

# Study on Timeline for Export and Import of Containers at Jawaharlal Nehru Port Trust, Chennai Port Trust and APSEZ Mundra



August 2018

# Highlights of the August Report

- The port dwell time for import increased at the Chennai from (50:09 to 57:50), whereas at the Mundra port the dwell time decreased from (127:49 to 107:08) hours.
- The port dwell time for exports decreased at JNP and Mundra from (83:47 to 75:37) and (116:41 to 108:37) hours respectively and increased at Chennai from (72:23 to 75:27) hours.
- Share of DPE containers increased at Chennai (6% to 11%).
- Import Custom release time increased in August at JNP and Chennai (43:01 to 44:13) hours and (31:14 to 44:08) hours respectively.
- JNP CFS export dwell time for the month August decreased from (153:48 to 119:35) hours.
- JNP and Chennai CFS import recorded the highest dwell time for the year 2018 in this month 136:18 and 130:03 respectively, in January it was 125:18 and 127:32 respectively.
- ICD TKD import dwell time increased in the month of July from (129:25 to 141:17), however export dwell time decreased (83:43 to 80:50) hours.
- JNP recorded its lowest "Rake turnaround time" and "Rake handling time" for the year 2018 in the month of August i.e., 10:09 and 05:01 respectively.
- In August 2018, the JNP-TKD rail transit time for exports decreased from (80:17 to 63:29) hours.
- In August 2018, the Mundra-TKD rail transit time for exports decreased from (82:32 to 79:05) hours.

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# 1. Introduction

India's rank in World Bank's Report, Doing Business 2018: Reforming to Create Jobs, has moved up to 100 as compared to 130 in the previous year. This massive jump in the ranking - highest ever recorded - is the result of reforms undertaken in the last four years in nearly thirty seven area covered under the indicators of starting a business, dealing with construction permits, getting credit, protecting minority investors, paying taxes, enforcing contracts and resolving insolvency. India has also been

categorized among the top 10 improvers of 2017.

One of the most crucial indicators for business is 'Trading Across Borders' (TAB) wherein the time and cost required to release the cargo from the

Table 1: India's Ease of Doing Business Ranking				
Parameter/Year	2014	2015	2016	2017
Overall ranking	134	131	130	100
Trading Across	126	144	143	146
Borders				

customs port in Delhi and Mumbai is captured through a questionnaire which relies on the perception of the traders and trading agents. Here, India's position has slipped by 3 places, currently at 146 out of 190 economies.

The World Bank's Doing Business 2018 estimates for the TAB through Mumbai and Delhi have been given in Table 2 and 3 respectively.

Table 2: World Bank's Estimate of Trading Across Borders through Mumbai					
Parameter	r Time to Export (Hours)		Time to Import (Hours)		
	Documentary	Border	Documentary	Border	
Year	Compliance	Compliance	Compliance	Compliance	
2016	61	88	67	311	
2017	58	85	65	307	
2018	58	85	65	267	
Source www doinghusiness and					

# 1.1. Context of the study

In 2016-17, a study was undertaken by Federation of Indian Export organisations (FIEO) and Bureau of Research on Industry and Economic Fundamentals (BRIEF), which was commissioned by NITI Aayog, for a comprehensive dwell time analysis of the various procedures and agencies involved in the supply chain for export and import through the JNP. It involved an assessment of the time taken at various intervention points - dissecting the dwell time of containers from/to Container Freight Stations (CFS), Inland Container Depot (ICD) as well as Direct Port Entry/Delivery – entailing transportation of containers and other operational aspects, the process of assessment, registration and examination, among others. As a result of this study, a number of initiatives were taken at JNP including, discontinuation of use of physical copies of certain documents at the terminal, mandatory issuance of e-delivery order by shipping lines, introduction of RFID, and initiation of e-sealing facility for self-sealed containers.

In continuation with the previous study, Logistics Division in the Ministry of Commerce has entrusted FIEO and BRIEF with the mandate of carrying out the timeline analysis of various processes for different agencies at the ports. The present study has also been extended to Mundra Port and Chennai Port, in addition to the JNP for the year 2018. This study will specifically identify dwell time at various agencies in the EXIM process at the three ports, covering all aspects of border compliance and documentary compliance. This will be done through calculation of the time taken for import and export of Containers through JNP, Mundra and Chennai ports on a monthly basis along with the details of the time taken at every agency/place involved in the process.

This report also acts as a benchmarking tool for the targets for 2018-19 – for export and import – setting benchmarks for different agencies such as railways, customs, ports, and the partner government agencies. Apart from the dwell time analysis, the report also delves upon the qualitative aspects of activities in the EXIM process to provide a comprehensive picture of the operations impacting the ease of doing business in India.

# 1.2. Purpose and Objectives

# MONTHLY REPORTS

- a. To track supply chain of import/ export at JNP, Mundra and Chennai ports through identification of all the procedures, agencies and stakeholders
  - ✓ Inclusive of all formats of port entry and delivery such as Direct Port Delivery, Direct Port Entry, CFS facilitated, Factory stuffed and ICD facilitated through rail, etc.
- b. To provide a comparison of processes adopted at the selected ports for EXIM trade.
- c. To calculate the time taken for import and export of Containers through JNP, Mundra and Chennai ports on a monthly basis along with the details of the time taken at every agency/place involved in the process.
- d. To specifically identify dwell time at various agencies in the EXIM process at the three ports. These would include, but not be restricted to, the following:

Border Compliance

- ✓ Customs Clearance and Inspections: Time taken by the Customs for export and import clearances at select ports based on actual data as well as perception.
- ✓ Port Handling: Time taken by Terminal, select CFS's and select ICD's for export and import.
- ✓ Allied Agencies: Time taken by agencies such as FSSAI, PQ, etc during the course of import and export including chemical and Pharma sector.
- ✓ No. of shipments physically inspected i.e. evaluating RMS clearances based on data as well as perception.

# 1.3. Stakeholders

- I. **Port/Terminal:** A port is the point of entry of goods and travellers into the country. It provides facilities for berthing of vessels and loading/unloading of cargo. A terminal is a part of the port, comprising of berth(s) which form a part of the terminal. It may be cargo-specific or designed to handle all types of cargo.
- II. **Customs**: It is the official department of the government with the authority to check goods and travellers. In international trade, the customs collect duty on imported goods as levied by the government, and provide clearance on both export and import goods.
- III. Container Freight Station (CFS) and Inland Container Depot (ICD): A Container Freight Station is an extension of the port. It is the custodian of goods after they are evacuated from the terminal in case of import and before they are shifted to terminals in case of export. The process of customs clearance takes place inside the CFS. Inland Container Depots are

located in different inland points away from the sea ports, offering services such as handling, temporary storage and clearance of goods.

- IV. Partner Government Agency: Partner Government Agencies (PGAs) are external agencies allied with the Central Board of Excise and Customs (CBEC) for providing clearance to sensitive goods such as food products, dyes, animal products, drugs etc. In congruence with the Budget, 2016-17, the CBEC initiated the Single Window Interface for Facilitating Trade (SWIFT) on 1st April 2016, as part of the 'Ease of Doing Business' initiative of the central government. The SWIFT connected with CBEC's Electronic Data Interchange (EDI) gateway is an electronic platform that enables the importer/exporter to file a single declaration entailing the nature of goods with the customs and the PGAs, in the form of an 'Integrated Declaration'; whereas for the PGAs, the system enables these agencies to upload the reports online. The PGAs which have been integrated with SWIFT include: Food Safety and Standards Authority of India (FSSAI), Plant Quarantine Information System (PQIS), Animal Quarantine and Certification Services (AQCS), Drug Controller (CDRUG), Wild Life Crime Control Bureau (WCCB) and the Textile Committee.
- V. **Railways:** Railways is one of the various modes of transporting the consignment between port and the inland destinations.

# 1.4. Methodology

The report records the time associated with the import and export of containers through the JNP, Chennai, Mundra and ICD Tughlakabad ports. *Recording of time starts when the container reaches the port till the time it is made available for the importer/CHA in case of imports, and from the time the custody of the container is handed over to ICD/CFS/port to the time the vessel sails off in case of exports.* 

As a part of situational appraisal, **preliminary assessment** on parameters of border compliance, customs compliance and documentary compliance was done for all the three ports. **Business Process Analysis (BPA)** charts were developed for Import and Export – entailing the requisite documentation and processes undertaken – as a basis for time difference calculation between different steps, also taking cognisance of any peripheral activity being undertaken, which affects the dwell time. After the BPA charts were developed, **data was collected** from stakeholders such as ports (JNP, Chennai, Mundra and ICD TKD), customs, CFS operators (CFSAI and NACFS), rake operators (CONCOR) ad partner government agencies (FSSAI, PQIS, AQCS, CDSCO, etc.). The data was collected and assembled on the basis of predetermined formats, following which, the process of **data analysis** was conducted, involving cleaning and analysis of the collected data through requisite tools. The analytical process involved stakeholder-wise calculation of dwell time and subsequently, consolidation of the same in the process chain of EXIM trade. Monthly reports are prepared post analysis of data for each month, starting January 2018. The reports summarised average timelines for analysed processes, custodians and finally, the export and import value chains as a whole.

The datasets used in the report were collected from the aforementioned stakeholders in the form of system generated date and time stamps recorded against each activity, as generated/collated by the stakeholder. From each stakeholder's datasets, dwell time was calculated on the basis of custodianship i.e. the time for which a container remained in its custody before being made available for the trader/importer/agent for delivery. For certain stakeholders, the processes are linear and therefore

the time analysis was done on the basis of duration between subsequent activities. For example, in case of terminals, import dwell time was calculated as the duration between container discharge and container out time and for export, the same was calculated as the duration between container in time and container loading time. On the other hand, in case of stakeholders such as customs, where the processes are not linear, dwell time was calculated as the summation of durations for which containers were held by the customs.

The data analysed in the report was recorded against container numbers and collated on a monthly basis. Therefore, dwell time of each stakeholder is calculated, every month, as the average of containerwise time taken from the first activity till the time the consignment was made available to the trader/importer/agent for delivery under each custodian. For instance, the import dwell time of containers at a terminal was calculated as the average time taken from container discharge to container out time. However, for the calculation of dwell time for port, which includes four terminals, weighted average of all the terminals was used.

Broadly, the following parameters have been considered during analysis and report preparation:

- a. The report provides the time analysis of import and export of containers through the JNP, Chennai, Mundra and ICD TKD ports.
- b. The import and export dwell time has been calculated on the basis of movement of containers, irrespective of size and commodity contained.
- c. Out of the total number of containers imported and exported at a port, the sample taken considers the containers under the import and export categories only and not containers meant for transhipment. Further, only Full Container Load (FCL) containers have been considered for this study and not empties.
- d. The representation of time in the tables, figures and charts used in this report has been done in the hour format i.e. *[b]:mm:ss*.
- e. The total time taken by each custodian has been calculated as the time taken from the arrival of the containers under its custodianship to the release of the time when it was made available to the trader for the delivery, and not as a summation of time taken for individual processes, even if they are linear in nature (except for customs). The reason for the same is that the sample size of each process under an agency differs, and therefore aggregating the time taken for individual processes to arrive at the overall dwell time becomes infeasible.
- f. While calculating the dwell time for containers, it was observed that some containers had significantly high dwell time. Since we take the average of the time taken to complete any activity in the complete process, these outliers tend to make the average skewed. In order to overcome this challenge, the calculated durations between any two activities, which were above 30 days (~720 hours), were not included in the calculation of dwell time. This has been done in order to overcome the effect of outliers (consignment that has been dwelling with a particular custodian for some reasons not related to day-to-day trade, such as unclaimed cargo, legal issues, etc.). However, the study also evaluates the percentage of

such outliers. For any data set to be analysed, the percentage of outliers has to be less than 4 per cent.

For maximising accuracy, the following measures have been taken during analysis of data from various stakeholders, which have been summarised as follows:

# Port

- Only Loaded containers have been taken for dwell time analysis. Empties have not been included in the analysis.
- For imports, only containers with vessel berthing time stamps in the same month as the month under analysis have been taken. For example, while analysing port data for January, only containers corresponding to vessel berthing in the month of January have been taken.
- For exports, only containers with in time in the same month as the month under analysis have been taken. For example, while analysing port data for January, only containers with in time in the month of January have been taken.

# ICD Tughlakabad

- Based on the recording done in the datasets received, the segregation of containers for each month has been done by filtering the containers from the date of dispatch and departure in a particular month for export and import containers respectively. For instance, all export containers dispatched and import containers that departed from ICD Tughlakabad in the month of January 2018 have been analysed for the month of January. These container may or may not have arrival date and time in the same month i.e. January.
- Any inconsistent outliers in the datasets have not been considered for calculation.

# Customs

• The monthly datasets were segregated on the basis of Out of Charge (OOC) date in case of imports and Let Export Order (LEO) date in case of exports. For instance, for the import dataset of January 2018, all the entries wherein the date of issuance of OOC is from 01-01-2018 to 31-01-2018 have been considered. Similarly, the dataset analysed for exports have all the entries for which the LEO issuance date is between 01-01-2018 and 31-01-2018.

# CFS

• The monthly datasets were segregated on the basis of CFS gate out date in case of both imports and exports. For instance, the import and export datasets of January 2018 have all the entries wherein the CFS gate out date is from 01-01-2018 to 31-01-2018.

# Rake Handling

• The monthly data has been segregated on the basis of the arrival date. All the entries having the arrival date in the month of January 2018 are used for analysis for the month of January

PGAs

• The monthly data has been segregated on the basis of the Application date. All the entries having the application date in the month of January 2018 have been analysed and presented in the report for the month of January.

# 1.5. Limitations of the Study

Despite having collected all data directly from the concerned stakeholders, there were certain unavoidable complications that affected the precision of the average time calculated. These include:

- a. *Transit time calculation between port and CFS:* Due to unavailability of the relevant timestamps with all the CFS, the average transit time for Import and export was calculated on the basis of data provided by few CFS.
- b. *Missing entries in datasets:* Many entries in the datasets analysed were missing or not recorded by the agencies. Missing or wrong entries for any process under any custodian have been removed, and the 'n' (number of entries) value has been adjusted accordingly.
- c. *Incomplete entries:* In many datasets, only the dates were provided for certain processes. Absence of time stamps made these entries redundant, as the time difference between two activities taking place on the same date came out to be zero. For instance, let's assume an activity A took place on 01-01-2017 at 9:00 am and a subsequent activity B took place on the same date at 8:00 pm. The duration between these two activities is 11 hours, but in case of absence of time stamps, the duration comes out to be zero, which adversely affects the average. Further, in case of the dates being different, the time difference can potentially display a skew of up to 24 hours vis-à-vis the original difference, which again posed a limitation to the analysis.
- d. *Gaps in Shipping Line Delivery Order data:* Data for shipping line delivery orders (SLDO) was provided by the CFS'. However, not all CFS' could provide the said information.
- e. *Missing time stamps in OOC entries:* The Out of Charge (OOC) entries in the CFS datasets did not have time stamps. As such, time difference between seal cutting (which has both date and time) and OOC taking place on the same day came out to be negative. For instance, for a seal cutting entry of 01-03-2017 at 13:56:45 and a corresponding OOC entry of 01-03-2017 only, the time taken from seal cutting to OOC would be negative.
- f. *Data errors:* For some agencies, data errors were recorded. For instance, in certain entries, the gate out time recorded preceded gate in time. Further, duplication of entries was observed in the some datasets. Such entries have been removed during calculation.
- g. *Calculation of DPD and DPE containers*: Calculations for both DPD and DPE categories have been done using the datasets provided by the terminals. The monthly datasets received from NSICT and NSIGT were segregated as per mode of transport into

rail and road categories only. The containers with 'rail' as mode had to be taken as ICD and those with 'truck' as mode had to be taken as DPE (even though the category contains both CFS and factory stuffed containers). Further, in case of GTICT, the segregation – under group type – includes three categories: 'CFS', 'Factory stuffed/ICD by road' and 'ICD by rail', taken for analysis as containers originated from CFS, DPE containers and containers originated from ICD respectively. Therefore, here, ICD containers coming by road get included in DPE. In case of DPD, many containers, post clearance at the terminal, are moved to the designated CFS' for warehousing, after a time period of 48 hours as stipulated by the customs. Their destination is recorded as 'CFS' instead of 'DPD' in the datasets provided by NSICT and NSIGT. Therefore, the actual share of DPD containers are higher as compared to the analysed figures represented in this report.

h. Unavailability of electronic data for PGAs: During our field visits and our interactions with various stakeholders including PGA representatives, it was observed that the data (timestamps) for various activities related to clearance by PGAS are not maintained electronically by all the PGAs. The port offices of various PGAs maintain these entries manually and not all activities are recorded. Further, the entries recorded by the PGAs only contain date and no time for the commencement or completion of an activity leading to a statistical challenge where a difference of 24 hours becomes zero. In between submission of Bill of Entry and issuance of NOC by PGAs there are various activities that take place involving filing of application, scrutinising of documents, collection of samples, testing, report generation and issuance of NOC. In the absence of timestamps for all the relevant activities the clearance time for all PGAs could not be calculated.

# Port Profiles

# 2. Port Profile

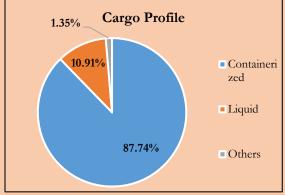
# 2.1. Jawaharlal Nehru Port

JNP located on the western coast is the biggest container port in the country. It handles about 56 percent of the container traffic in India through its four dedicated terminals, namely Jawaharlal Nehru Port Container Terminal (JNPCT), Gateway Terminals India Container Terminal (GTIPL), Nhava Sheva International Container Terminal (NSICT) and Nhava Sheva International Gateway Terminal (NSIGT). In addition, there is one liquid cargo berth and shallow water berth. Initially, the port was formed with the objective to reduce the traffic at Mumbai port but ever since its inception it has chronicled persistent increased performance and other achievements for India's foreign trade. The JNPT covers a land area of 2,987 hectares and has connectivity to hinterlands and the major business centres of the country through rail, road, etc.

Year-on-year Traffic:   Table 1: Container Traffic Handled at JNPT Table 3: Container Capacity and T				roughput at JNPT Terminals	
2016-17	2017-18	Terminal	Capacity (TEU)	Throughput (TEU) (2017-18)	
4.50 million TEUs	4.83 million TEUs	JNPCT	1,500,000	1,481,768	
Infrastructure:		NSICT	800,000	641,122	
		NSIGT	800,000	659,400	
Berth	Table 2: JNPT Port Infrastructure		1,800,000	2,027,895	
	Draft (m)	BMCTPL	24,00,000	23,212	
12	14	Total	73,00,000	4,833,397	

### **Cargo Profile:**

In the financial year 2016-17, JNPT handled a total of 62.15 MT cargoes. The break-up of these cargoes are as under:



### Storage:

Table 5: Storage Capacity at the Port

Particulars	Storage Capacity
Liquid Tank	750000 MT
Warehouse Area	1197260 TEU
Open Area Storage	875000 TEU

## **Cargo Handling Equipment:**

Table 4: Details of Cargo Handling Equipment's

Equipment	Number
RMQCs	34
RTGCs	99
RMGCs	11

### **Connectivity:**

Table 6: JNPT Connectivity

CFS	Rail connected ICD
34 Active	9 siding tracks for 12 ICD
Container	
Freight Stations	

# 2.2. Chennai Port: Profile

Port of Chennai located on the eastern coast is among the oldest and major ports in India. Despite being the oldest port, it adopted continuous modernization and provided efficient and convenient services to withstand the competition from the existing and emerging ports. It is the first Indian port to establish the marine pollution management to ensure protection for marine life. The port covers a land area of 237.54 ha and has its own shunting yard and railway operations within the harbour. The connectivity of the port through rail, road and its container market makes it the most preferred choice in the southern region of the country.

Year-on-year Traffic: Table 1: Container Traffic Handled at Port of Chennai		
2016-17 2017-18		
1.4 million TEUs	1.5 million TEUs	

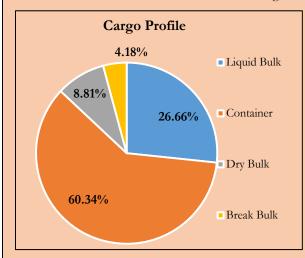
### Infrastructure:

Table 2: Port Infrastructure

Berth	Draft (m)
24	15

### **Cargo Profile:**

In the financial year 2015-16, Port of Chennai handled a total of 50.06 million tonnes of cargo:



Chennai			
Terminal	Capacity TEU	Throughput TEU (2017-18)	
Chennai			
Container			
Terminal	1,200,000	646,481	
Chennai			
International			
Terminal	1,250,000	901,584	
Total	24,50,000	15,48,065	

Table 2. Containing Catality and Thursdates

### Cargo Handling Equipment: (2017-18)

Table 4: Details of Cargo Handling Equipment's

Equipment	Number
RMQCs	14
RTGs	40
Locomotives	7

### **Connectivity:**

Table 6: Chennai Port Connectivity

CFS	Rail connected ICD
25 Active	2 siding tracks for 1 ICD
Container	
Freight Stations	

### Storage:

Table 5: Storage Capacity at the Port

Particulars	Storage Capacity
Container parking Yard	2,50,600 sq. mt
Warehouse Area	30,138 sq. mt
Open Space	3,84,611 sq. mt

# 2.3. Mundra Port: Profile

Adani group's Mundra port is the largest commercial port in India, located on the north-western coast in the Gulf of Kutch. The strategically thought out location of the port and different transport facilities provides favourable connectivity to the northern hinterlands of the country.Mundra Port located in Gujarat and the flagship port of APSEZ, is already one of India's biggest port by volumes handled. It was the first Indian port to handle 100 million tonnes (mt) or more of cargo in a year, a feat it achieved in FY14. The port has facilities for handling, storage and evacuation of crude oil, containers, dry bulk, break bulk, automobiles and liquid cargo. The above-mentioned and mechanized facilities at the port make it a preferred port in the region.

Table 1: Container Traffic	Handled at Mundra Port
2015-16	2016-17

2015-16	2016-17
3 Million TEUs	3.5 Million TEUs

### Infrastructure:

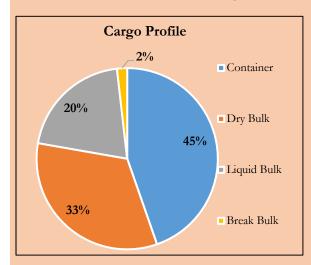
Year-on-year Traffic:

Table 2: Port Infrastructure

Bert	h	Draft (m)
24 berths		14 -18m

### **Cargo Profile:**

In the financial year 2016-17, Mundra Port handled a total of 113.03 MMT of cargo



### Storage:

Table 5: Storage Capacity at the Port

Particulars	Storage Capacity
Covered Area	2,03,687 sq. mt
Open yards	7,57,805sq. mt

Table 3:	Container	Capacity	and	Throughput	at Mundra
Port					

19011		
	Capacity	Throughput
Terminal	TEU	TEU (2016-17
AMCT	1,000,000	860,000
AICT	1,750,000	1,160,000
ACCMT	800,000	276,630
MICT	1,100,000	1,163,055
Total	46,50,000	34,59,685

### Cargo Handling Equipment: (2015-16)

Table 4: Details of Cargo Handling Equipment

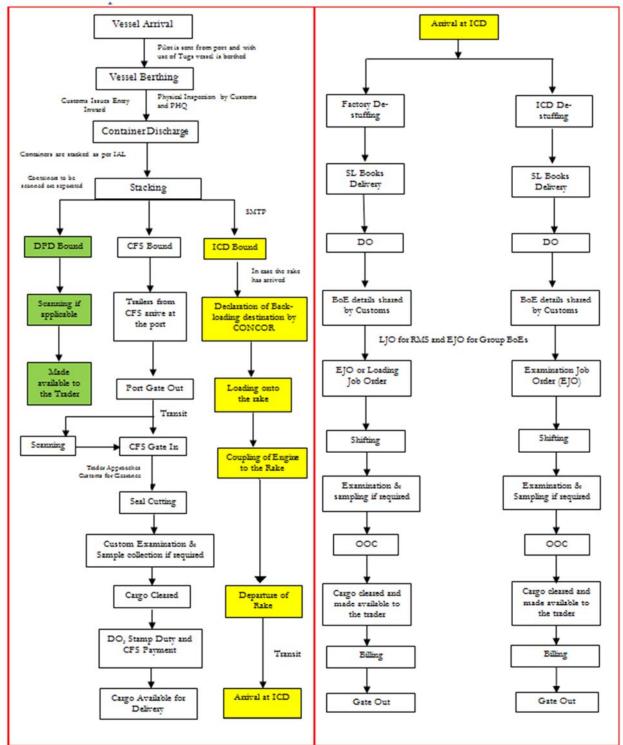
Equipment	Number
Mobile Harbor Cranes	16
Goliath cranes	8
Reach Stacker	1
Quay Cranes	16
Rubber Tyre Gantry Cranes	50

### **Connectivity:**

Table 6: Mundra Port Connectivity

CFS	Rail connected ICD
13 Active	11 siding tracks for
Container	30ICDs
Freight Stations	

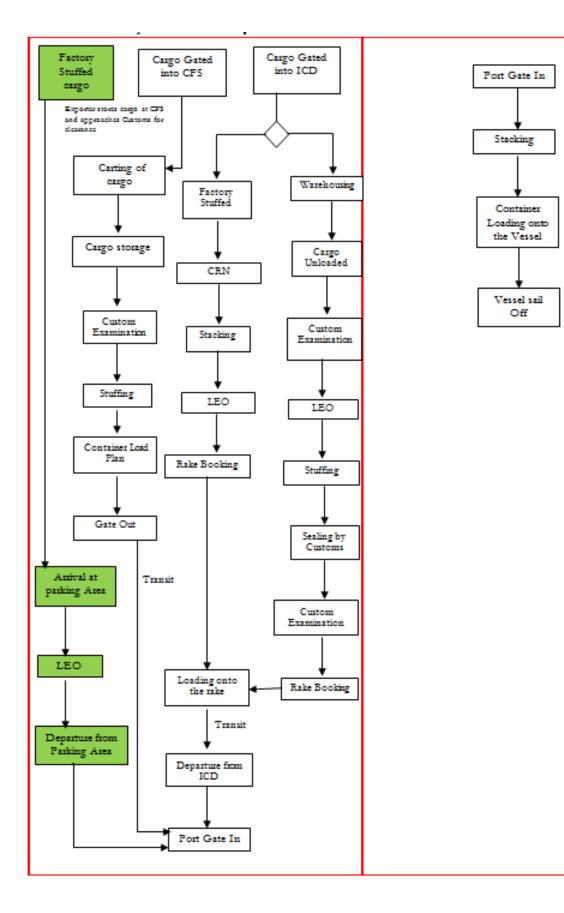
# EXIM PROCESS



# 3. Import Process at Port, ICD and CFS

**S.L** – Shipping Line: **VOA**- Vessel operating Agent: **IGM**- Import General Manifest: **IAL**-Import Advance List: **SMTP**-Sub Manifest Transhipment Permit: **OOC**- Out of Charge: **NOC**-No Objection Certificate: **PGA**-Partner Government Agency

# 4. Export Process at Port, ICD and CFS



# 5. Comparison of Port Processes

Parameter	JNP	Chennai	Mundra	
Different entry and exit points at Ports. Presence of	The terminal gate and port gate is the same in case of the JNP. During the dwell time calculation of the road bound cargo, time calculation starts from the entry or exit from these gates. There is no customs	The terminal gate and port gate is not the same in case of Mundra and Chennai port. Terminal gates – usually container yard gates- are inside the port. The terminal records gate out or gate in when the container crosses the terminal gates. At Chennai and Mundra ports, Customs personnel have		
Customs personnel at the port gate.	personnel stationed at the gates at the JNP. For exports, the customs personnel have been shifted to the holding/parking yard where customs procedures are carried out.	been stationed at the port gate. Further, at Chennai port the customs personnel checks all the documents at the port gate thereby leading to escalation of dwell time. The time taken at the port gate in case of Mundra and Chennai is not reflected in the port dwell time figures mentioned in this report owing to the reason mentioned above.		
Free days at the terminal for the road and rail bound EXIM containers.	The terminals at Chennai port a free period of 72 hours (3 days) containers and 168 hours (7 day containers.	for Road bound	At Mundra the terminals provide 3 calendar days (not 2 hours) free period for the road bound containers and 10 calendar days for rail bound. If a container is discharged at 01:00 hrs or 23:00 hrs on 01- 01-2018, the free period will be till midnight 03-01-2018.	
Different procedure for evacuation of rail bound containers from the port.	The railway lines are within the terminal area. The containers transported through rail are loaded and unloaded from the rake within the terminal. The departure of rake is considered as port out and arrival of rake as port in at the JNP.	In case of Chennai port, there is a separate railway yard outside the CCTL gate, operated by CONCOR. The containers transported through rail leave the terminal gate to be shifted to the yard where they are loaded onto the rakes. However in case of CITPL, railway line is placed in the terminal and containers are loaded onto the rake within the terminal.	Same as the JNP	
Entry of Export cargo into the port after customs clearance.	The export containers enter the JNP and Chennai port only after they are cleared by customs.		At Mundra port the containers are allowed inside the terminal without custom clearance. Therefore, the time the containers spend at the	

	terminals also includes the
	time for custom clearance,
	which may result in a higher
	dwell time for export
	containers for Mundra
	compared to the JNP and
	Chennai port.
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# TIMELINE ANALYSIS

# **SNAPSHOT**

# **IMPORT TIMELINES**

Stakeholder	Dwell Time	JNP	MUNDRA	CHENNAI	TKD
	Port Dwell Time	61:52	107:08	57:50	141:17
	Port Dwell Time	44:06	22:28	49:55	
	for CFS Bound				
PORT	Containers				
	Port Dwell Time	114:00	189:31	61:40	
	for ICD Bound				
	Containers				
	Port Dwell Time	57:37	80:37	72:28	
	for DPD				
	Containers				
Customs	Customs Release	44:13	32:45	44:08	36:11
	Time				
CFS	<b>Dwell Time at CFS</b>	136:18	97:38	130:03	
Port,	Rake Turnaround	10:09	10:17	18:50	
CONCOR	Time				
& Railway	Rake Handling	05:01	07:31	08:00	
	Time				
Overal	l Dwell Time	170:18	277:52	145:19	

# **EXPORT TIMELINES**

Stakeholder	Dwell Time	JNP	MUNDRA	CHENNAI	TKD
	Port Dwell Time	75:37	108:37	75:27	80:50
	Port Dwell Time	64:53	85:19	74:06	
	Containers				
PORT	Originated from				
	CFS				
	Port Dwell Time	107:09	116:02	60:42	
	Containers				
	Originated from				
	ICD				
	Port Dwell Time for	68:26	111:45	51:42	
	<b>DPE</b> Containers				
Customs	<b>Customs Release</b>	4:18	7:09	4:32	10:14
	Time				
CFS	<b>Dwell Time at CFS</b>	119:35	192:03	102:38	
Overa	ll Dwell Time	171:48	187:43	209:37	

\*In case of Chennai, only CFS and DPD/DPE is considered while analysing overall dwell time as we do not receive data from ICD Whitefield (Bangalore) which is the major ICD for Chennai port.

# 6. Timeline Analysis

# 6.1. Loaded container Volume Handled by the Ports

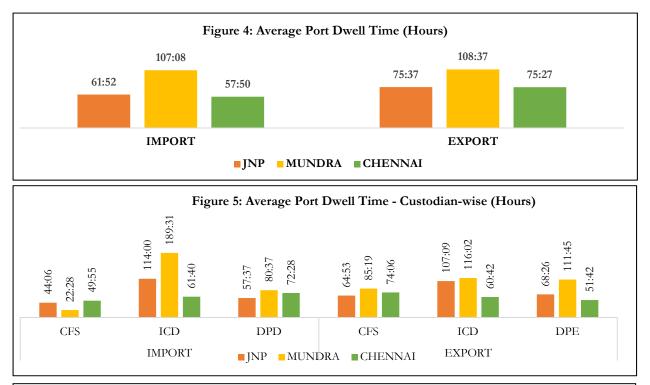
The EXIM volume of loaded containers handled at the select ports has been provided in the chart below. The stats given in the figure 1, should not be confused with the total number of containers handled at the ports, which would be a higher figure than the one mentioned in the graph. The total volume of containers handled at a port also include empties, transhipment containers and containers meant for SEZ around the port.



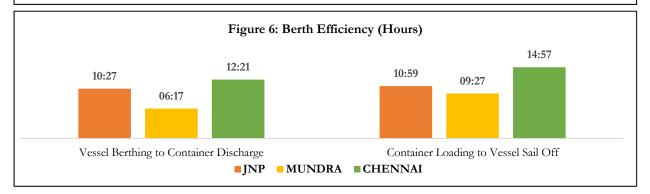
Rail Road

# 6.2. Port Dwell Time

Port or Terminal dwell time is the calculation of the time a container is at the terminal. It is calculated as the average time taken from container discharge from the vessel to the time of container evacuation from port gate for import and time from the entry of container into the port till it is loaded onto the vessel for export. In case of Mundra, for import, the out time has been taken as gate out from the container yard at the terminal. Terminal dwell time varies with respect to the destination or source of the container – Container Freight Station (CFS), Inland Container Depot (ICD) or Direct Delivery (DPD or DPE).



CFS operators have to obtain and submit hard copies of documents, for instance, *PNR copy (Public Notice Removal of Container)* to take the delivery at Chennai port unlike the JNP and Mundra leading to a high dwell time. The port dwell time for ICD bound containers at Chennai port is considerably low compared to other two ports. One of the reasons for this metric is that the gate out for ICD bound containers at CCTL Terminal, Chennai port is recorded when the containers move out of the terminal to be shifted to a separate Railway yard operated by CONCOR. The time spent at the railway yard till the departure of the rakes is not captured by terminals at the Chennai port.



Before the containers are discharged from the vessel, the customs, immigration and PHQ officials inspect the ship. Operational factors such as the number of quay crane moves along with external

factors such as the tide situation, vessel size, time taken for customs processes, etc. determine this metric. Similarly, post loading of containers during export process, the vessel has to be moved off the berth for sail off. This process is dependent on external factors such as favourable tide, etc. These two processes are representative of the berth efficiency at the select ports.

# 6.3. Transit Time - Import

Transit time is the time taken for the container to reach the custodian - which can either be a CFS or an ICD. The rail transit time for ICD has been calculated as the difference between the time of departure of rail from the source location to its arrival at the destination. The CFS transit time is taken from the time of exit of a container from port to its arrival (gate-in) at the CFS. The transit time through road for JNP, Chennai and Mundra has been calculated using data provided by 10, 3 and 1 CFSs respectively.

	Tabl	Table 3: Transit Time of Import Containers						
	J	NP	Mu	Chennai				
	Road	Rail	Road	Rail	Road			
Average time taken (hr)	10:28:35	59:23:03	0:57:36 91:43:47		1:51:59			

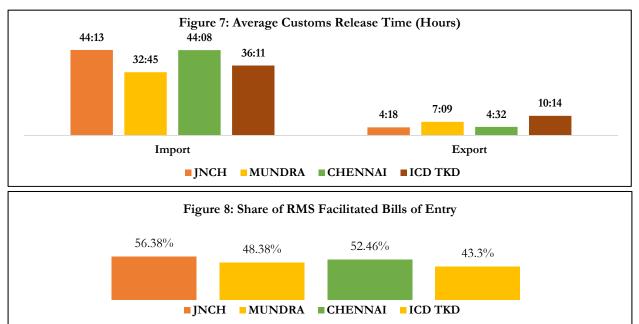
# 6.4. Transit Time - Export

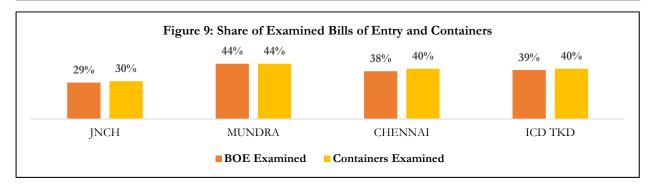
Transit time for CFS and ICD has been calculated as the time taken from departure of containers from ICD or CFS to their arrival at the port. The transit time through road for JNP has been calculated using data provided by 4 CFSs.

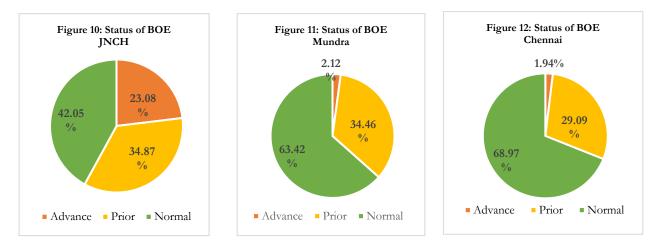
	Table 4: Transit Time of Export Containers						
	JN	P	Mundra	Chennai			
	Road	Rail	Rail	Road			
Average time taken (hr)	35:09:56	63:29:57	79:05:23	NA			

# 6.5. Customs Release Time

Customs release time is the time taken by the customs authorities, be it at the dock, at CFS or at ICD. In case of imports, the customs release time is calculated as the average time between submission of bill of entry to assessment and registration of goods to OOC [in case of RMS and Group B/E]; and registration of a container to assessment and duty payment to OOC [in case of Group (First Check) B/E]. It must be noted that the process of customs release is not linear; many agencies play a parallel role such as the PGAs, the importer/customs broker for duty payment, shipping line for delivery order and the CFS. In case of exports the release time is the duration between registration of goods and issuance of LEO.

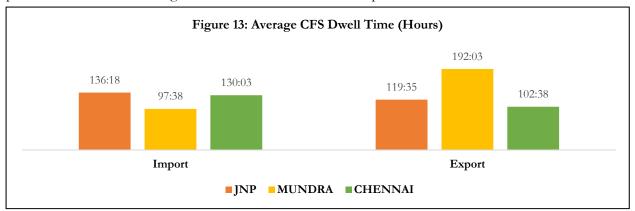






# 6.6. Container Freight Station (CFS)

CFS import dwell time is calculated from the time of gate-in of a container at the CFS to its custom clearance which is issuance of Out of Charge (OOC) by customs in case of imports. For exports, dwell time is calculated from the issuance of export carting order to the gate-out of container from CFS. Please note that the total time taken by CFS is calculated in terms of gate-in to OOC (and not as a linear addition of time taken in the various processes) due to the sample size being different for each process and many parallel processes involving customs, customs brokers and shipping line taking place. The list of CFS along with their dwell time has been provided in the annexure.



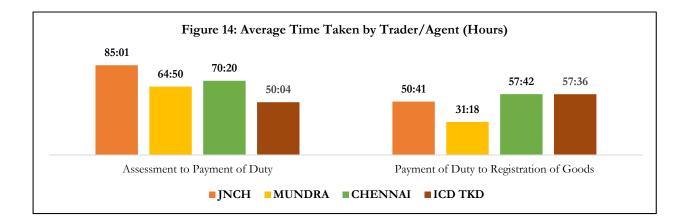
# 6.7. Inland Container Depot (ICD) Tughlakabad

The overall dwell time of containers at ICD Tughlakabad has been computed as the weighted average of overall dwell time figures for all the different categories under analysis viz. green channel factory de-stuffed/stuffed containers, non-green channel factory de-stuffed/stuffed containers, warehouse bound containers and direct de-stuffing/stuffed containers.

Table 5: ICD Tughlakabad Dwell Time				
ICD Time Import (Arrival – OOC) 141:17:37				
ICD Time Export (Arrival – Dispatch) 80:50:30				

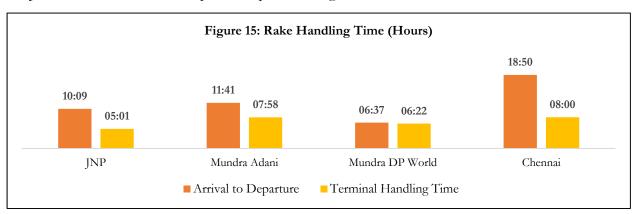
### 6.8. Time Taken by the Trade – Importers/Customs Brokers

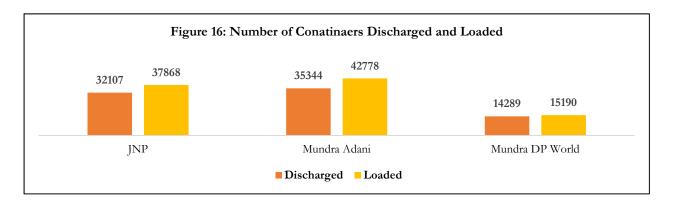
It is imperative for time-to-release studies to take into account the time taken by the importers or their customs brokers for completing various procedures like payment of duty and registration of goods with the customs. These procedures substantially add to the custodian release time and the need for factoring in such parameters – to arrive at a clearer view of the role of and time taken by the custodians as well as the trade – is paramount. In a number of cases, delays in payment of duty by the importers or in the clearance process occur due to reasons such as: a) paucity of funds for clearances – as a result of which the cargo remains in the customs bonded area within the CFS/ICD and b) market evaluation by the traders before releasing goods from the custodian. For ease of doing business, it is important that the importer completes the necessary payments and formalities on time to ensure timely completion of rest of the procedures.



# 6.9. Rake Handling

The turnaround time of rakes at the terminals is the time taken from arrival of rake to its departure from the terminal. The processes that take place during this period include discharge of export containers or empty containers, loading of import containers, submission of rake removal memo and coupling of engine. The time taken by the terminal to unload the export cargo and load the import cargo is called the Rake Handling Time. The turnaround time and the rake handling time at the JNP, Chennai and Mundra port is depicted in Figure 15.





# 6.10. Shipping Line Delivery order

The shipping line provides delivery order (DO) as a final confirmation for delivery of cargo to the customs broker. Any delay by the shipping line in providing delivery order gets added to the total time of the container at CFS/ICD. Some DOs are given after issue of OOC by customs, while others are generated at the same time or prior to OOC, Table 6.

Table 6: Average Time Taken for Genera	ation of Delivery	y Orders by Ship	oping Lines
	JNP	JNP Mundra	
Total no. of DO	10206	633	4757
No. of DOs prior to OOC	3285	290	946
No. of DOs given post OOC	5133	150	2869
No. of DOs received on same day as OOC	1788	193	942
Average time taken from CFS gate-in to receiving delivery order	193:05:59	91:02:41	145:08:01

# 6.11. Partner Government Agencies

Partner government agencies (PGAs) are the allied agencies that are required to examine and provide clearance to certain types/categories of cargo. They play a key role in the overall process of cargo clearance. In an earlier practise, the time required by these agencies was added in the customs release time, however, some cargo (particularly perishable) is now released before the arrival of report by PGAs on the basis of a bond guarantee. This report analyses the time taken from sample collection to publishing of report by 3 PGAs -Animal Quarantine (AQ) for Mundra and JNP region and Food Safety and Standards Authority of India (FSSAI) for JNP and Chennai region and Drugs Controller for Chennai region. Please note that the reports for some agencies like PQ and FSSAI may also be received after out-of-charge due to nature of the cargo.

Table 7: AQCS Release Time							
	AQCS (Mundra)						
Total number of entries (n)	599	232					
Average Time taken from Application to NOC for all	42:32:05	15:09:49					
BoEs (hr)							
Total number of BoEs	597	232					
BOEs for which sample was collected	240	14					
Average Time taken from Application to NOC for	274:28:22	256:00:00					
sample collected BoEs							
BoEs for which provisional NOC was issued	246	15					
BoEs for which Provisional NOC was issued on the	231	12					
day of application							

In case of FSSAI, the release time has been calculated as the summation of time taken by the FSSAI at various stages of the overall clearance process. The release in case of cargo where sample was collected is the time is a summation of the average time between filing of application by the trader to the time when the officer at the FSSAI scrutinises the documents, payment of dues to collection of sample, sample collection to the issuance of the NOC. In case of cargo where no sample has been drawn, the release time is the summation of the duration between filing of application and issuance of NOC.

Table 8: FSSAI Release Time (Chennai)								
	Sample Non-Sample Not in Sco							
Total number of entries (n)	1108	35	103					
Total number of BoEs	997	22	54					
Average FSSAI Release time (hr)	138:00:20	53:28:51	52:00:48					

Table 9: FSSAI Release Time (JNP)								
Sample Non-Sample Not in Scope								
Total number of entries (n)	2750	179	124					
Total number of BoEs	1942	143	95					
Average FSSAI Release time (hr)	181:50:23	47:13:21	72:45:22					

In case of CDrug, the release time has been calculated as the summation of time taken by the CDrug at various stages of the overall clearance process. The release in case of cargo where sample was collected is the time is a summation of the average time between filing of application by the trader to the time when the officer at the CDrug scrutinises the documents, scrutinises the documents to collection of sample, sample collection to the issuance of the NOC. In case of cargo where no sample has been drawn, the release time is the summation of the duration between filing of application and issuance of NOC.

Table 10: CDSCO Release Time (Chennai)								
Sample Non-Sample Not in Scope								
Total number of entries (n)	21	1460	497					
Total number of BoEs	10	573	325					
Average CDSCO Release time (hr)	306:41:09	38:12:10	0:05:48					

Note: There is no time mentioned in the activities in the data sets, therefore, two activities taking place on same day have a difference of zero hours between them which is technically incorrect. Due to this limitation the average clearance time much lesser than other PGAs represented in this section.

Due to unavailability of data from all PGAs from all the selected locations, present study also calculates the PGA clearance time from the data recorded by customs SWIFT platform. The only limitation with the usage of SWIFT data is that it only captures the starting process which is BoE sharing date and the culminating activity, NOC receiving time. Therefore, whilst comparing the PGA figures from the tables provided below, it must be borne in mind that the time mentioned also includes the time taken by the trade.

Average Time Taken by PGAs (JNCH)								
PQIS FSSAI WCCB CDRUG AQCS								
Total number of entries (n)	38372	20180	195	21585	2074			
Total number of BoEs	1287	2328	22	3714	690			
Average time taken (hr)   196:12:41   289:32:08   44:20:08   154:20:50   172:58:12								

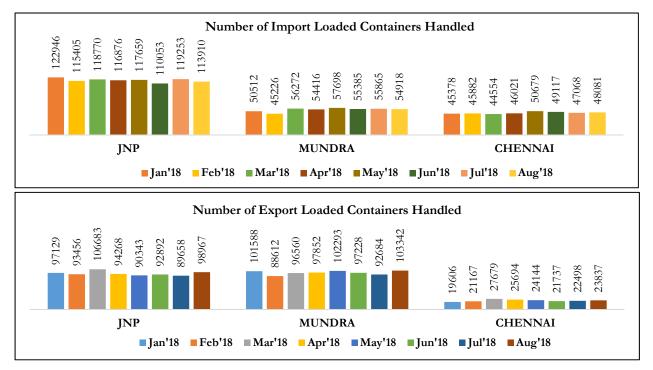
Average Time Taken by PGAs (Mundra Customs)								
PQIS FSSAI WCCB CDRUG AQCS								
Total number of entries (n)	5633							
Total number of BoEs 598								
Average time taken (hr)	Average time taken (hr) 146:21:36							

Average Time Taken by PGAs (Chennai Customs)								
PQIS FSSAI WCCB CDRUG AQCS								
Total number of entries (n)	796	1192	24	1503	1315			
Total number of BoEs	380	796	10	634	438			
Average time taken (hr)	Average time taken (hr)198:53:03167:57:2019:00:00107:25:02138:45:43							

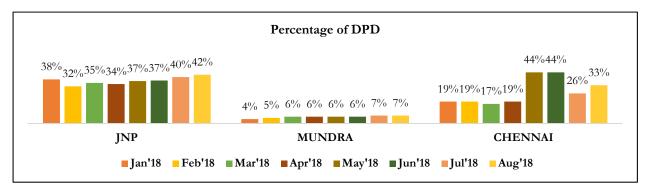
Average Time Taken by PGAs (ICD TKD Customs)										
PQIS FSSAI WCCB CDRUG AQCS										
Total number of entries (n)	2146	6588	10	948	355					
Total number of BoEs	148	234	8	140	84					
Average time taken (hr)	260:14:39	364:04:57	69:27:12	175:04:48	158:45:54					

# 7. Trend Analysis

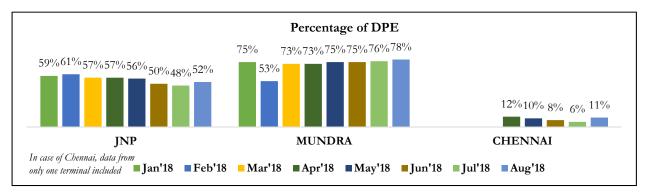
# Volume of EXIM Cargo Handled



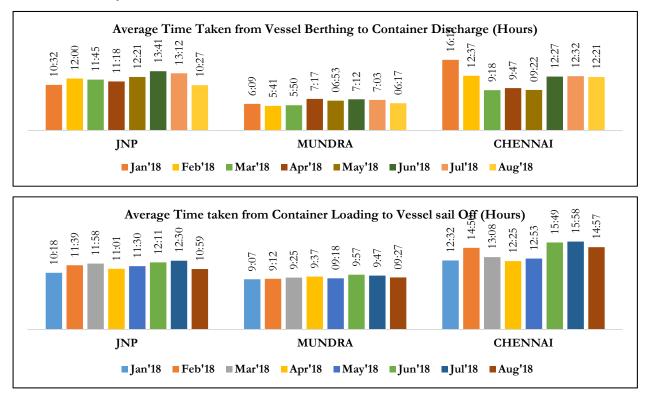
### Share of DPD



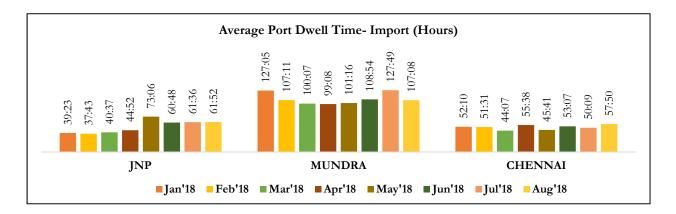
### Share of DPE

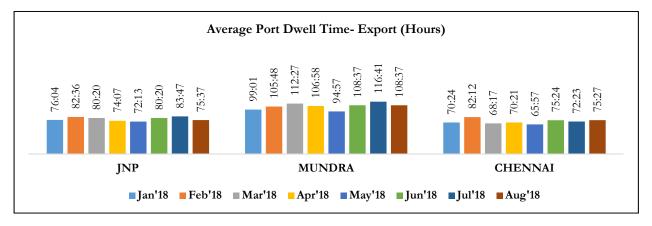


### **Berth Efficiency**

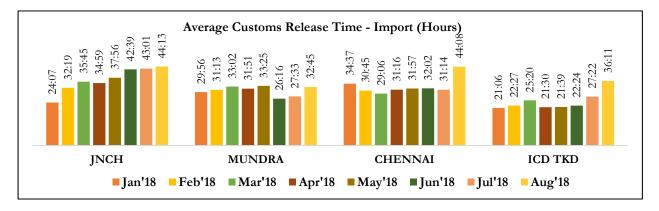


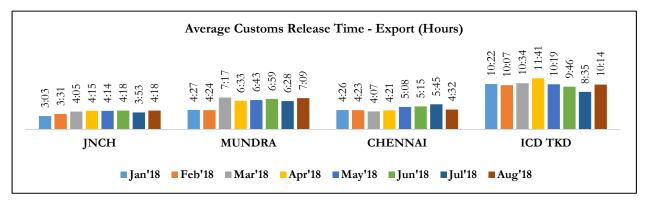
### Port Dwell Time



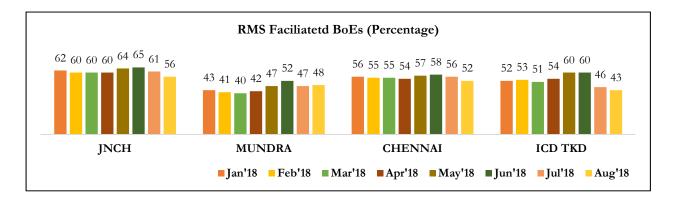


## **Customs Release Time**

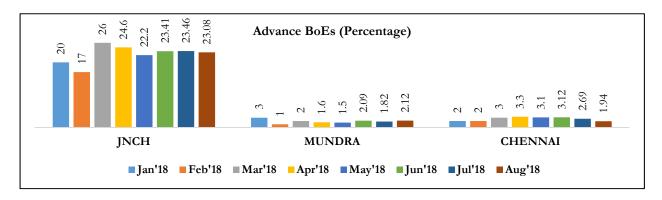




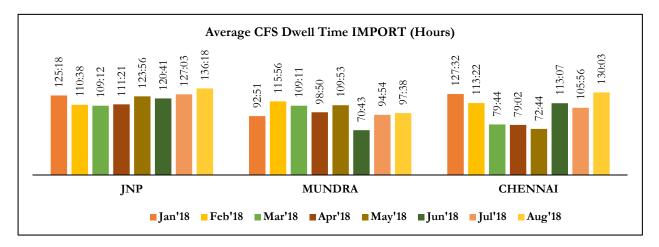
# Share of RMS facilitated BoEs

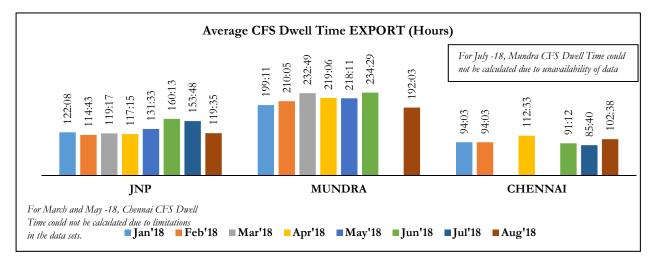


## Share of Advance BoE

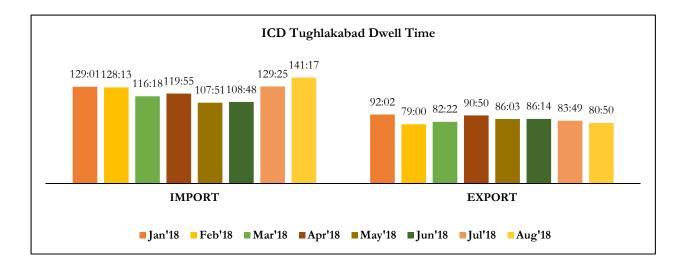


### **CFS Dwell Time**

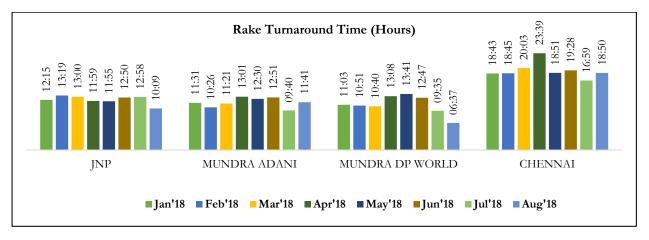


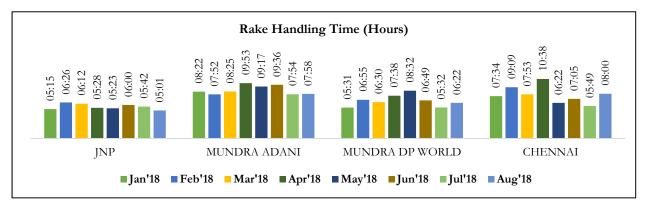


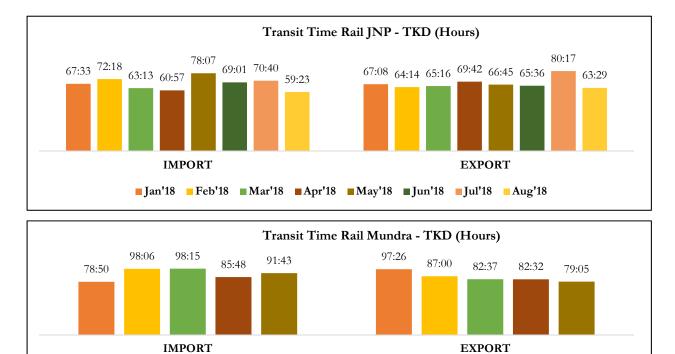
ICD TKD Dwell Time



### Rake Handling







■ Apr'18 ■ May'18 ■ Jun'18 ■ Jul'18 ■ Aug'18

# **Rail Transit Time**

# Annexure-I

# Time Taken from Vessel Arrival to Vessel Berthing

Terminal	Time- Hours
JNPCT	13:02:13

# Timelines for the Import of Auto-components from South Korea and Export of Electrical Machinery to US at JNP

Import Timeline of Auto components from South Korea					
Parameter	Value				
Number of BoEs	141				
Number of Containers	35929				
RMS Facilitated BoEs	126 (89%)				
Import Dwell Time (Entry Inward to OOC)	107:59:57				
Customs Release Time	29:26:27				

Export Timeline of Electrical Machinery to US					
Particulars	Value				
Number of SBs	698				
Number of Containers	3435				
Customs Release Time	3:06:09				

# Number of Containers Handled by Ports EXIM

	Number of Loaded Co	ontainers Terminal-wise	
Port	Terminal	Export	Import
	JNPCT	16273	26961
JNP	GTICT	40538	55978
JINF	NSICT	15035	10085
	NSIGT	27121	20886
	CCTL	12602	19492
Chennai	CITPL	11235	28589
	ACMTPL	19855	8138
Maria	AICTPL	38672	17730
Mundra	АМСТ	24769	17196
	MICT	20046	11854
Total		226146	216909

Terminal Wise Activities (Imports)									
Port	Terminal		ig to Container harge	Container Discharge to Port Out					
		N	Avg.	N	Avg.				
	JNPCT	26960	12:41:10	26646	56:56:54				
JNP	GTICT	55978	10:30:15	54988	61:36:26				
v	NSICT	10085	5:49:11	10085	71:47:52				
	NSIGT	20886	9:41:26	20886	64:06:07				
Chennai	CCTL	19492	12:02:31	19492	54:26:43				
	CITPL	28589	12:34:30	28498	60:10:24				
	ACMTPL	8138	7:30:54	7292	100:50:31				
Mundra	AICTPL	17730	6:56:03	17232	119:47:56				
	AMCT	17196	6:00:57	15797	97:47:20				
	MICT	11854	4:53:57	11213	104:56:49				

# Port Dwell Time Terminal-wise- Import

# Port Dwell Time Terminal-wise- Export

Terminal Wise Activities (Exports)								
Port	Terminal	Container In t Load		Container Loading to Vessel Sail Off				
		Ν	Avg.	Ν	Avg.			
	JNPCT	16273	76:06:21	13595	16:03:31			
JNP	GTICT	40537	76:45:15	40536	10:45:06			
JIVI	NSICT	15035	70:28:24	15035	8:26:18			
	NSIGT	24461	76:36:37	24461	10:06:59			
Chennai	CCTL	12602	82:36:32	12602	14:33:41			
	CITPL	11159	59:50:42	11118	13:56:46			
	ACMTPL	19855	127:51:23	19855	11:05:00			
	AICTPL	38672	108:51:31	38672	10:43:46			
Mundra	AMCT	24769	100:12:05	24769	8:13:12			
	MICT	20046	99:32:08	20046	6:53:14			

# CFS Process Timelines - Import

		CFS Pr	ocess 7	limelines (I	mport)			
Port	CFS	Entries	Ν	GIN to SC	Ν	SC to OOC	N	GIN to OOC
	Allcargo Logistics Annex	3,784	3358	88:16:26	2905	16:05:37	3129	94:21:23
	Allcargo Logistics	18	16	128:40:05	10	0:00:00	12	103:09:02
	Ameya Logistics	2,976	2972	89:47:40	999	91:49:15	2482	120:01:09
	APM Main & Anex	4,117	3732	143:40:42	930	84:26:41	2888	153:59:00
	Apollo Logisolutions	2,686	2631	143:56:17	697	87:06:07	1895	157:27:34
	Ashte Logistics	2,193	2193	81:31:56	1523	26:43:34	1929	96:40:19
	Balmer Lawrie	2,045	2008	152:43:04	2043	47:22:17	1998	197:09:00
JNP	EFC Logistics India Pvt Ltd	1,040	1040	51:34:40	75	29:39:05	568	48:41:31
	Globicon Terminals	3,091	3072	103:45:00	2546	52:48:27	2690	143:14:30
	JWC Logistics	1,639	1600	118:32:51	812	36:47:02	1362	126:34:19
	JWR Logistics	7	7	146:03:09	4	3:10:45	5	197:25:00
	Kerry Indev Logistics	1,279	1153	92:36:48	914	12:09:27	1041	94:04:48
	Seabird Marine Services	4,087	4029	124:17:59	1372	95:28:46	3340	146:16:10
	Vaishno Yard Logistics	1,195	1168	147:37:24	617	152:53:43	1076	222:24:04
	ICTIPL	3,951	2126	116:56:23	803	113:54:14	2797	135:37:04
	All Cargo	4,961	4556	80:13:58	4700	111:58:40	4733	179:13:33
Chennai	CWCNSL (M)	965	965	5:41:43	965	0:00:00	965	5:41:43
	CWCNSL Redhills	595	265	87:45:31	265	54:20:23	560	121:06:51
	ECCT	1,282	463	98:24:30	246	67:26:02	1119	115:23:03
	GDL	3,527	1674	90:03:58	1038	36:47:10	2332	90:55:04
Mundra	Mundra CFS	633	633	111:26:06	116	57:43:11	593	97:38:57

# CFS Process Timelines - Export

	CFS Process (Export)											
Port	CFS	Entries	N	ECO to STUFF	Ν	STUFF to MO	Ν	ECO to GO				
	Allcargo Logistics Annex	2230	2196	24:00:00	NA	NA	2230	35:03:04				
	Allcargo Logistics	231	216	129:35:29	NA	NA	231	61:11:41				
	Ameya Logistics	590	587	104:02:22	590	24:31:45	587	132:00:32				
	Apollo Logisolutions	1894	1701	115:12:17	1849	30:34:26	1864	179:49:50				
JNP	Ashte Logistics	668	NA	NA	667	10:32:34	NA	NA				
	Balmer Lawrie	271	NA	NA	271	0:00:00	NA	NA				
	EFC Logistics India Pvt Ltd	364	359	101:47:57	356	27:10:19	359	133:40:39				
	Globicon Terminals	390	382	92:57:28	390	3:47:09	382	129:04:54				
	JWC Logistics	4270	NA	NA	2715	29:04:38	NA	NA				
	JWR Logistics	5450	NA	NA	5428	11:05:43	NA	NA				
	Kerry Indev Logistics	387	387	15:23:14	57	63:09:08	387	31:39:13				
	Navkar Corp-1-2-3	4709	4661	85:20:38	3026	85:30:27	4655	155:41:59				
	Seabird Marine Services	611	419	25:31:49	NA	NA	567	13:14:45				
	Vaishno Yard Logistics	781	NA	NA	778	31:00:38	NA	NA				
	ICTIPL	1146	NA	NA	1141	25:01:39	NA	NA				
Chennai	ALLCARGO	4587	4579	123:28:28	4587	16:55:41	4578	132:34:37				
	Calyx CFS	1483	NA	NA	613	38:24:29	NA	NA				
	CWCNSL(Redhills)	2307	2305	43:11:23	2307	0:00:00	2305	43:11:23				
Mundra	Mundra CFS	2260	2121	165:58:53	1310	29:13:09	2130	192:03:24				

ICD Cumulative (Import)										
Number of Containers	N	GC-FAC	N	Non-GC- FAC	N	Warehouse	N	Direct		
Arrival to EJO	NA	NA	2153	79:41:54	193	77:20:14	157	99:36:14		
EJO to DJO	NA	NA	NA	NA	259	123:37:06	NA	NA		
DJO to De-stuffing	NA	NA	NA	NA	207	4:59:30	NA	NA		
EJO to OOC	NA	NA	2153	90:46:32	NA	NA	155	72:44:18		
De-stuffing to OOC	NA	NA	NA	NA	166	106:46:53	NA	NA		
OOC to DJO	NA	NA	NA	NA	NA	NA	142	50:23:06		
OOC to Gate pass	2113	29:03:43	2097	14:22:45	204	80:11:14	NA	NA		
DJO to Gate Pass	NA	NA	NA	NA	NA	NA	155	14:31:23		
Gate Pass to Departure	2201	24:02:23	2158	17:00:48	259	2:32:57	159	3:18:17		
Arrival to OOC	2190	106:52:10	2136	165:24:15	253	221:58:02	156	163:35:12		
Arrival to Departure	2178	155:14:41	2128	193:44:07	252	286:02:19	156	218:56:29		

# ICD Process Timelines- Import

# ICD Process Timelines- Export

ICD Cumulative (Export)									
Number of Containers	N	GC-FAC	N	Warehouse	Ν	Direct			
Arrival to CRN	495	21:49:05	NA	NA	NA	NA			
Arrival to LEO	NA	NA	249	47:29:23	8	4:52:44			
CRN to LEO	495	14:25:27	NA	NA	NA	NA			
LEO to Loading	495	21:56:19	NA	NA	NA	NA			
LEO to Stuffing	NA	NA	247	30:27:14	8	4:54:17			
Stuffing to Sealing	NA	NA	239	12:37:56	8	16:11:59			
Sealing to Loading	NA	NA	249	42:14:56	8	22:49:40			
Loading to Dispatch	425	1:14:04	224	1:19:14	7	1:03:09			
Arrival to Dispatch	495	59:09:27	243	126:02:35	8	49:33:18			

AQCS Process-wise												
Agency	Ν	BoE	Ν	BoE to APP	Ν	APP to SMP	Ν	SMP to RPT	Ν	RPT to NOC	Ν	APP to NOC
AQCS JNP	599	597	592	180:04:52	225	0:51:12	55	246:58:55	404	3:33:52	404	42:32:05
AQCS Mundra	232	232	231	136:24:56	13	24:00:00	3	208:00:00	220	0:26:11	220	15:09:49

FSSAI Process-wise (Chennai)							
Process	S	ample	No	on-Sample	Not in Scope		
	N	Avg. Time	Ν	Avg. Time	Ν	Avg. Time	
BoE to Application	1094	97:16:31	35	122:28:44	101	130:02:07	
Application to Scrutiny	1108	27:09:42	35	20:02:46	103	52:39:01	
Scrutiny to NOC			35	33:26:04	102	0:42:41	
Scrutiny to Payment	1108	14:30:53	NA	NA	NA	NA	
Payment to Sample	430	38:40:57	NA	NA	NA	NA	
Sample to NOC	1108	72:09:41	NA	NA	NA	NA	
Application to NOC	NA	NA	35	53:28:51	103	52:00:48	
Total Time	1108	138:00:20	35	53:28:51	103	52:00:48	

FSSAI Process-wise (JNP)							
Process	Sample		No	on-Sample	Not in Scope		
	N	Avg. Time	Ν	Avg. Time	N	Avg. Time	
BoE to Application	2732	115:56:13	179	121:12:21	120	162:51:15	
Application to Scrutiny	2750	43:41:59	179	40:01:14	124	59:51:10	
Scrutiny to NOC	NA	NA	152	9:05:23	124	12:54:11	
Scrutiny to Payment	2742	30:21:14	32	42:12:30	1	5:17:31	
Payment to Sample	2006	46:07:35	NA	NA	NA	NA	
Sample to NOC	2734	92:00:49	NA	NA	NA	NA	
Application to NOC	NA	NA	179	47:13:21	124	72:45:22	
Total Time	2750	181:50:23	179	47:13:21	124	72:45:22	

# Annexure-II

# Methodology

Monthly Segregation of Data					
Stakeholder	Import	Export			
Port	Vessel Berthing	Port In			
Customs	Out of Charge	Let Export Order			
CFS	Gate Out	Gate Out			
ICD	Departure	Departure			
PGA	NOC	NOC			

Dwell Time Calculation					
Stakeholder	Import	Export			
Port	Container Discharge to Port Out	Port In to Container Loading			
Customs	Submission of BoE to OOC	Registration to LEO			
CFS	Gate in to OOC	Carting to Gate Out			
ICD	Arrival to OOC	Arrival to Departure			
PGA	Application to NOC	Application to NOC			
Rake TRT	Arrival of Rake to Departure				
Rake THT   Unloading to Loading of Containers					
*TRT- Turn Around Time: THT- Terminal Handling Time					