMPORT CYCLE - PORT DWELL TIME(IN HOURS) (TRUCK)

Augu...

Industry Best :30 hrs.

APM 25, JNPCT 29, NSICT 28, NSIGT 28
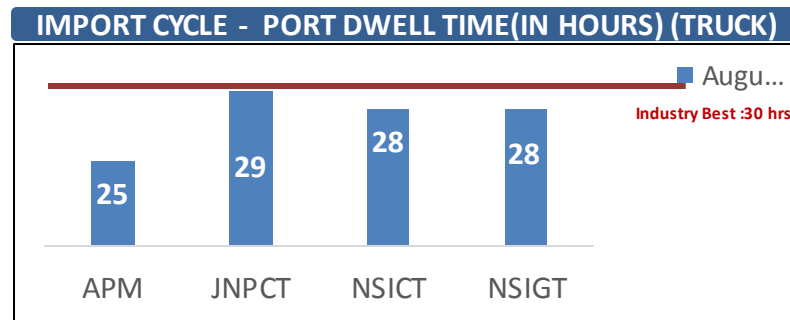
PORT EXPORT via TRAIN

The Port Dwell time for train movement in export cycle is depicted in the following table.

Port	July'17(in hrs)	August'17(in hrs)
APM	-	114
JNPCT	133	117
NSICT	122	106
NSIGT	109	116

The below graph depicts the average port dwell time in collation with individual dwell time of respective ports

EXPORT CYCLE – PORT DWELL TIME(IN HOURS) (TRAIN)

■ August...

Average : 113 hrs.

APM	JNPCT	NSICT	NSIGT
114	117	106	116

Container Volume Handled : Day wise (via train)

Port Terminals

Port Handling limit

	Within 2 days	Within 2-5 days	Within 5-8 days	More than 8 days
GTI :	10%	44%	37%	09%
JNPCT:	12%	39%	38%	11%
NSICT:	14%	44%	31%	11%
NSIGT:	13%	42%	34%	11%

PORT EXPORT via TRUCK
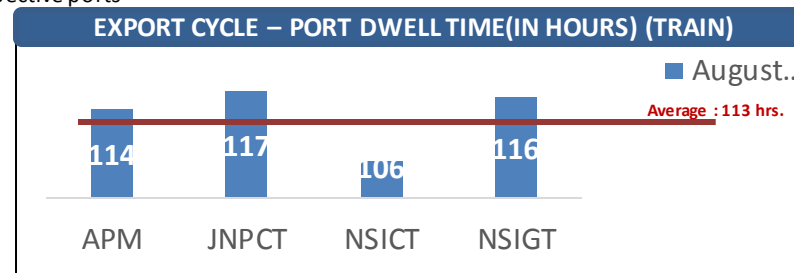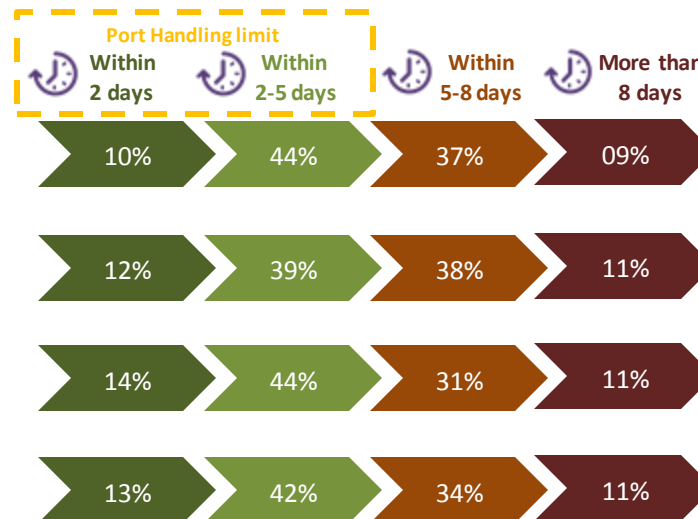
The Port Dwell time for truck movement in export is depicted in the following table.

Port	July'17(in hrs)	August'17(in hrs)
APM	-	84
JNPCT	76	78
NSICT	66	71
NSIGT	72	66

The below table depicts the average port dwell time in collation with individual dwell time of respective ports

EXPORT CYCLE – PORT DWELL TIME(IN HOURS) (TRUCK)

Augus...

Average :75 hrs.

84	78	71	66
APM	JNPCT	NSICT	NSIGT

The below table shows the average dwell time of refrigerated container at port terminal for the month of August'17

Refrigerated Container Dwell time (August'17)	
Port Terminals	**Dwell Time (Hrs)**
GTI	71
JNPCT	50
NSICT	52
NSIGT	50

Refrigerated Container Volume (in %)

3.5%	1.9%	8.9%	2.3%
GTI	JNPCT	NSICT	NSIGT
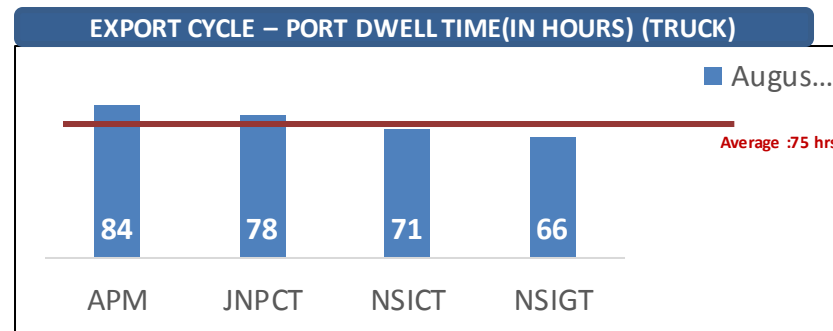
■ Refrigerated container

Refrigerated containers arrives and depart from port terminals on specific scheduled date(s), the below graph shows average refrigerated containers entering and leaving port terminal on a scheduled day for the month of August'17

Container movement : JNPT

Import Cycle :

Below showcase is the container handling time for rail bound containers for import cycle for August'17

GTI

GTI Terminal	Import Cycle → **31 hrs**	Railway Siding Out

JNPCT

JNPCT Terminal	Import Cycle → **22.7 hrs**	Railway Siding Out

NSICT

NSICT Terminal	Import Cycle → **49 hrs**	Railway Siding Out

NSIGT

NSICT Terminal	Import Cycle → **21.7 hrs**	Railway Siding Out
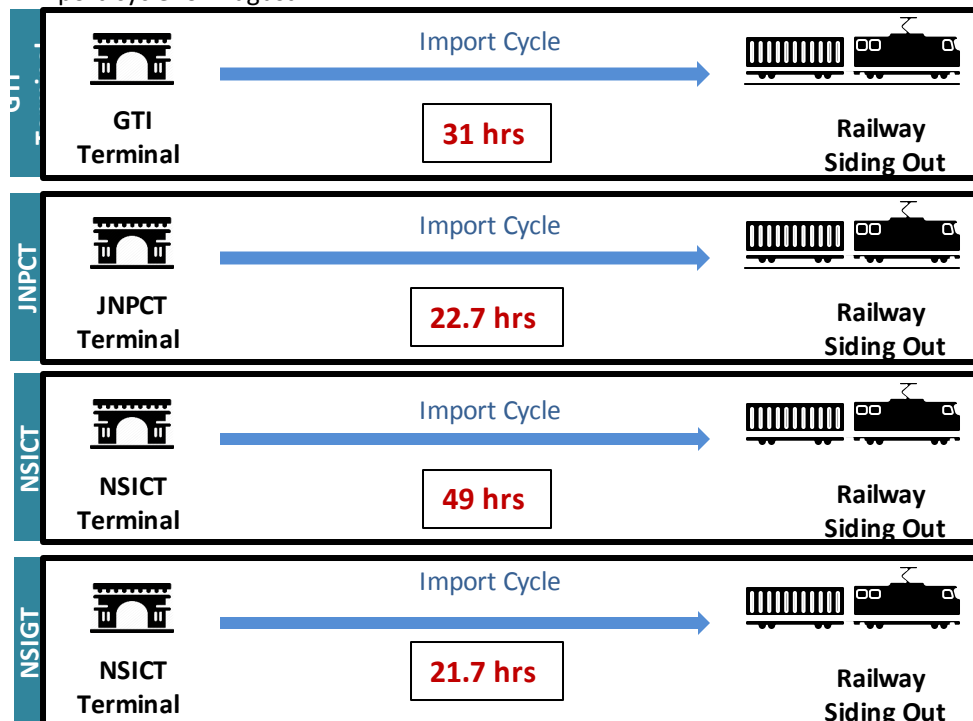
Total Rail bound containers handled per Terminal (Train)	
Port Terminals	Volume handled (in %)
GTI	58%
JNPCT	21%
NSICT	11%
NSIGT	10%

Container movement : JNPT

Export Cycle :

Below showcase is the container handling time for rail bound containers for export cycle for August'17

GTI

Export Cycle

GTI Terminal → **24.4 hrs** → Railway Siding IN

JNPCT

Export Cycle

JNPCT Terminal → **14 hrs** → Railway Siding IN

NSICT

Export Cycle

NSICT Terminal → **18 hrs** → Railway Siding IN

NSIGT

Export Cycle

NSICT Terminal → **26 hrs** → Railway Siding IN
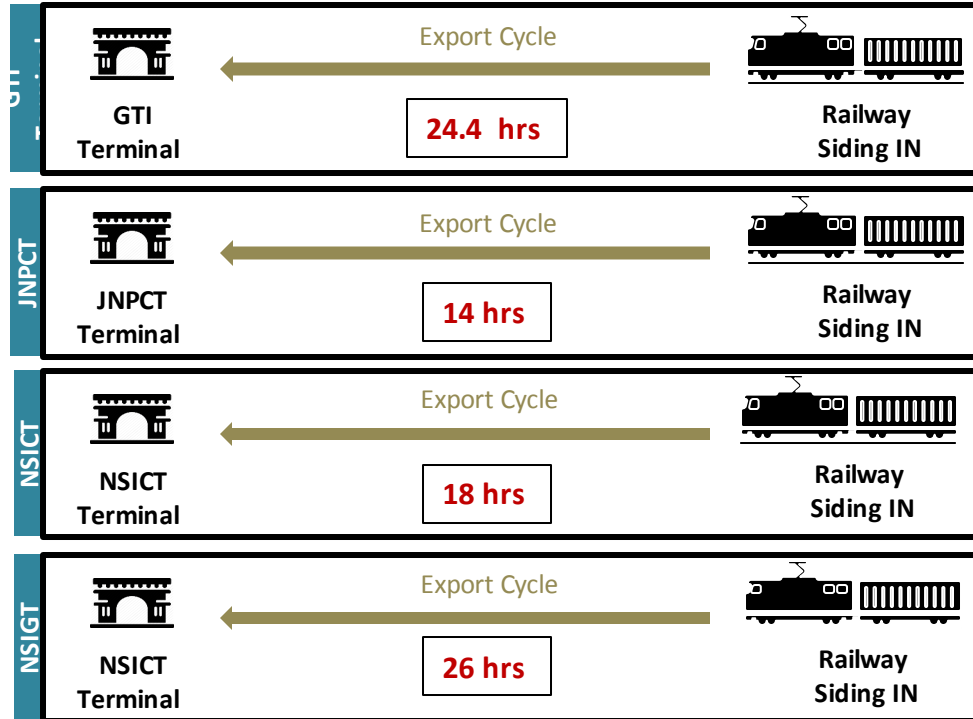
Container Volume Handled by respective Terminal (Train)	
Port Terminals	Volume handled (in %)
GTI	30.5 %
JNPCT	29.9 %
NSICT	32.2 %
NSIGT	7.4 %

ICD DWELL TIME ANALYSIS

The table on the right depicts the dwell of all ICDs for month of July'17 and August'17.

The below graph depicts the average dwell time in collation with individual dwell time of respective ICD,

🔻 **ICD with dwell time above Average dwell time for August'17**

Dwell Time (in Hrs)		
ICD	**July'17**	**August'17**
ACTL ICD 🔻	151	153
Albatross Inland Ports Pvt. Ltd.	151	119
Allcargo Logistics Park ICD Dadri 🔻	163	150
APM Terminals ICD, Dadri	133	120
CMA CGM Agencies ICD, Dadri	102	92
CONCOR ICD 🔻	157	144
CWC Loni 🔻	145	136
CWC Patparganj ICD 🔻	158	169

ICD – DWELL OVERVIEW (IN HRS)

153   119   150   120   92   144   136   169

Avrg. 135 hrs.

ACTL ICD Albatross Inland Ports Allcargo Logistics Park ICD Dadri APM Terminals ICD, Dadri CMA CGM Agencies ICD, Dadri CONCOR ICD CWC Loni CWC Patparganj ICD

■ Aug...
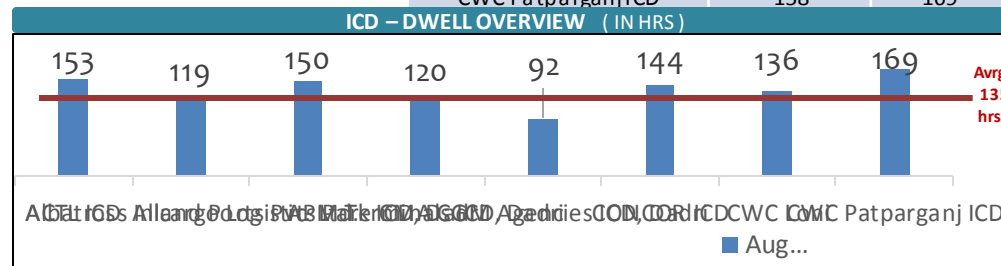
Below table shows the top performing ICD i.e.

Top Performing ICD	
CMA CGM Agencies ICD, Dadri	Dwell Time : 92 hrs.

Below table shows the low performing ICD i.e.

Low Performing ICD	
CWC Patparganj ICD	Dwell Time : 169 hrs.

ICD DELIVERY 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	**August'17**
NCR region	3.5 days
Aurangabad	3.4 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	**August'17**
NCR region	3.09 days
Aurangabad	4.6 days

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	**August'17**
NCR region	12.1 days
Aurangabad	13.7 days

Calculation :

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

7.3.1 CFS DWELL TIME ANALYSIS

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

CFS	July'17	August'17	CFS	July'17	August'17
CFS Dwell Time (in hrs)					
All Cargo Logistics CFS, Navi Mumbai	71	68	International Cargo Terminals (ULA) CFS, Navi Mumbai 🔴	96	90
Ameya Logistics CFS, Navi Mumbai 🔴	104	96	JWC Logistics Park CFS 🔴	94	88
APM (Maersk India) CFS, Navi Mumbai 🔴	93	87	Maharashtra State Corp CFS	93	71
APM (Maersk India) CFS, Navi Mumbai 🔴	93	107	Navkar Corporation Yard 1 CFS, Panvel 🔴	107	93
Apollo Logisolutions CFS, Panvel	92	80	Navkar Corporation Yard 2 CFS, Panvel 🔴	79	86
Ashte Logistics CFS, Panvel 🔴	113	97			
Balmer & Lawrie CFS, Navi Mumbai	98	70	Navkar Corporation Yard 3 CFS, Panvel	87	100
Continental Warehousing CFS, Navi Mumbai	96	81	Ocean Gate CFS, Panvel 🔴	105	95
CWC Dronagiri CFS, Navi Mumbai	67	60	Punjab Conware CFS, Navi Mumbai	87	70
CWC Hind Terminal CFS, Navi Mumbai 🔴	105	91	Seabird CFS, Navi Mumbai 🔴	91	93
CWC Impex Park CFS, Navi Mumbai	77	69	Speedy Multimode CFS, JNPT	68	67
Dronogiri Rail Terminal CFS, Navi Mumbai	84	77	Transindia Logistics Park, Navi Mumbai	71	80
Gateway Distriparks CFS, Navi Mumbai	88	77	Vaishno Logistics CFS, Navi Mumbai 🔴	122	98
			International Cargo Terminal CFS	88	75
Indev Logistics CFS, Panvel 🔴	100	85	SBW Logistics CFS, Navi Mumbai 🔴	92	92

🔴 **CFS with dwell time above Average dwell time for August'17**

The below graph depicts the average dwell time in collation with individual dwell time of respective CFS

Top and Low Performing CFS's w.r.t Dwell Time for August 2017

Below table shows the top performing CFS's

Top Performing CFS's w.r.t Dwell time (August 2017)	
Speedy Multimode CFS, JNPT	Dwell Time : 67 Hrs
All Cargo Logistics CFS, Navi Mumbai	Dwell Time : 68 Hrs

Below table shows the low performing CFS's

Low Performing CFS's w.r.t Dwell time (August 2017)	
APM (Maersk India) CFS, Navi Mumbai	Dwell Time : 107 Hrs
Navkar Corporation Yard 3 CFS, Panvel	Dwell Time : 100 Hrs

CFS DELIVERY TIME ANALYSIS

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

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

AVERAGE DELIVERY TIME (In Hrs)- GTI/APM TO ALL CFS IN MUMBAI					
CFS	July'17	August '17	CFS	July'17	August '17
Speedy Multimode CFS, JNPT	1	2	Indev Logistics CFS, Panvel	3	4
AllCargo Logistics CFS	NA	2	International Cargo Terminals (ULA) CFS, Navi Mumbai	3	3
Ameya Logistics CFS	3	3	JWC Logistics Park CFS	3	3
APM (Maersk India) CFS, Navi Mumbai	NA	2	Maersk Annex (APM)CFS, Navi Mumbai	2	3
Apollo Logisolutions CFS, Panvel	3	5	Maharashtra State Corp CFS	3	2
Ashte Logistics CFS	3	3	Navkar Corporation Yard 1 CFS	NA	3
Balmer & Lawrie CFS, Navi Mumbai	NA	3	Navkar Corporation Yard 2 CFS, Panvel	NA	3
Continental Warehousing CFS	NA	2	Navkar Corporation Yard 3 CFS, Panvel	5	3
CWC Dronagiri CFS, Navi Mumbai	NA	NA	Ocean Gate CFS, Panvel	NA	3
CWC Impex Park CFS, Navi Mumbai	1	2	Punjab Conware CFS, Navi Mumbai	4	2
CWC Hind Terminal CFS, Navi Mumbai	2	2	Seabird CFS	NA	3
Dronagiri Rail Terminal CFS	1	5	Transindia Logistics Park, Navi Mumbai	3	2
Gateway Distriparks CFS	4	3			

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

AVERAGE DELIVERY TIME (In Hrs)- JNPCT TO ALL CFS IN MUMBAI					
CFS	July'17	August '17	CFS	July'17	August '17
Speedy Multimode CFS, JNPT	1	2	Indev Logistics Pvt. Ltd.CFS	4	5
AllCargo Logistics CFS	1	3	International Cargo Terminals & Infrastructure Private Limited-CFS	3	3
Ameya Logistics Pvt. Ltd.	3	4	JWC Logistics Park Ltd CFS	4	3
APM (Maersk India Pvt. Ltd)CFS	2	2	Maersk Annex (APM)CFS	4	3
Apollo Logisolutions Ltd.	4	5	MAHARASHTRA STATE WARE. CORP. CFS	1	1
Ashte Logistics Pvt. Ltd.	3	4	NAVAKAR CORPORATION LTD.,YARD-1 CFS	3	4
Balmer & Lawrie & Co. Ltd.,CFS	2	2	NAVKAR CORPORATION LTD.,YARD-II CFS	3	3
Continental Warehousing (Nhava Sheva) Ltd.	1	2	NAVKAR CORPORATION LTD.YARD-III CFS	3	3
CWC Dronagiri CFS	2	1	Ocean Gate Container Terminals Pvt. Ltd.CFS	4	4
CWC IMPEX PARK CFS	1	2	PUNJAB CONWARE (PW)	2	3
CWC Hind Terminal CFS, Navi Mumbai	2	2	Seabird Marine Services Pvt Ltd.	2	3
Dronagiri Rail Terminal CFS	1	2	Transindia Logistics Park Pvt, Ltd CFS	2	3
Gateway Distriparks Ltd	3	4	Vaishno Logistics Yard CFS	1	2
SBW Logistics CFS , Navi Mumbai	NA	5	International Cargo Terminal CFS	NA	2

DLDS
Logistics Redefined
DMICDC LOGISTICS DATA SERVICES LTD

CFS DELIVERY TIME ANALYSIS

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	July'17	August '17	CFS	July'17	August '17
Speedy Multimode CFS, JNPT	1	2	Indev Logistics Pvt. Ltd.CFS	3	5
AllCargo Logistics CFS	2	2	International Cargo Terminals & Infrastructure Private Limited-CFS	2	2
Ameya Logistics Pvt. Ltd.	3	3	JWC Logistics Park Ltd CFS	3	3
APM (Maersk India Pvt. Ltd)CFS	2	3	Maersk Annex (APM)CFS	4	2
Apollo Logisolutions Ltd.	3	4	MAHARASHTRA STATE WARE. CORP. CFS	1	2
Ashte Logistics Pvt. Ltd.	3	3	NAVAKAR CORPORATION LTD.,YARD-1 CFS	3	3
Balmer & Lawrie & Co. Ltd.,CFS	2	2	NAVKAR CORPORATION LTD.,YARD-II CFS	3	3
Continental Warehousing (Nhava Sheva) Ltd.	1	2	NAVKAR CORPORATION LTD.YARD-III CFS	4	3
CWC Dronagiri CFS	1	NA	Ocean Gate Container Terminals Pvt. Ltd.CFS	3	4
CWC IMPEX PARK CFS	1	3	PUNJAB CONWARE (PW)	5	3
CWC Hind Terminal CFS, Navi Mumbai	2	2	Seabird Marine Services Pvt Ltd.	2	3
Dronagiri Rail Terminal CFS	1	2	Transindia Logistics Park Pvt, Ltd CFS	2	3
Gateway Distriparks Ltd	3	3	Vaishno Logistics Yard CFS		2
SBW Logistics CFS , Navi Mumbai	NA	6	International Cargo Terminal CFS	NA	2

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					
CFS2	July'17	August '17	CFS	July'17	August '17
Speedy Multimode CFS, JNPT	1	2	Indev Logistics Pvt. Ltd.CFS	4	4
AllCargo Logistics CFS	1	NA	International Cargo Terminals & Infrastructure Private Limited-CFS	3	3
Ameya Logistics Pvt. Ltd.	3	3	JWC Logistics Park Ltd CFS	4	3
APM (Maersk India Pvt. Ltd)CFS	2	2	Maersk Annex (APM)CFS	4	3
Apollo Logisolutions Ltd.	4	4	MAHARASHTRA STATE WARE. CORP. CFS	1	2
Ashte Logistics Pvt. Ltd.	3	3	NAVAKAR CORPORATION LTD.,YARD-1 CFS	3	2
Balmer & Lawrie & Co. Ltd.,CFS	2	3	NAVKAR CORPORATION LTD.,YARD-II CFS	3	2
Continental Warehousing (Nhava Sheva) Ltd.	1	1	NAVKAR CORPORATION LTD.YARD-III CFS	3	3
CWC Dronagiri CFS	2	1	Ocean Gate Container Terminals Pvt. Ltd.CFS	4	3
CWC IMPEX PARK CFS	1	2	PUNJAB CONWARE (PW)	2	3
CWC Hind Terminal CFS, Navi Mumbai	2	2	Seabird Marine Services Pvt Ltd.	2	2
Dronagiri Rail Terminal CFS	1	2	Transindia Logistics Park Pvt, Ltd CFS	2	3
Gateway Distriparks Ltd	3	3	Vaishno Logistics Yard CFS	1	2
SBW Logistics CFS , Navi Mumbai	NA	5	International Cargo Terminal CFS	NA	2

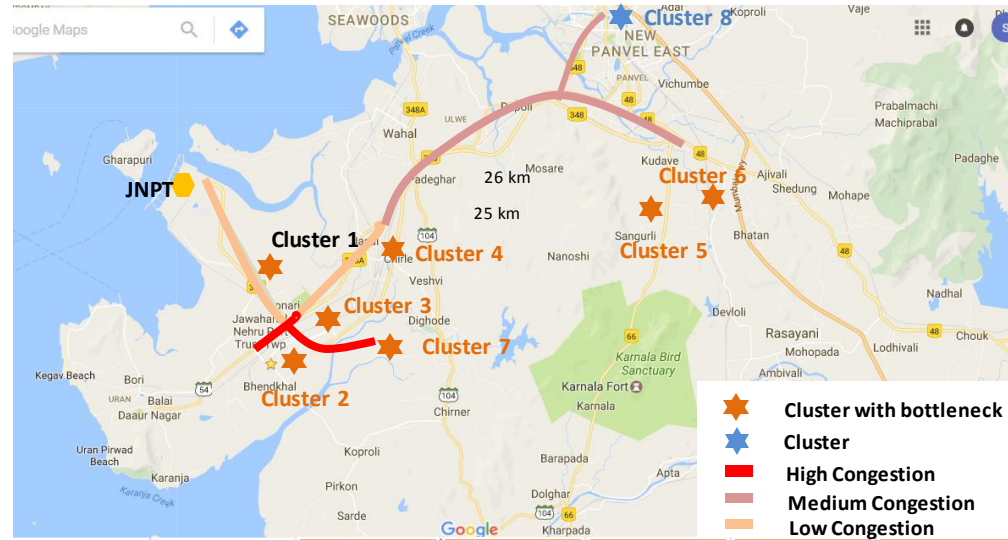# CFS - AVERAGE DELIVERY TIME – all CFS in Mumbai TO JNPT Port

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

Month of August'17				
CFS Out Port in (Export Cycle in Hrs)				
CFS	GTI	JNPCT	NSICT	NSIGT
Gateway Distriparks CFS, Navi Mumbai	5	4	2	4
Continental Warehousing CFS, Navi Mumbai	5	3	2	6
Seabird CFS, Navi Mumbai	11	4	4	5
Ameya Logistics CFS, Navi Mumbai	5	5	3	5
Ashte Logistics CFS, Panvel	9	4	5	NA
NAVAKAR CORPORATION LTD., YARD-1 CFS	10	10	6	22
Apollo Logisolutions CFS, Panvel	12	8	5	5
AllCargo CFS, Navi Mumbai	14	4	NA	10
Navkar Corporation YARD-II CFS	6	7	7	NA
Punjab Conware CFS, Navi Mumbai	5	4	5	3
Dronogiri Rail Terminal CFS, Navi Mumbai	8	4	3	NA
CWC Hind Terminal CFS, Navi Mumbai	6	3	2	5
Navkar Corporation YARD-III CFS	5	5	5	5
International Cargo Terminals (ULA) CFS, Navi Mumbai	5	8	5	11
Jawaharlal Nehru Port CFS (Speedy Multimode Ltd CFS)	4	3	2	4
Balmer & Lawrie CFS, Navi Mumbai	4	4	4	5
APM (Maersk India) CFS, Navi Mumbai	4	3	3	5
JWC Logistics Park CFS	7	4	4	10
Ocean Gate CFS, Panvel	5	7	3	NA
Indev Logistics Pvt. Ltd	9	5	NA	NA
Transindia Logistics Park Pvt, Ltd	6	4	3	8
CWC Impex Park CFS, Navi Mumbai	11	35	5	NA
CWC Dronagiri CFS, Navi Mumbai	5	4	NA	5
Vaishno Logistics CFS, Navi Mumbai	8	3	3	2
Maharashtra State Corp CFS	13	3	5	4
Maersk Annex (APM)CFS, Navi Mumbai				

N.A : Not available   Note : specific CFS operates with specific Port terminals

7.3.4 1 Congestion Analysis around Mumbai Region

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

Cluster 8
Taloja, Navi Mumbai

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

7.3.4 2 Congestion Analysis : JNPT Terminal :

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 :-

Scale : ▮ High Congestion ▮ Medium Congestion ▮ Low Congestion

Note : Congestion is measured w.r.t actual time taken to cover the respective distance between clusters and terminals(Port to CFS)

CFS Cluster : GTI Terminal

Base on container movement from port to CFS in Mumbai region, 26 CFS's have been grouped into 7 Clusters on the basis of their vicinity.
Below table shows all the clusters and the relevant data for GTI terminal

- In export cycle the GTI terminal is having congestion for traffic from cluster 2, cluster 3, cluster 6, cluster 7
- In import cycle the movement of traffic towards cluster 5, cluster 6 is facing congestion

GTI terminal for month of August'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	0.95	6.9
Cluster 2	6	13	2.34	5.2
Cluster 3	6	11	1.68	4.94
Cluster 4	1	13	1.08	7.91
Cluster 5	2	25	3.19	6.04
Cluster 6	6	25	3.59	7
Cluster 7	4	12	2.3	5.6
Cluster 8	1	34	3.14	

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**

CFS Cluster : JNPCT Terminal

Below table shows all the clusters and the relevant data for JNPCT terminal

- In export cycle the JNPCT terminal is having traffic congestion from cluster 2, cluster 6

JNPCT terminal for month of August'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	0.71	2.7
Cluster 2	6	13	2.48	3.5
Cluster 3	6	11	1.8	3.98
Cluster 4	1	13	1.18	3.23
Cluster 5	2	25	3.55	4
Cluster 6	6	25	3.88	6.8
Cluster 7	4	12	2.59	4.5
Cluster 8	1	34	4.6	

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**

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

CFS Cluster : NSICT Terminal

Below table shows all the clusters and the relevant data for NSICT terminal

- Cluster 2 and Cluster 6 have shown congestion in Export Cycle for NSICT Terminal
- In Import cycle the NSICT terminal is having traffic congestion at Cluster 5 and Cluster 6

NSICT terminal for month of August'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	0.63	1.8
Cluster 2	6	13	1.95	2.21
Cluster 3	6	11	1.37	2.24
Cluster 4	1	13	1.29	1.79
Cluster 5	2	25	2.82	3.82
Cluster 6	6	25	3.11	5.4
Cluster 7	4	12	2.36	3
Cluster 8	1	34	4.25	

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**

CFS Cluster : NSIGT Terminal

Below table shows all the clusters and the relevant data for NSIGT terminal

- Cluster 5 and cluster 6 have shown congestion in Import cycle at NSIGT Terminal this month
- Cluster 2, Cluster 5 and Cluster 6 have shown traffic congestion in export cycle for reaching NSIGT terminal
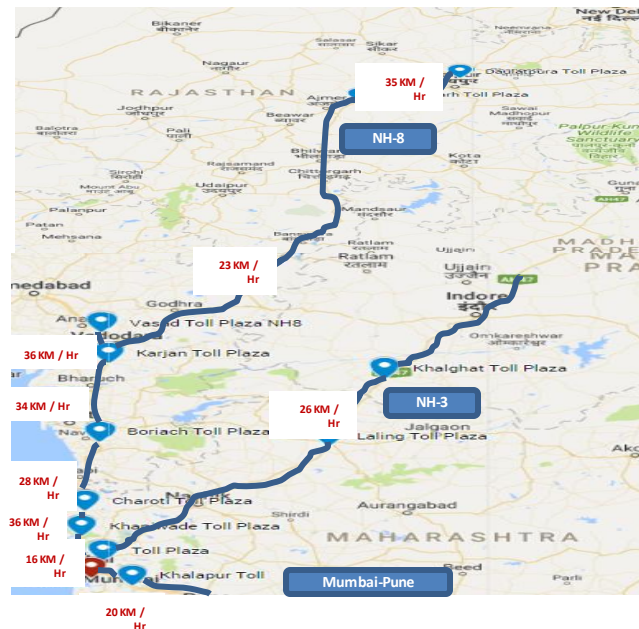
NSIGT terminal for month of August'17				
Clusters	No. of CFS's in Cluster	Distance from Port (Km)	Import cycle time (in Hrs)	Export cycle time (in Hrs)
Cluster 1	1	8	0.78	4.01
Cluster 2	6	13	2.08	5.07
Cluster 3	6	11	1.64	2.96
Cluster 4	1	13	1.27	1.41
Cluster 5	2	25	3.41	8.9
Cluster 6	6	25	3.17	5.4
Cluster 7	4	12	2.62	7.1
Cluster 8	1	34	5.3	

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**

Note : Please find the respective CFS in each cluster in annexure section
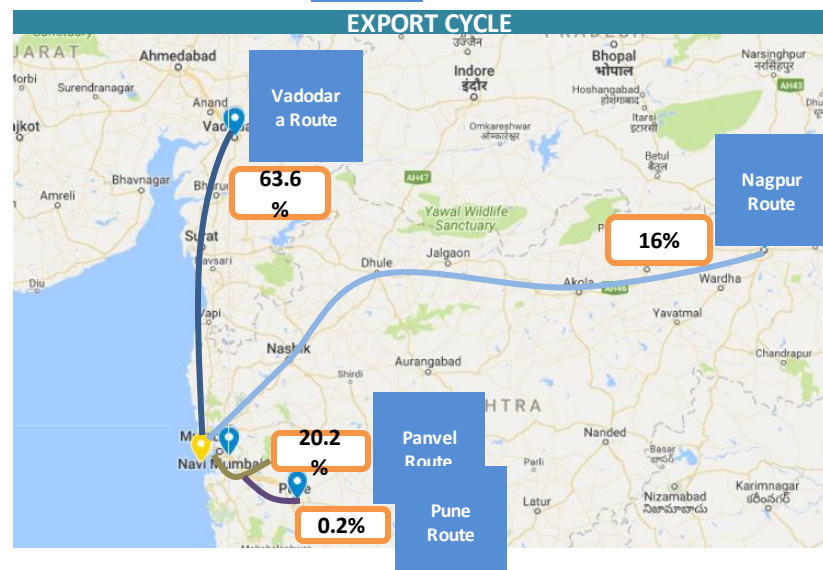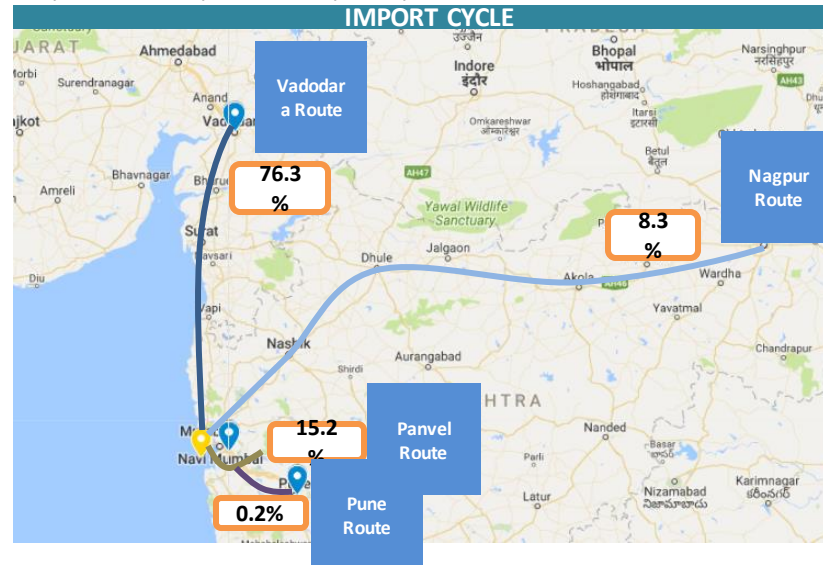
Congestion Analysis : TOLL PLAZA

The below table shows all the toll plazas covered under DLDS, the average speed from **Bharthan to KIshangarh** and **Boriach to Barthan** has decreased from the previous month showing the signs of traffic congestion in the Barthan area. Speed has mostly remain consistent or increased in other areas.

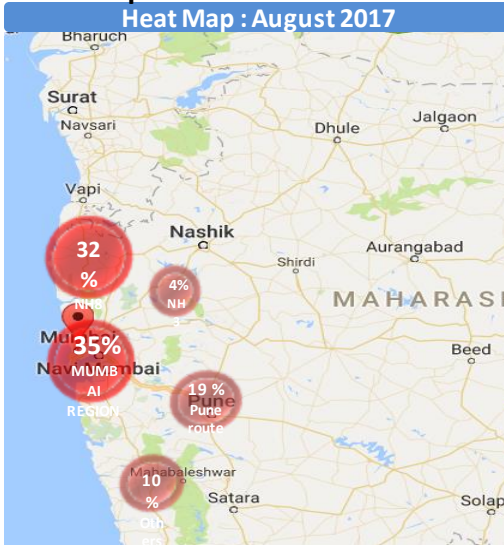| Avg. Travel Time & Speed between Toll Plazas (August'17)					
Source	Destination Toll Plaza	Inter Distance (Km)	Avg. Travel Time (Hr)	Avg. Speed (Km/Hr)	Previous month Avg. speed (km/hr)
JNPT	Khaniwade	94	6	**16**	13
JNPT	Khalapur	60	3	**20**	21
Khaniwade	Charoti	50	1.4	**36**	31
Charoti	Boriach	126	4.5	**28**	29
Boriach	Bharthan	142	4	**34**	34
Bharthan	Kishangarh	686	29	**23**	22
Bharthan	Vasad	60	1.7	**36**	36
Kishangarh	Daulatpura	128	3.7	**35**	36
Dhule	Khalghat	186	7	**26**	27

7.5.1 Container Movement around JNPT region via Train

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

IMPORT CYCLE

Vadodara Route — 76.3%

Nagpur Route — 8.3%

Panvel Route — 15.2%

Pune Route — 0.2%

EXPORT CYCLE

Vadodara Route — 63.6%

Nagpur Route — 16%

Panvel Route — 20.2%

Pune Route — 0.2%

Container Movement around JNPT region via Truck

Heat Map :JNPCT Port Terminal

Heat Map : August 2017

Region	July'17	August'17
Mumbai Region	59%	35%
Pune	14%	19%
NH8	14%	32%
NH3	3%	4%
Others	10%	10%

The heat map on the left depicts the movement of containers in and around the Mumbai region. Container movement has increased on NH8 and Pune region.

HEAT MAP : NSICT Port Terminal

Heat Map : August 2017
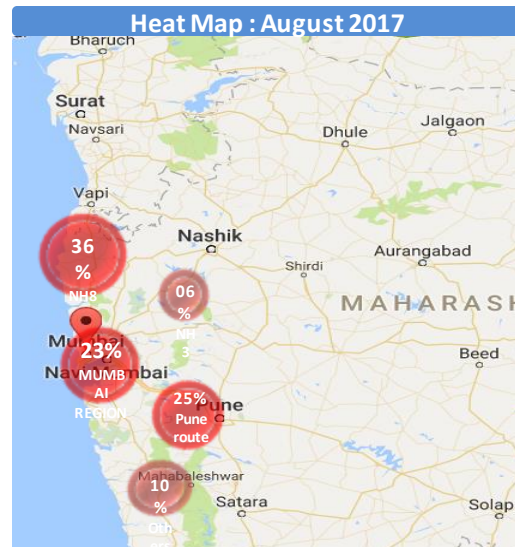
Region	July'17	August'17
Mumbai Region	51%	23%
Pune	19%	25%
NH8	16%	36%
NH3	4%	6%
Others	10%	10%

The heat map on the left depicts the movement of containers in and around the Mumbai region. Container movement has increased on NH8 and Pune region.

Container Movement around JNPT region via Truck

Heat Map :APM Port Terminal

Heat Map : August 2017

Region	July'17	August'17
Mumbai Region	67%	35%
Pune	12%	25%
NH8	10%	27%
NH3	1%	3%
Others	10%	10%

The heat map on the left depicts the movement of containers in and around the Mumbai region. . Container movement has increased on NH8 and Pune route.
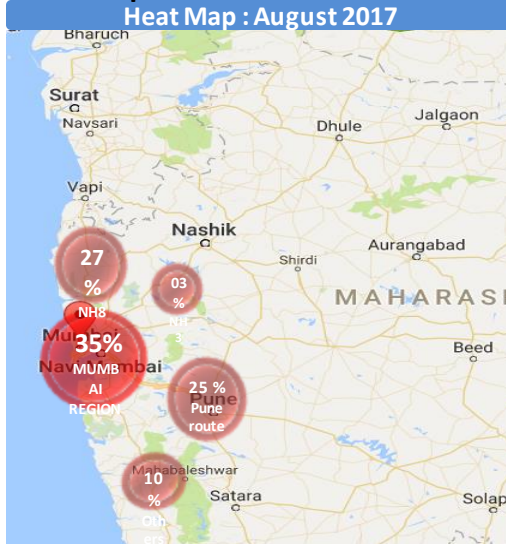
HEAT MAP : JNPT OVERALL Port Terminal via Truck

Heat Map : August 2017
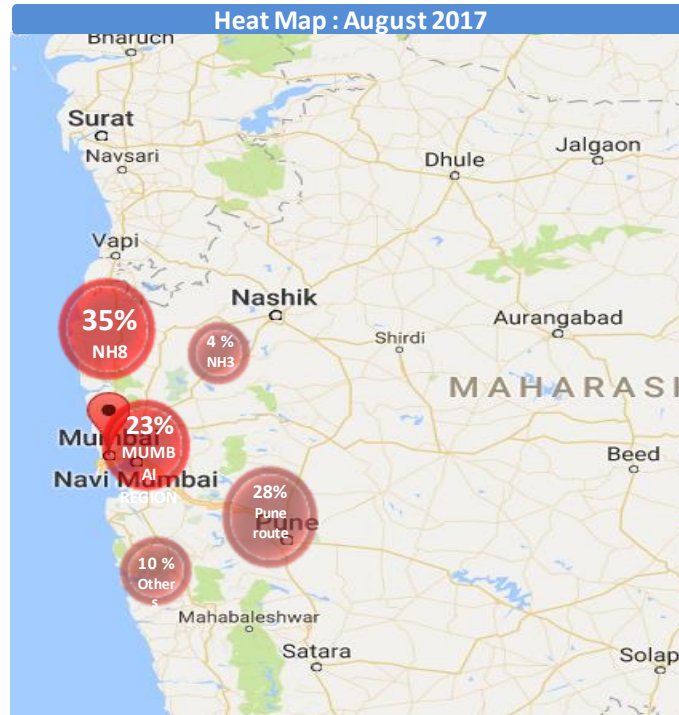
Region	July'17	August'17
Mumbai Region	57%	23%
Pune	15%	28%
NH8	15%	35%
NH3	3%	4%
Others	10%	10%

The heat map on the left depicts the movement of container in and around the Mumbai region. Container movement has increased on NH8 and Pune route.

Performance Benchmarking : CFS

Below table shows the dwell time of the respective CFSs .

JNPT Region CFS Dwell Time (in hrs)

CFS	July'17	August'17	CFS	July'17	August'17
All Cargo Logistics CFS, Navi Mumbai	71	68	International Cargo Terminals (ULA) CFS, Navi Mumbai	96	90
Ameya Logistics CFS, Navi Mumbai	104	96	JWC Logistics Park CFS	94	88
APM (Maersk India) CFS, Navi Mumbai	93	87	Maharashtra State Corp CFS	93	71
Maersk Annex (APM)CFS, Navi Mumbai	93	107	Navkar Corporation Yard 1 CFS, Panvel	107	93
Apollo Logisolutions CFS, Panvel	92	80	Navkar Corporation Yard 2 CFS, Panvel	79	86
Ashte Logistics CFS, Panvel	113	97	Navkar Corporation Yard 3 CFS, Panvel	87	100
Balmer & Lawrie CFS, Navi Mumbai	98	70	Ocean Gate CFS, Panvel	105	95
Continental Warehousing CFS, Navi Mumbai	96	81	Punjab Conware CFS, Navi Mumbai	87	70
CWC Dronagiri CFS, Navi Mumbai	67	60	Seabird CFS, Navi Mumbai	91	93
CWC Hind Terminal CFS, Navi Mumbai	105	91	Speedy Multimode CFS, JNPT	68	67
CWC Impex Park CFS, Navi Mumbai	77	69	Transindia Logistics Park, Navi Mumbai	71	80
Dronogiri Rail Terminal CFS, Navi Mumbai	84	77	Vaishno Logistics CFS, Navi Mumbai	122	98
Gateway Distriparks CFS, Navi Mumbai	88	77	International Cargo Terminal CFS	88	75
Indev Logistics CFS, Panvel	100	85	SBW Logistics CFS, Navi Mumbai	92	92

Mundra region CFS (Dwell Time in hrs)

CFS	July'17	August'17
All Cargo CFS, Mundra	92	106
Ashutosh CFS, Mundra	71	77
CWC CFS, Mundra	40	77
Hind Mundra Terminals CFS, Mundra	94	108
Honey Comb CFS, Mundra	111	118
MICT CFS, Mundra	84	52
Mundhra CFS, Mundra	100	109
Saurashtra CFS, Mundra	104	95
Seabird CFS, Mundra	108	115
TG Terminals CFS, Mundra	94	97
Transworld CFS, Mundra	99	86
Adani CFS Eximyard, Mundra	67	77

APSEZ Hazira Region Dwell Time (in Hrs)

CFS	July'17	August'17
Adani CFS, Hazira	113	109
Seabird CFS, Hazira	75	90

Best performer
Low performer

Performance Benchmarking : ICD

Dwell Time (in Hrs)		
ICD	**July'17**	**August'17**
ACTL ICD	151	153
Albatross Inland Ports Pvt. Ltd.	151	119
Allcargo Logistics Park ICD, Dadri	163	150
APM Terminals ICD, Dadri	133	120
CMA CGM Agencies ICD, Dadri	102	92
CONCOR ICD	157	144
CWC Loni	145	136
CWC Patparganj ICD	158	169

Best performer
Low performer

Thank You !!