Amidst new reformative policies and unprecedented structural changes, container trade has seen a year of survival as the drastic changes are making every business to rethink and re-draw strategies.

However, Indian container trade has witnessed an impressive upward growth of 11% in FY 2016-17 with 13.71 TEUs being handled when compared with 12.39 TEUs in FY 2015-16. Indian installed capacity now stands at 21 million TEUs with an average capacity utilization of 65% which is on par with the industry standards. On Indian coast still west coast plays dominant role with the biggest capacities are created around Maharashtra and Gujarat while west coast predominantly capturing two-thirds of the country's container business.

In spite of these, one of the major setbacks that Industry has been facing is the cost of doing business which is highest compared with rest of the world. The upward growth in Indian container market has been largely driven by strong import volumes and this is expected to continue during the current year while the exports remain under pressure.

During the past few months, GST implementation, Demonetization and Direct Port Delivery (DPD) are the regulatory measures which have impacted Indian logistics sector to large extent.

In this vibrant backdrop Maritime Gateway in association with Drewry brings you this insightful report.

Like every year, we hope this report would also be helpful.

Sincerely

Ramprasad
Editor-in-chief and Publisher
Maritime Gateway
FOREWORD

Drewry is proud to be associated with Maritime Gateway as Knowledge Partner for Containers India 2017. It is our pleasure to present this report prepared in collaboration with Gateway Media.

Container terminals are one of the critical nodes in the whole cargo supply chain system. Individuals and business trade across borders via the shipping lines. Terminals act as gateways for this trade to take place. Therefore, although shipping and terminal business have many different market dynamics, they remain on both sides of the same coin. Being a lucrative business opportunity, it has attracted many operators and investors in recent years both globally and in India. Apart from profiling major terminal operators in India, this paper also attempts to analyse their strengths in terms of their equity stakes at facilities located in different parts of the country.

Author: **Dr. Subrata K Behera**

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CONTENTS

1. Indian Container Market Overview 06
2. Growth Drivers & Challenges 09
3. Container Market Introduction 11
4. Terminals Ranking 14
5. Indian Container Terminals 16
6. Performance of Indian Container Terminals (FY 2016-17) 18
7. Terminals Profile
   • Jawaharlal Nehru Port Container Terminal 19
   • Nhava Sheva International Container Terminal Pvt. Ltd. 20
   • Nhava Sheva India Gateway Terminal 21
   • APM Terminals Mumbai 22
   • Mundra International Container Terminal 23
   • Adani Mundra Container Terminal 24
   • Adani International Container Terminal 25
   • Adani CMA CGM Mundra Terminal 26
   • APM Terminals Pipavav 27
   • Adani Hazira Container terminal 28
   • Kattupalli International Container Terminal 29
   • Vallarpadam ICTT 30
   • Chennai Container Terminal 31
   • Chennai International Terminal 32
   • Visakha Container Terminal 33
   • Krishnapatnam Port Container Terminal 34
   • PSA SICAL Tuticorin Container Terminal 35
   • Dakshin Bharat Gateway Terminal 36
   • Bharat Kolkata Container Terminal 37
   • Haldia International Container Terminal 38
8. Liner connectivity in India (main lines) 39
9. DPD on Rise 40

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Positive demand in Europe and North America, reversal of fortunes in South American economies, improved economic environment in South Africa from the second half of 2016, as well as rising imports from China tethered the container traffic growth at Indian ports in 2016. India’s container port throughput that grew by a paltry 2% annually in 2015, registered an 11% growth in 2016. Barring ports of Greater Mumbai where traffic was stagnant last year, the remaining regions recorded a double digit increase in throughput. While the container throughput at Indian ports grew at a CAGR of 13% during the six years period from 2005 till 2010, it slowed to 6% during 2011-2016. The decline was attributed to the global slowdown, following the economic recession of 2008.

**Major vs non-major ports**

The share of major ports in container handling has shrunk dramatically in the last ten years, while non-major ports, particularly in the upper west coast of India have grown by leaps and bounds. The market share of major ports declined from 92% in 2005 to 63% in 2016.
The rapid expansion of private ports attracted a significant chunk of the traffic. The market share of non-major ports collectively surged to a whopping 37% in 2016 from 3% in 2005. On the east coast, Krishnapatnam and Katupalli have amassed significant volume in three years (operational from 2013), adding to the growth story of non-major ports. In 2016, barring Pipapav that is on a weary footing with rumours of ownership change from APMT, the other four private ports registered humongous growth. Mundra handled 20% additional boxes in 2016 over 2015 even as traffic at Hazira zoomed by 54% during this period and a further 73% boxes passed through the quay of Krishnapatnam in 2016. The rival Katuapalli port after its operational take over by Adani is mending its slow start. It handled about 3 lakh teu in 2016 from 31,000 in 2014.

**East coast ports vs west coast ports**

The west coast ports continue to dominate the container market in India and its share in the country’s total container handling is hovering in the range of 70-75% since 2001, while that of east coast ports is in the range of 25-30%. The traffic at both coasts grew at a CAGR of 6% during 2011-2016. However, the capacity growth on the east coast at a CAGR of 15% from 2011 to 2016 is much higher than the 7% growth on the west coast of India. Despite higher capacity expansion at east coast ports, their share in the total container movement was pegged at 28%. This also indicates that the inter-port competition is rife between ports on the same coast and in the same range and not between ports on different coasts.

On the west coast, competition is palpable between upper west coast ports in Gujarat and ports on the Greater Mumbai coast. The JNPT that had a share of 66% in the west coast traffic back in 2010 slipped to 48% by 2016. On the other hand, Mundra expanded its share from 18% to 35% during the same period. On the east coast, the tussle is between Chennai and ports few miles north of Chennai. Krishnapatnam and Katupalli that started operations
India’s trade with west and east

Trade with western countries continues to dominate as India’s export market with a share of 72% of the country’s total exports. The share remained unchanged during 2011-2016. However, imports from western countries are gradually declining and decreased from 59% in 2011 to 51% in 2016. On the other hand, inbound from eastern countries reached 49% in 2016 from 41% in 2011. India’s exports to developing and emerging economies have been rising, while the pie is shrinking to advanced economies. Exports to the EU countries slide by 6% during 2011-2016. Moreover, imports from 28 EU countries shrunk by 28% during the same period. India’s trade with South East Asia is on the rise. Exports to this region have increased by 12% during 2011-2016.

If we analyse India’s export basket, the country continues to rely on exports of primary goods and low-value, low-tech manufacturing goods. Agricultural products such as cotton, rice, tea, meat and spices continue to dominate the exports. A shift to exports of medium and high-tech manufacturing products such as engineering goods is visible; however, their share in the total export goods lags behind China and other emerging economies.
Drivers for container trade growth and headwinds for terminal operators

The future of container growth in India is bullish in the wake of various policy initiatives such as Make in India, Goods and Services Tax (GST), Digital India, new Foreign Trade Policy and port linked infrastructure projects. On the flip side, encouraging growth picture comes with several riders like the fragmented port capacity, increased pressure on terminal assets from vessel upscaling and delay or time lag in the implementation of infrastructure projects. Drewry has categorised the drivers under the following headers

1. **Improving global economic environment**

Shipping is a cyclical business, and we are clawing back from the bottom of the cycle. The global container traffic, according to Drewry’s estimate is expected to grow by more than 5 per cent in 2017 and 3.5 per cent in 2018. The tide is turning in Latin America, particularly in Brazil that was in doldrums until the third quarter of 2016. The container traffic in North America and Europe is expected to grow by 3 per cent and 3.9 per cent respectively in 2017. The positive demand outlook globally will reflect on the box traffic in India.
2. New Foreign Trade Policy (FTP)

Under the new Foreign Trade Policy (2015 – 2020), India aims to increase its share in the global trade to 3.5% by 2020. Incentives to agricultural exports and extension of the same under Merchandise Exports from India Scheme to units in SEZ are part of the new FTP. This is aimed to integrate with Make in India and Digital India initiatives.

3. Infrastructure projects linked to port

Multiple infrastructure projects, eyeing to improve India’s logistics efficiency and hinterland connectivity, will boost the country’s box trade in the coming years. Some of the key projects that will be a game changer when fully operational are:

A. Multi-modal terminal under Jal Marg Vikas project:
   The 170 crore multi-modal terminal at Varanasi, under the Jal Marg Vikas project that will open before December 2018, will be a major logistics hub connecting North India to North East India. The government will also develop 35 multi-modal logistics parks for freight aggregation and distribution, multi-modal transportation and warehousing.

B. Port based multi-product SEZ at JNPT
   First of its kind, a port-based SEZ at JNPT will be developed with Free Trade Warehousing Zone, Engineering Goods sector, Electronics & Hardware sector and Pharma sector.

C. Dedicated Freight Corridor (DFC)
   DFC will provide logistics support for the Make in India initiative. Two of the three DFCs are scheduled to be operational in the next three years. DFC will reduce the inland transit time significantly.

D. Sagarmala programme
   The Indian government is implementing the Sagarmala programme in phases, spanning over 20 years from 2015-35. Four hundred and fifteen projects have been identified for port modernisation, new port development, port connectivity enhancement and port linked industrialisation. Six new port locations have also been identified.

4. Proposed transhipment hubs in the south

The government has approved ₹27,000 crore port project at Enayam. The port is expected to become a gateway port for India by shifting boxes that are currently transhipped at Colombo or South East Asian ports such as Singapore or Port Kelang. The location has a natural draft of 16 meters, and its proximity to East-West shipping route will enable it to be a transhipment hub for cargo from Bangladesh and Myanmar, which are currently being transhipped at Colombo or other South East Asian hubs.

The 7,525 Vizhinam port, currently being developed by Adani that enjoys a natural draft of more than 20 metres is another port that will compete as a transhipment hub.

Challenges for container terminals

1. Spatial distribution of ports:
   Fragmented container terminal capacity and development of new facilities in close vicinity will lead to traffic diversion. This will be a significant headwind to optimum utilisation of terminal facilities.

2. Vessel upscaling:
   Increasing pressure on terminal assets from vessels upscaling will inflate the sunk cost for terminal operators as container handling equipment becomes obsolete and yard space becomes scarce. For instance, in March the government approved a project worth ₹2,029 crore for the widening and deepening the Mumbai harbour channel to enable large vessels to call at JNPT.

3. Delay in policy implementation and project approvals:
   The best example to cite here is the Vizhinjam port. The plan to develop this port was mooted way back in 1991 and it materialised after 24 years. Another example is the delay in the construction of the fourth container terminal at JNPT that has proved costly for the port, in terms of traffic diversion to the neighbouring ports.
Indian container market is flourishing every year with huge investments from Indian and global operators in building largest capacities across Indian coast to serve the nation. Box business dynamics are rapidly transforming into new era that embrace advanced infrastructure, digitization, innovative business practises, process automation, transparency…etc. Implementation of advanced technology, enhancements in soft and hard infrastructure are also playing the key role for this transformational changes in the industry. Every operator is trying their best to establish India as a leader on the logistical map of the world. Despite uncertainties, Indian shipping industry is still a sweet spot for many global investors to work in an extremely progressive and fast paced environment of logistics.

As per Indian container market trend over the last few years, installed capacities and handled volume have been growing proportionately shows a positive sign for the industry apart from achieving best capacity utilization levels of almost 65 per cent. Year over year growth of Indian container installed capacity and throughput are 11 and 10 per cent respectively. Global and Indian operators are trying to attract transhipment cargo which could trigger inclusive growth in box trade. Few major and private players are also trying hard to establish themselves as transhipment hubs apart from serving as Gateway Port. This transformational changes in box business aiding Indian container market to reach the next level in Indian shipping business.

For the first time in Indian shipping industry, Gateway Media Pvt Ltd
and Drewry have tried to analyse and present Indian container terminal market by operator. Global and Indian Operators are one of the key stakeholders of the industry, aiming high with their big ticket investments in India for the betterment of the industry in spite of industry headwinds. In this report, total Indian throughput is segregated by each operator as per their equity share in the terminal. Thus, could derive the exact picture of each operator share in Indian total throughput.

DP World India, APSEZ Ltd, APM Terminals India, JNPT, PSA International and MSC India Pvt Ltd contributed around 90% of the throughput as per their equity share in Indian container terminals. The rest is shared among other players like JM Baxi, KPCL, CMA CGM Terminals, ABG Infra Logistics and Bollore Africa Logistics.

**DP World**

DP world portfolio comprises of 78 marine and inland terminals along with around 50 related businesses in 40 countries across six continents with a significant presence in both high-growth and mature markets. Container handling is the company’s core business and generates more than three quarters of its revenue. In 2016, DP World handled around 64 million TEU across its global portfolio. With its committed pipeline of developments and expansions, the current global gross capacity of 84.6 million TEU is expected to rise to more than 100 million TEU by 2020, in line with market demand. Dubai government owned DP World is currently the biggest foreign port operator in India, reported 3.5 million TEU as per their equity shareholding in Indian portfolio of terminals in FY 2016-17 while capturing 30 per cent share in Indian total throughput. DP world is running six container terminals in Indian ports in almost all biggest major container ports across Indian coast such as Mundra, Jawaharlal Nehru Port (two facilities), Cochin, Chennai and Visakhapatnam. One of the major contributor, Mundra International Container Terminal has registered a growth of 18 per cent year over year in FY 2016-17. These six terminals have a combined market share of about 30 per cent of the 13.5 million TEU handled by Indian ports during 2016-17. DP World is seeking opportunities in the country worth over US $1 billion in the next few years. This will be aimed at development of port infrastructure of the Sagarmala project, creation of the Delhi – Mumbai Industrial Corridor, river transportation and cold chain storage, investing in port-led special economic zones, free trade zones, ICDs and cruise terminals.

**APSEZ Ltd**

APSEZ Ltd is the only major Indian operator among other operators in India with highest portfolio of owning and operating ports and terminals across Indian Coast. APSEZ has their presence in almost all coastal states of India. Almost around 30 per cent of Adani’s portfolio is box business in its portfolio of diversified cargo types handled. In India, Adani is owning and operating 5 container terminals and 4 new terminals are in the anvil at Dhamra, Ennore, Mormugao along with one transhipment terminal at Vizhinjam.
Adani total container terminals throughput by equity share is accounting around 20 per cent of the Indian total throughput, ranked 1st biggest Indian operator.

Joint venture of Terminal Investment Ltd (MSC) and APSEZ Ltd, Adani International Container Terminal handled 1,160,000 TEU in FY 2016-17 with a year over year growth of 8 per cent, another joint venture facility of CMA CGM terminals and APSEZ Ltd is Adani CMA CGM Mundra Terminal registered one of the highest first year throughput of 276,630 TEU and in contrary, Adani 100 per cent owned terminal has registered a negative growth of 9 per cent in the same period. Adani Kattupalli container Terminal has registered around 200 per cent growth and Adani Hazira container terminal witnessed 37 per cent year over year growth in FY 2016-17.

APM Terminals

APM Terminal’s is one of the largest container terminal operators in the world, offers the global shipping community an integrated Global Terminal Network of 56 ports and 154 inland facilities in 63 countries. With a presence in every major market, APM Terminals serves all major trade lanes providing wide clientele with the most advanced terminal technology, equipment and operations in the industry. APM terminal’s Indian portfolio consists of two terminals in India, currently - India’s largest and most successful container terminal, APM Terminals Mumbai (earlier known as Gateway Terminals India), in JNPT at Nhava Sheva, Mumbai; and Port Pipavav in Gujarat. APM terminal’s total installed capacity is 3.15 million TEU where in total throughput share by equity holding is 1.61 million TEU in FY 2016-17.

APM terminals Mumbai and Pipavav clocked highest throughput in its history in the FY 2014-15 especially APM terminals Mumbai volume touched the highest ever handled by a single container terminal of 2.01 million TEU in the Indian shipping industry, since after the two terminals fall a prey to the negative growth trend till this year. In addition, Global cyber-attack, ransomware hit the APM terminals operations across the globe that could further pull down the growth of the terminals in the current year. Notwithstanding to its downfall, still APM terminals Mumbai has registered a highest throughput handled by a single terminal in India of 1.7 million TEUs in FY 2016-17.

JNPT

Jawaharlal Nehru Port Trust owned and operated Jawaharlal Nehru Port Container Terminal has witnessed a positive year over year growth of 10 per cent in FY 2016-17. JNPT as an operator has contributed 13 per cent of throughput by equity share holding to the total volume handled in India. JNPT’s transformational changes and adaptability to the new technology and enhancement of port infrastructure intensified the operations across its container terminal to record one of the highest throughput in India. Still many progressive plans are in progress for the betterment of the port and terminal to ease the congestion issues for the speedy evacuation of cargo apart from streamlining the operational processes.

PSA International

PSA International is eyeing to increase its dominance in Indian container market with slew of measures undertaken while adding new services and also with its high investments by adding further capacities across Indian coast. PSA’s position in India will be beefed up further when Phase 1 of the Bharat Mumbai Container Terminal in Jawaharlal Nehru Port becomes operational in FY 2017-18.

In India, PSA achieved equity throughput of more than 1.15 million TEU and garnered 5th position among other operators in India. In the last fiscal 2016-17, PSA’s Chennai International Terminal clocked around 21 per cent of impressive growth rate year over year, while registering throughput of around 0.85 million TEU in FY 2016-17. In addition, its Bharat Kolkata Container Terminal achieved an upick of 10 per cent growth rate, and its Tuticorin Container Terminal witnessed 5 per cent growth year over year with 0.53 million TEU in FY 2016-17.
TERMINALS RANKING (FY 2016-17)

Total Installed Capacity (FY 2016-17)  
21,000,000 TEUs

Total Throughput (FY 2016-17)  
13,710,622 TEUs

1. GTIPL  
1,792,503 TEUs

2. JNPCT  
1,533,975 TEUs

3. MICTPL  
1,163,055 TEUs

4. AICTPL  
1,160,000 TEUs

5. AMCT  
860,000 TEUs

6. NSICT  
728,560 TEUs

7. NSIGT  
445,111 TEUs

8. GPPL  
663,380 TEUs

9. MPT-C  
19,552 TEUs

10. NMPTC-C  
9,428 TEUs

11. ICTT  
491,087 TEUs

12. MbPT-C  
31,092 TEUs

13. ACMT  
276,630 TEUs

14. AHCT  
414,945 TEUs

15. KPT-C  
5,252 TEUs

16. GHRD  
2,963 TEUs

17. KANDLA  
1,782 TEUs

18. MUNDRA  
1,774 TEUs

19. JVPT  
1,756 TEUs

20. NHAVA SHEVA  
1,747 TEUs

21. PIPAVAV  
1,739 TEUs

22. PIPAVAV  
1,737 TEUs

23. NHAVA SHEVA  
1,730 TEUs

24. PIPAVAV  
1,727 TEUs

25. HAZIRA  
1,720 TEUs

26. PIPAVAV  
1,716 TEUs

27. PIPAVAV  
1,713 TEUs

28. PIPAVAV  
1,710 TEUs
Note: Ranked all Indian container terminals as per the throughput based on data obtained from ports/container terminal authorities and also from other reliable sources.
<table>
<thead>
<tr>
<th>Container Terminal Name</th>
<th>Known as (Short Name)</th>
<th>Operator</th>
<th>Year of Commission</th>
<th>Draft (m)</th>
<th>Berths</th>
<th>Quay Length (m)</th>
<th>Installed Capacity (TEUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APM Terminals Pipavav - Gujarat Pipavav Port Ltd</td>
<td>GPPL</td>
<td>APM Terminals Pipavav - Operating since 2005</td>
<td>2002</td>
<td>15.5</td>
<td>2</td>
<td>735</td>
<td>1,350,000</td>
</tr>
<tr>
<td>Mundra International Container Terminal</td>
<td>MICTPL</td>
<td>DP World</td>
<td>2003</td>
<td>14.5</td>
<td>2</td>
<td>632</td>
<td>1,100,000</td>
</tr>
<tr>
<td>Adani Mundra Container Terminal</td>
<td>AMCT</td>
<td>Adani Ports &amp; SEZ Ltd</td>
<td>2007</td>
<td>14.5</td>
<td>2</td>
<td>631</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Adani International Container Terminal</td>
<td>AICTPL</td>
<td>Adani Ports &amp; SEZ Ltd and MSC Mediterranean Shipping Company</td>
<td>2012</td>
<td>16.0</td>
<td>2</td>
<td>810</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Adani Hazira Container terminal</td>
<td>AHCT</td>
<td>Adani Hazira Port Pvt Ltd</td>
<td>2012</td>
<td>13.0</td>
<td>2</td>
<td>637</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Chennai Container Terminal</td>
<td>CCTL</td>
<td>DP World</td>
<td>2001</td>
<td>15.0</td>
<td>4</td>
<td>885</td>
<td>850,000</td>
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<tr>
<td>PSA - Chennai International Terminal</td>
<td>CITPL</td>
<td>PSA Chennai</td>
<td>2009</td>
<td>15.5</td>
<td>3</td>
<td>832</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Visakha Container Terminal</td>
<td>VCTPL</td>
<td>United Liner Agencies of India Pvt Ltd and DP World.</td>
<td>2003</td>
<td>16.5</td>
<td>2</td>
<td>450</td>
<td>700,000</td>
</tr>
<tr>
<td>Krishnapatnam Port Container Terminal</td>
<td>KPCT</td>
<td>Krishnapatnam Port Company Ltd</td>
<td>2012</td>
<td>13.5</td>
<td>2</td>
<td>650</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Kattupalli International Container Terminal India</td>
<td>KICT</td>
<td>Adani Ports &amp; SEZ Ltd</td>
<td>2013</td>
<td>13.5</td>
<td>2</td>
<td>710</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Jawaharlal Nehru Port Container Terminal &amp; Shallow Drought Terminal</td>
<td>JNFTL</td>
<td>Jawaharlal Nehru Port Trust</td>
<td>1989</td>
<td>14.0</td>
<td>3</td>
<td>680 &amp; 445</td>
<td>1,400,000</td>
</tr>
<tr>
<td>Nhava Sheva International Container Terminal</td>
<td>NSICT</td>
<td>DP World</td>
<td>1999</td>
<td>13.5</td>
<td>2</td>
<td>600</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Nhava Sheva India Gateway Terminal</td>
<td>NSIGT</td>
<td>DP World</td>
<td>2015</td>
<td>13.5</td>
<td>1</td>
<td>330</td>
<td>800,000</td>
</tr>
<tr>
<td>APM Terminals Mumbai - Gateway Terminals India</td>
<td>GTIPL</td>
<td>APM Terminals and Container Corporation of India</td>
<td>2006</td>
<td>14.0</td>
<td>2</td>
<td>712</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Bharat Kolkata Container Terminal</td>
<td>BKCT</td>
<td>PSA provides container handling services (06M) since 2014-KoPT</td>
<td>1979</td>
<td>8.5</td>
<td>5</td>
<td>812</td>
<td>850,000</td>
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<tr>
<td>Haldia International Container Terminal</td>
<td>HICT</td>
<td>United Liner Agencies of India Pvt Ltd operating since 2015</td>
<td>1977</td>
<td>8.5</td>
<td>2</td>
<td>432</td>
<td>300,000</td>
</tr>
<tr>
<td>Vallarpadam International Container Transhipment Terminal</td>
<td>ICTT</td>
<td>DP World</td>
<td>2011</td>
<td>14.5</td>
<td>2</td>
<td>605</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PSA - SICAL Tuticorin Container Terminal</td>
<td>TCT</td>
<td>Sical and PSA International</td>
<td>1999</td>
<td>10.9</td>
<td>1</td>
<td>370</td>
<td>450,000</td>
</tr>
<tr>
<td>Dakshin Bharat Gateway Terminal</td>
<td>DBGT</td>
<td>Dakshin Bharat Gateway Terminal Pvt Ltd</td>
<td>2014</td>
<td>12.8</td>
<td>1</td>
<td>345</td>
<td>500,000</td>
</tr>
<tr>
<td>New Mangalore Port - (Containers)</td>
<td>-</td>
<td>New Mangalore Port Trust</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Adani CMA Mundra Terminal</td>
<td>ACMTPL</td>
<td>Adani Ports and Special Economic Zone Ltd (APSEZ) and CMA CGM</td>
<td>2017</td>
<td>16.5</td>
<td>2</td>
<td>650</td>
<td>13,000,000</td>
</tr>
<tr>
<td>Mormugao Port - Containers</td>
<td>-</td>
<td>Mormugao Port Trust</td>
<td>NA</td>
<td>13.1</td>
<td>1</td>
<td>250</td>
<td>NA</td>
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<tr>
<td>PSA Kakinada Container Terminal</td>
<td>KCTPL</td>
<td>Bothra Shipping, Kakinada Infrastructure Holdings and PSA</td>
<td>2016</td>
<td>13.0</td>
<td>1</td>
<td>300</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Yard Area (Hectares)</td>
<td>Throughput</td>
<td>Total Ground Slots (TGS)</td>
<td>Reefer Plugs</td>
<td>Quay Cranes</td>
<td>Rubber Tyred Gantry Cranes (RTGC)</td>
<td>Rail Mounted Gantry Cranes (RMGC)</td>
<td>Reach Stackers</td>
</tr>
<tr>
<td>----------------------</td>
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<td>--------------</td>
<td>-------------</td>
<td>----------------------------------</td>
<td>----------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>16.0</td>
<td>6,63,380</td>
<td>3,409</td>
<td>526</td>
<td>3 Panamax and 5 Post Panamax</td>
<td>18</td>
<td>4</td>
<td>9</td>
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<td>11,63,055</td>
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## PERFORMANCE OF INDIAN CONTAINER TERMINALS (FY 2016-17)

<table>
<thead>
<tr>
<th>Names</th>
<th>Volume Handled</th>
<th>Annual Growth</th>
</tr>
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<tbody>
<tr>
<td>APM Terminals Pipavav</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Mundra International Container Terminal</td>
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<td>High</td>
</tr>
<tr>
<td>Adani Mundra Container Terminal</td>
<td>Medium</td>
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<tr>
<td>Adani International Container Terminal</td>
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<td>Medium</td>
</tr>
<tr>
<td>Adani Hazira Container Terminal</td>
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<td>Paradip Container Terminal</td>
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<td>Chennai Container Terminal</td>
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<td>Visakha Container Terminal</td>
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<td>Krishnapatnam Port Container Terminal</td>
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<tr>
<td>Kattupalli International Container Terminal India</td>
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<td>Jawaharlal Nehru Port Container Terminal</td>
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<td>Kakinada Container Terminal</td>
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### Reference

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<thead>
<tr>
<th>Volume(Mi TEUs)*</th>
<th>Annual Growth</th>
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<tr>
<td>Low 0-0.5</td>
<td>&lt;5%</td>
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<tr>
<td>Medium 0.5-1</td>
<td>5-10%</td>
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<tr>
<td>High &gt;1</td>
<td>10%+</td>
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*Mi TEUs - Million Twenty Foot Equivalent Units
Jawaharlal Nehru Port Container Terminal (JNPCT), owned and operated by Jawaharlal Port authority, handled 1,533,975 TEU in FY 2016-17 surpassing last year volume of 1,401,290 TEU and registered 7.33 per cent year over year growth in terms of TEU and 1.78 per cent in terms of tonnage. Out of the total traffic of JNPT 4.50 million TEUs, the share of the JNPCT is 34.09 per cent.

JNPCT handled 401,305 TEUs in the 1st quarter of FY 2017-18, compared to 399,306 TEUs during the corresponding quarter of the last year with 0.5 per cent growth. Backup infrastructure like 34 CFSs, connectivity with 46 ICDs, full fledge Custom House, proximity to Mumbai, Pune, Nasik city and its industrial belt all makes JNPCT a unique container terminal of JN Port.

In a major attempt to rise above conventional standards and achieve high benchmarks, the Port owned container terminal has taken series of measures for improving productivity parameters leading to record achievement. The major initiatives taken to achieve zero congestion included streamlining processes, improving infrastructure, migration from manual forms to electronic formats and CCTV monitoring of Port roads. A major intervention was the commencement of Inter-Terminal Movements, which facilitated lateral movements of container trucks. Inter-Terminal Movement of trailers avoided a transit of 7.5 km on the Port roads. It is estimated that there is an 8 per cent reduction of movement on Port roads and a gain of ₹125 crore to the trade due to savings in fuel in one year alone. Average berth productivity increased by 4.74 per cent from 64.98 moves per hour in 2015-16 to 68.06 moves per hour in 2016-17. Average parcel size increased by 9.24 per cent from 2,977 TEU in 2015-16 to 3,252 TEU in 2016-17. Average turn round time of JN Port on Total account is 1.93 days improved by 5.39 per cent as compared to previous year’s (FY 2015-16) 2.04 days.

The port administration continues to work on easing supply chain bottlenecks in an effort to stay ahead of anticipated trade growth and cope with rising competition.

- **Throughput**: 1,533,975 TEU
- **Installed Capacity**: 1,500,000 TEU
- **Capacity Utilization**: 102%
- **Operator**: JNPT
- **Mr Anil Diggikar, IAS** Chairman.
D P World’s flag ship facility in Jawaharlal Port, Nhava Sheva International Container Terminal (NSICT), handled 728,560 TEU in FY 2016-17 while reporting a negative year over year growth. Out of the total traffic of JNPT 4.50 million TEU, NSICT contributed share of 16.19 per cent. There has been a significant decrease over the years volume since FY 2014-15 with the addition of new terminal NSIGT owned and operated by DP world. NSICT has registered a negative CAGR of 8.6 per cent during FY 2013-17. This terminal handled 167,849 TEUs in the 1st quarter of FY 2017-18, compared to 191,860 TEUs during the corresponding quarter of the last year with negative growth of 12.51 per cent.

This terminal serves the trade with 600 meters quay, 26 hectares of yard space, 8 quay cranes, 3 rail-mounted gantry cranes and 29 rubber tyred gantry cranes, with installed capacity of 1.2-1.5 million TEUs per year.

90 per cent of this terminal EXIM cargo is being handled by CONCOR’s rail connectivity. 15 export trains are placed on daily basis to Delhi, Ludhiana, Mulund, Ahmedabad, Hyderabad, Nagpur, Jodhpur, Aurangabad, Vadodara, Moradabad etc. Direct rail connectivity to 46 ICDs across major centres in India ease the shippers with better options.

Majority of the cargo handled by this terminal are Chemicals, Machinery, Plastics, Vegetable oils, Electrical equipment, Aluminium, Non-ferrous metals, Motor Vehicles, etc.
P World's new container terminal, Nhava Sheva India Gateway Terminal (NSIGT), handled 0.45 million TEUs in FY 2016-17 when compared to previous year's 0.20 million TEUs, registering an impressive growth of 120 per cent in terms of TEUs and 125.43 per cent in terms of tonnage. Out of the total traffic at JNPT of 4.50 million TEUs, the share of NSIGT is 0.45 million TEUs (10 per cent). This terminal handled 1,34,244 TEUs in the 1st quarter of FY 2017-18, compared to 1,17,014 TEUs during the corresponding quarter of the previous year with a growth of 14.72 per cent.

NSIGT, located next to DP World’s flagship Nhava Sheva International Container Terminal officially opened in 2015. The new facility comprises a berth length of about 330 m, a draft of 16m alongside, a 27.51 hectares storage yard, 4 rail-mounted quay cranes and 12 rubber-tire gantry cranes, capable of handling 800,000 TEUs annually.

Equipped with the latest technology and terminal equipment, this terminal will be in a position to handle 14,000 TEU vessels. This terminal has installed advanced cargo handling infrastructure such as remote-controlled quay cranes and optical character recognition technology for gate operations. With this slew of advanced measures taken by the terminal, NSIGT gained a competitive edge over others. Increase in opportunities of breakbulk or heavy cargo apart from containers, Indian container terminals are also trying to capture this market. NSIGT also handled an oversize shipment weighing 79 metric tons, reportedly the heaviest-ever lift at the country’s busiest public container harbor. The out-of-gauge cargo was loaded on the Maersk Guayaquil operating as part of the Danish carrier’s Europe-Middle East (ME1) service.

NSIGT has achieved several operational milestones during the past year, the most notable of which was the berthing of the 13,000-TEU MSC Cristina, the largest container ship ever to have called Indian shores, on April 1, 2016.

**Throughput**
445,111 TEU

**Installed Capacity**
800,000 TEU

**Capacity Utilization**
56%

**Operator**
DP World

**Mr Ravinder Johal**
Chief Executive Officer
APM Terminals Mumbai (GTIPL) is a Joint Venture company of APM Terminals and the Container Corporation of India (CONCOR) in a 74 per cent and 26 per cent partnership, respectively.

In FY 2016-17, APM Terminals Mumbai handled 1,792,503 TEU while reporting a negative year over year growth of 3.6 per cent. Despite the slump in year on year volume, GTIPL contributes the largest share every year and in FY 2016-17 it contributed 39.83 per cent volume in the total throughput of JNPT.

This terminal handled 499,092 TEUs up 14.5 per cent in the 1st quarter in FY 2017-18 compared to last year same period volume of 435,886 TEU.

Apparently, In the last five years APM Terminals Mumbai is only the largest terminal operator by throughput as it handles highest traffic in Indian shipping industry. This terminal implemented several trade-friendly services to improve ease of doing business. This includes initiatives such as paperless transaction, delivery of import cargo within six hours of vessel discharge, RFID tracking, inter-terminal transfer through virtual gates, integrated rail sidings and improved gate turnaround times.

APM Terminals Mumbai added new Far-East weekly service. This service operates with a six-vessel string of the 4,200 - 5,000 TEU capacity category, links the west coast of India with Malaysia, Singapore and China. The port rotation originates in Tianjin, China and calls Qingdao and Ningbo, before proceeding to Singapore, Port Kelang, Malaysia and Nhava Sheva/Mumbai. The Eastbound leg leaves Nhava Sheva for Mundra and Hazira, on India’s west coast, and calls Colombo, Sri Lanka; and Port Kelang and Singapore before returning to Tianjin.

Throughput
1,792,503 TEU

Installed Capacity
1,800,000 TEU

Capacity Utilization
100 %

Operator
APM Terminals & CONCOR

Mr. Kamal Jain
Chief Executive Officer

Terminal Address
GTI House, JNPT, Sheva, Navi Mumbai, Taluka - Uran, District Raigad, Maharashtra - 400 707, India.
Tel :+ 91 22 6681 1000
As one of the technically advanced terminal facilities in the Indian Subcontinent, strategically located in the State of Gujarat, Mundra International Container Terminal (MICT) is the closest gateway to India’s largest cargo generating regions in the north and northwest. In FY 2016-17, Mundra International container terminal handled 1,163,055 TEU while reporting a year over year growth of 18 per cent. This terminal has consistently recorded positive growth in the last five years.

MICT terminal this year has booked average gross berth productivity of 88.62 moves per hour and a gross crane rate of 31 moves per hour. One the major stumbling block of the terminal is operating with exceeded capacity of 105 per cent capacity utilization in the last fiscal year.

To rise the productivity levels, the terminal has implemented several measures that bolstered the performance, such as

1. Electrification of the conventional diesel driven RTG into a fully electric RTG (E-RTG). 18 RTGs converted and 36 Yard blocks have been converted to bus-bar system.
2. Replacement of existing ITVs – All 65 ITVs at terminal has been replaced with brand new ITVs.

The Mundra International Container Terminal also provides its customers with an integrated container freight station (CFS) about 3 kms outside the terminal. The CFS covers an area of 20 hectares and provides enclosed warehousing space of 1.9 hectares and a 9.95 hectares open container yard.

**Throughput**

1,163,055 TEU

**Installed Capacity**

1,100,000 TEU

**Capacity Utilization**

105%

**Operator**

DP World

**Mr Sandeep Mehta**
Chief Executive Officer
Adani Mundra Container Terminal

Adani and SEZ Ltd 100 per cent owned operated container terminal in Mundra Port is Adani Mundra Container Terminal (AMCT) has reached a level of 86 per cent capacity utilization. This container terminal has registered a positive year over year double digit growth till FY 2015-16 but in contrast it has registered a fall in growth of 8 per cent in FY 2016-17.

APSEZ Ltd has initiated several new developments across Mundra region and also sought government approval to club its three SEZs in Mundra to form mega multi product export zone spanning over 8,500 hectare. The integrated facility would have multi modal connectivity with all utilities, industrial and social infrastructure. The spurt in economic activities in and around Mundra will definitely further augment the growth of the trade while creating an opportunity for the terminal to expand its wings to further facilitate the trade.

Along with regular cargoes, in Feb 2017, AMCT also handled two car carriers loading 2,500 cars for Latin America and loading 432 cars of Maruti Suzuki for European country.

APSEZ’s strategic joint ventures with major shipping lines is attracting and improving its cargo handling capacity and volume across Indian coast especially in Mundra. Earlier, it had entered into an agreement with Dubai Ports in early 2000 to start Mundra International Container Terminal. In 2012, it signed a Joint Venture with MSC for a terminal (CT3) with capacity of 1.5m TEUs. Such strategic tie-ups are a win-win proposition for its ports as well as the shipping liners with the latter ensured of preferential berthing and faster turnaround, while cargo visibility increases for the ports.

### Throughput
860,000 TEU

### Installed Capacity
1,000,000 TEU

### Capacity Utilization
86%

### Operator
APSEZ Ltd

### Mr Ennarasu Karunesan
Chief Executive Officer

Address
New Mundra Port,
Navinal, Mundra,
Kutch - 370 421
Gujarat, India
Adani International Container Terminal

Adani International Container Terminal (AICTPL) is a joint venture with Terminal Investment (part of Swiss-based Mediterranean Shipping Company). AICTPL has registered a throughput of 1.16 million TEU with year over year growth of 8% in FY 2016-17.

To intensify box operations, this terminal is planning to complete the expansion of Adani International Container Terminal (AICTPL) at Mundra port by 2017-18 to create a transhipment hub for West Asia, South Asia and India. Once, the new expansion facility commence operations, the terminal will consist of 1460 meter quay length and 15 super post panamax quay cranes with cargo handling capacity of 3.1 million TEU. With this expansion, the terminal will be capable of handling 18,000 TEU container vessels. In this expanded capacity, the terminal is planning to handle around 1.2 million of transhipment cargo. This clearly indicates the advantage of tie ups with one of the major shipping lines to attract the EXIM and transhipment cargoes.

In FY 2016-17, this terminal added 3 quay cranes and 9 rubber tyred gantry cranes to serve the trade more efficiently to increase the terminal productivity. This strategic Joint Venture with Terminal Investment Ltd, helped the terminal in improving the year over year growth. The container terminal is already handling highest transhipment cargo of growth around 30-40 per cent as compared to any other terminal across Indian coast. The strategic expansion and enhancements in this terminal further ease the trade.

Throughput
1,160,000 TEU

Installed Capacity
1,750,000 TEU

Capacity Utilization
66 %

Operator
APSEZ Ltd & Terminal Investment Limited

Mr Ennarasu Karunesan
Chief Executive Officer
Adani CMA CGM Mundra Terminal

Adani Ports and SEZ (Adani Ports) has set up its fourth container terminal Adani CMA Mundra Terminal in 50:50 joint venture (JV) with France based CMA CGM with capacity of 800,000 TEUs. Successfully commissioning of Container Terminal (CT-4), has made Adani Mundra Port India’s largest container-handling port. APSEZ and CMA CGM will jointly operate this CT-4 at Mundra Port for 15 years. CT-4 has a 650 meter quay with a container backup area of 6,503 TGS culminating to a terminal capacity to 1.3 million TEUs per annum.

The terminal can handle container vessels with 2,00,000 dead weight tonnage (about 18,000 TEUs) and also super post and ultra large container vessels. In Phase I, the terminal will be equipped with four units of 65 tonnes capacity of rail mounted away cranes and twelve RTGs in addition to three reach stacker & one empty container handler. For the first year, CT-4 handled 276,630 TEUs, one of the highest volumes handled by any terminal in India in the commencement year. The terminal will have capacity of around 1.3m TEUs which will make Mundra India’s largest container port with 5.3m TEU capacity.

For CMA CGM, CT4 is its first port investment in India, and demonstrates its ambition to further increase its presence in this strategic and fast-developing country. CMA CGM is present in India since 1984. With 29 offices, it is calling 13 ports in India, and offers to its Indian customers 11 direct weekly shipping services connecting India to Europe, Africa, North America, South America, Asia, Australia and the Middle East.

APSEZ Ltd is fairly confident of achieving full utilisation of the terminal within the next five years.

**Throughput**
276,630 TEU

**Installed Capacity**
800,000 TEU

**Capacity Utilization**
35 %

**Operator**
APSEZ Ltd & CMA CGM

**Mr Ennarasu Karunesan**
Chief Executive Officer

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**Address**
New Mundra Port, Navinal, Mundra, Kutch - 370 421 Gujarat, India
APM terminals Pipavav is located on the southwest coast of Gujarat at a distance of 140 kms southwest of Bhavnagar and around 152 nautical miles Northwest of Mumbai. This container terminal lies on a strategic international maritime trade route which connects India with the Far East, Middle East, Africa, Europe and the US.

The terminal is on an expansion spree that it has completed enhancements at the terminal recently includes strengthening of the existing berth, additional dredging work, addition of three new post-Panamax cranes to accommodate ultra-large container ships and four new rubber tyred gantry cranes, increasing annual throughput capacity from 0.85 million TEUs to 1.35 million TEUs. This terminal in India is well connected with Gujarat and the northern hinterlands of India, serving as a gateway for the movement of containers.

This terminal has reported throughput of 663,380 TEUs in FY 2016-17 with a negative growth of 4 per cent. Similarly, in FY 2015-16, the terminal registered a negative growth of 12 per cent. APM Terminals Pipavav is also partially impacted by cyber attack which has meagre effect in registering low volumes but mainly on account of the shift of one service from the port, discontinuance of one service and Hanjin going out of business.

With the expansions, the terminal is expecting to turn around the situation to record positive results in the upcoming years. As a result of the expansion, the 10,100 TEU capacity Maersk Gibraltar has berthed on June 16th 2017, marking a new record of largest vessel ever called. The newly added weekly loop linking Europe, the Middle East and India provides direct connections to Pipavav with Salalah, Oman; Jeddah, Saudi Arabia; Port Tangier, Morocco; Felixstowe, UK; Antwerp, Belgium; Bremerhaven and Wilhelmshaven, Germany; Rotterdam, The Netherlands; Algeciras, Spain; Aqaba, Jordan and Jebel Ali, in the UAE. The 337-meter long Maersk Gibraltar loaded cargoes of refrigerated agricultural products, and iron castings for export. A 269-km-long rail line links Pipavav with the nearest major railway line at Surendranagar in the Saurashtra region of Gujarat.

### Throughput

- **663,380 TEU**

### Installed Capacity

- **1,350,000 TEU**

### Capacity Utilization

- **49 %**

### Operator

- **APM Terminals**

- **Mr. Keld Pedersen**
  - Managing Director
Adani Hazira Container Terminal

Adani Hazira Container Terminal is located in the gulf of Khambat and is proximate to the hinterland of India’s biggest chemical manufacturing corridor extending from Vapi to Vadodara in South Gujarat. This terminal facilitates international trade to Europe, Africa, America and the Middle East. The terminal is of great significance as it is situated at the core of the biggest chemical manufacturing corridor i.e. South Gujarat (from Vapi to Vadodara).

Hazira port has five operational berths viz. two container berths and three multipurpose berths which can handle dry as well as liquid cargo.

Hazira container terminal started its operations in March 2013 and became a preferred gateway port for South Gujarat, Central India and North Maharashtra. Presently, the terminal has two container berths with installed capacity to handle 1,000,000 TEUs per annum. Hazira container terminal has congestion free approach roads that allow EXIM trade faster turnaround of their container shipments from port that reduces cost and valuable time. Port also has on-dock EXIM yard with facility of customs examinations, de-stuffing and stuffing which helps importers and exporters in fast clearance of their cargoes.

During FY 2016-17, the total cargo handled at Hazira Port showed an increase of 24 per cent against total cargo handled during previous year and also the container terminal has registered a whopping growth of 37% year over year growth. 1st quarter in FY 2017-18, the total cargo handled at Hazira container terminal showed an increase of 25 per cent against the same period last year.

Presently Shipping Lines like Maersk, MSC, CMA CGM, OOCL, PIL, Simatech, Emirates, UASC, Perma Shipping, Freight Connection, Caravel, Balaji, Trans Asia, IAL are offering weekly service to worldwide destinations from Hazira. The terminal has improved the connectivity for Far East with the addition of new services. New GALEX service of Emirates/KMTC/RCL will further boost the growth of the terminal.

Average output per ship berth per day increased by 23 per cent in FY 2016-17. Average Crane productivity increased by 12.12 per cent from 28.37 moves per hour in 2015-16 to 31.81 moves per hour in 2016-17. Average turn round time is 0.51 days improved by 7.23 per cent as compared to previous year’s (FY 2015-16) 0.55 days. Positive growth across all performance parameters induces a big impact on the overall performance of the terminal to flourish in the coming years.

| Throughput | 414,945 TEU |
| Installed Capacity | 1,000,000 TEU |
| Capacity Utilization | 42 % |
| Operator | APSEZ Ltd |
| Capt Anil Kishore Singh | Chief Executive Officer |

Address
At & Post Hazira, Tal. Chorliyasi, Surat, Gujarat 394270
Kattupalli International Container Terminal (KICT) is one of the most modern container terminal ideally situated 35km from Chennai, is geared to offer the best terminal services for the trade. Adani owned Kattupalli terminal serve the EXIM trade of Tamil Nadu and nearby hinterlands with two berths of total length about 710 metres with a capacity to load 1.2 million TEUs. Since, Adani took over KICT operations from Larsen & Toubro (L&T) in 2015, there has been an exponential growth year over year and also surge in existing vessel services.

In the first quarter in FY 2017-18, the total cargo handled at Kattupalli Contianer terminal showed an increase of 31 per cent against the same period previous year. Volumes at the terminal rose from 7900 TEUs per month in November 2015 to over 35,000 TEUs per month in FY17. The terminal has handled 0.35 Lakh TEUs during 2016-17 and year-on-year growth of 202 per cent in containers.

The new services added to Kattupalli terminal are the Maersk line shuttle service to Colombo & Salalah. The new service which has been shifted from Chennai to kattupalli and another service Asia Chennai Service (ACS) connects Shanghai, Busan, Ulsan, Ningbo, Singapore, Port Klang with Kattupalli.

The port managed to attract some portion of the cargo from nearby major port Chennai port, and also cargo volume from the hinterland escalated from Bengaluru and Hyderabad as it is more economical for ships to call at Kattupalli. Terminal Handling Charge is same at both Kattupalli and Chennai ports. However, vessel-related charge at Kattupalli is around 30 per cent lower than Chennai port private terminals.

The port is now gradually succeeding in attracting customers while increasing its clientele to serve with wide range of new services. It is also slowly becoming the preferred port for exporters and importers particularly those involved in automobile due to its hinterland connectivity and availability of huge space. At this pace, it is expected that soon there would be an increase in the volume of container operations.

### Throughput
- 2013-14: 350,000 TEU
- 2014-15: 300,000 TEU
- 2015-16: 250,000 TEU
- 2016-17: 200,000 TEU

### Installed Capacity
1,200,000 TEU

### Capacity Utilization
29%

Mr G.J Rao
Director
Vallarpadam ICTT

Vallarpadam International Container Terminal is strategically located next to the East-West trade route, only 11 nautical miles from the direct Middle East - Far East sea route. DP World Cochin serves as the natural gateway to the vast industrial and agricultural produce markets of the south and west of India. The hinterland includes the state of Kerala and parts of Tamil Nadu and Karnataka. The main strategy to develop this terminal is to attract the 45 per cent of India’s trade which is being transshipped over to hub ports like Colombo, Salalah and Jebel Ali. Despite incremental growth year over year, the transshipment numbers are growing in snails pace.

ICTT has recorded a 17 per cent increase in volumes in 2016-17. The terminal has initiated several steps to improve the connectivity by introducing a new dedicated weekly rail service connecting with Karnataka exporters and importers to improve the transit time and direct loading. The rise in business volume also mainly attributed by maintaining the rail links between Tamil Nadu and Kochi, besides the setting up of the Green Channel for sealed container cargo at the Walayar border check post, which helped to slash the transaction time.

During the FY 2016-17, the terminal recorded an increase of over 60 per cent in coir exports, along with a 200 per cent plus jump in apple and orange imports. Vallarpadam also facilitated direct imports of East African raw cashew. The cashew was further trans-shipped to other ports, including Mangaluru and Tuticorin.

The terminal handled 8.5 per cent more vessels, compared to the previous year, from the bouquet of 14 vessel services including six mainline services. The terminal clocked an average gross crane rate (GCR) of 32 moves per hour in 2017, which is in line with international standards. The truck turnaround time of 26 minutes, gate-to-gate, displays the terminal’s operational efficiency. All services, particularly those connecting the Far East, West Asia and Europe, have been doing exceptionally well.

Throughput
4,91,087 TEU

Installed Capacity
1,000,000 TEU

Capacity Utilization
49%

Operator
DP World, CONCOR Transworld Group and Chakiat Agencies

Mr Jibu Kurien Itty
Chief Executive Officer

Address
Willingdon Island, N.End, Cochin - 682009 Kerala
DP World Chennai Container Terminal (CCT) is an important gateway in South India offering wide range of container services at par with global standards while providing a large network of connectivity to other global markets. It is also strategically positioned to offer South and East India the quick transits to the Far East markets.

The CCT has registered a dip in volumes with -26 per cent year over year growth in FY 2016-17 while registering volume of 646,319 TEUs compared with previous year same period volume of 867,549 TEUs.

Located on the south east coast of India, CCT is one of the most important container gateways for South India’s container market. The terminal operates within city limits and with a limited yard area. Over the last decade the Chennai Container Terminal has maintained its focus on exceeding customer needs and anticipating future trends to act as a driver for containerisation and industrial growth in South India. A CFS, with a covered area of 6500sqm, operates within the port offering services such as inspection, LCL de-stuffing and delivery of import cargo. The presence of the CFS within the port premises enables prompt convenient services to importers as well as passengers including swift in transhipment of LCL cargo to Inland Container Destinations such as Bangalore, Hyderabad, Cochin, Pondicherry and other locations.

Chennai port has further deepened the draught up to 15 meters of Chennai Container Terminal to serve bigger vessels. As a result, in 2017 the terminal has achieved another milestone of berthing the container vessel CMA CGM Bellini with a draft of 14.6 metres at CCTPL while creating history by hosting the deep draft vessel for docking at the Chennai port.

DP world Chennai is working aggressively to enhance the infrastructure to keep abreast with the ever changing industry demands. The terminal is working in tandem with Port authorities in order to be aligned with the expansion plans of various shipping lines. This trend is expected to continue in the wake of global consolidation and alliance realignment in the industry.

### Throughput

<table>
<thead>
<tr>
<th>Year</th>
<th>TEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>646,319</td>
</tr>
<tr>
<td>2013-14</td>
<td></td>
</tr>
<tr>
<td>2014-15</td>
<td></td>
</tr>
<tr>
<td>2015-16</td>
<td></td>
</tr>
<tr>
<td>2016-17</td>
<td></td>
</tr>
</tbody>
</table>

### Installed Capacity

1,200,000 TEU

### Capacity Utilization

54%

### Operator:

K.K. Krishnandas
Chief Executive Officer
SA’s Chennai International Terminals Pvt. Ltd (CITPL) is ideally positioned to tap the high growth Chennai region. The terminal serves an ever growing hinterland and caters to the fast growing automobile, pharmaceuticals, textile, leather, light engineering and chemical manufacturing units.

CITPL has witnessed upward growth with increasing volumes year over year while launching several weekly services. The region is also steadily emerging as the hub for the Indian East Coast. In FY 2016-17, the terminal registered an impressive 21 per cent growth rate, achieving a full year throughout of 844,694 TEU on the back of new services from a number of lines, and larger vessels being deployed to facilitate the trade.

The terminal’s connectivity to Inland Container Depot (ICD) destinations is enhanced by its own seamless rail connection. It is positioned to serve the growing rail container traffic generated by rail logistic operators. The terminal has on dock rail siding facility with 2 lines of 725 meters each capable of handling 2 rakes simultaneously. With regular Export and Import rakes, CITPL can provide seamless connectivity to and from vessels. The terminal offers direct connectivity to Bangalore, Hyderabad, Nagpur, Delhi and other ICDs. CITPL is also well connected by road to the captive and hinterland markets owing to its proximity to national highways NH4, NH5 and NH45.

CITPL is equipped with 7 Super Post Panamax Quay Cranes capable of handling twin lift containers up to 65 tons, 18 RTGs and 6 Reach stackers to support the terminal operations. Reefer facilities were further increased to 306 reefer plug points. CITPL offers as an alternate and cost effective gateway port of call for Indian cargo from the Northern, Western & Central regions going to and coming from the Far East.

### Throughput

- **2012-13**: 900,000 TEU
- **2013-14**: 800,000 TEU
- **2014-15**: 700,000 TEU
- **2015-16**: 600,000 TEU
- **2016-17**: 500,000 TEU

### Installed Capacity

1,250,000 TEU

### Capacity Utilization

68%

### Operator

PSA International

### Mr Sivakumar K

General Manager

### Address

Regus Citi Centre Level 6, Chennai Citi Centre, 10/11, Dr. Radhakrishnan Salai, Chennai - 600 004. INDIA

+91 44 25613000
The Visakha Container Terminal (VCTPL) is a deep-water gateway terminal on the Bay of Bengal coast of India. This terminal is a joint venture between United Liner Agencies of India (Private) Ltd and DP World. It has a natural depth of 16.5 metres alongside, excellent marine infrastructure and overland connectivity. These are complemented with contemporary infrastructure that the terminal has continuously developed over the last 10 years. It has now embarked on extending the berth length and enhancing its handling capacity to two million TEUs in the next three years.

The support from shipping lines and the trade has ensured that local, ICD and Transshipment traffic has grown steadily over the years. The terminal handled 366,723 TEUs of Containers in the FY 2016-17, registered a growth of 25 per cent over the same period previous year (293,000 TEUs). Its hinterland covers seven states within 700 kms. Industries that have come up over the last decade to process the abundant resources in the Coastal Andhra, Orissa and Chattisgarh, for which areas this terminal is the most convenient, are expected to further enhance volumes. Due to its deep draft and geographical location suitable for larger vessels and proximity to the ports of Paradip, Kolkata, Haldia and Chittagong and Yangon, VCTPL already handles a significant volume of transshipment cargo from these feeder ports and also Nepal based cargo is another additional advantage. Identified in the National Maritime agenda as a Hub Port, it is poised to become an ideal gateway on the East Coast of India.

The rich mineral production of nearly a third of India’s capacity within 600 kilometres from Vizag terminal, the upcoming Vizag-Chennai Industrial Corridor, petrochemicals region and Andhra Pradesh’s plans on manufacturing hubs that are likely to trigger raw materials needs many fold.

Visakha Container Terminal

Address
Opposite Town Hall, Beach Road, Beside Fishing Harbour, Port Area, Visakhapatnam, Andhra Pradesh 530001

Few of the initiatives of the terminal are:
- Revamping vessel related charges (VRCs).
- Infrastructural upgradation.
- Addition of new coastal services.
- Boosting transhipment.
- Improvement in main line service.

<table>
<thead>
<tr>
<th>Year</th>
<th>Throughput (TEU)</th>
<th>Y-O-Y Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>200000</td>
<td>7%</td>
</tr>
<tr>
<td>2013-14</td>
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<td>2014-15</td>
<td>400000</td>
<td>5%</td>
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<tr>
<td>2015-16</td>
<td>500000</td>
<td>18%</td>
</tr>
<tr>
<td>2016-17</td>
<td>600000</td>
<td>25%</td>
</tr>
</tbody>
</table>

Throughput
366,723 TEU

Installed Capacity
700,000 TEU

Capacity Utilization
52%

Operator:
United Liner Agencies (JM Baxi Group) & DP World

Mr Sushil Mulchandani
Chief Operating Officer
Foraying into new markets and serving the trade with advanced and more efficient infrastructure aid Krishnapatnam Port Container Terminal (KPCT) to register a whopping year over year growth of 115 per cent in the last fiscal year ending by March 2017. KPCT has always been at the forefront of Indian port sector by providing state-of-the-art facilities, customer-centric services and unparalleled operational efficiencies, which are improving the competitiveness of Indian EXIM community in the global trade. Several mainline carriers have started their services from KPCT as the support of exporters and importers to KPCT grew exponentially. Mostly these services catered to exporters of Tobacco, Shrimps, Cotton, Granite, Buffalo meat, Chillies, etc. and Importers of Solar panels, Furniture, Pharmaceuticals, Timber, etc.

Transhipment on east coast has been an untapped market as most of the cargo is still being handled at the nearest foreign hub ports. First time, KPCT has started handling transhipment cargo under PIX service which was earlier used to serve the Singapore transhipment hub. With the launch of this new service KPCT has become one of the largest transhipment handling container terminals in south and east India.

The surge in EXIM transactions at the terminal could be attributed with the commencement of CONCOR’s new rail connectivity between ICD Bangalore and ICD Sanath Nagar to KPCT. The broad gauge railway line connectivity between Obulavaripalle, Kadapa - Krishnapuram Port would be completed by December 2017. Completion of the rail and road connectivity between Obulavaripalle and Krishnapatnam port will intensify the trade.

Commencement of HMM’s weekly ACS Service to Far East & S.E. Asia connects Krishnapatnam with Port Klang, Singapore, Pusan, Ulsan, Shanghai, Hongkong, Yantian. In addition, major container shipping lines like Maersk Line and Mediterranean Shipping Company (MSC) have started calling their own vessels at KPCT. Also, the largest container feeder companies plying across Bay of Bengal, Bengal Tiger Line (BTL), FAR Shipping and Xpress Feeders (XCL) are also offering services from KPCT. The new Maersk Salalah Service has been added to KPCT services as part of the direct weekly service from Krishnapatnam to Salalah (Oman).

The weekly service is expected to provide fastest and most competitive service to the exporters and importers of Andhra Pradesh, Telangana, Karnataka and Northern Tamil Nadu to the ports of US East Coast, Mediterranean, Europe and Africa.

Average output per ship berth day increased by 30 per cent in FY 2016-17. Average Crane productivity increased by 5% with 30 moves per hour in 2016-17. Average turn round time is 0.5 days improved compared to previous year. Positive growth across all performance parameters of the terminal will further ramp up growth in the coming years.

### Throughput
255,436 TEU

### Installed Capacity
1,200,000 TEU

### Capacity Utilization
21%

### Operator
Krishnapatnam Port Container Terminal Pvt Ltd.

### Ms Vinita Venkatesh
Director

### Address
P.O. Bag No. 1, Muthukur, Dist. Nellore - 524 344, Andhra Pradesh, India.
Tel: +91 861 2377 999 / +91 970 4123 987 / 989
PSA SICAL Terms Limited is a joint venture between PSA International and SICAL Logistics, which operates the Tuticorin Container Terminal (TCT). As part of the PSA group of companies and with the partnership of SICAL, PSA SICAL is known for its efficiency, speed and reliability among the container ports and terminals business.

PSA Sical container terminal has consistently recorded steady growth in the last few years. The terminal has recorded a growth of 4 per cent in FY 2016-17 while registering volume of 533,049 TEUs as compared to previous year volume of 510,118 TEUs. The terminal also registered a CAGR of 2.89 per cent during the period of FY 2013-17.

Since its inception in 1999, TCT has built a very strong foundation in South India by serving region’s major textile industry. TCT is well connected by road and rail to all the major industries. In addition, train service from Bangalore, Chennai and Kochi connects the Terminal. TCT has the modern container handling equipment and operating systems to deliver fast, flexible and reliable services to the inland transportation and shipping lines. The terminal is well connected with twelve container freight stations and a solo ICD unit to serve the trade better.

Additional infrastructural support to the terminal comes by way of 30 MLOs, NVOCCs, 150 C&F agents and 25 transporters. This has enabled TCT to offer fast, reliable and custom made solutions to inland transportation.

PSA Sical is located in a growing trade region, along the busy Europe-Far East trade route. The terminal is well linked to the major trade hinterland industrial clusters and cities such as Bangalore, Chennai, Cochin, Coimbatore, Madurai and Tirupur by state and national highways and rail connections. The extensive use of information technology systems ensures high operational efficiency in the port.

The development of North cargo berth four for handling containers and other clean cargo through PPP mode at a cost of Rs 515 crores would enhance container handling capacity by another 8.62 million tonnes. The port’s entrance channel is being deepened to 14.5 meters draft at a cost of Rs 1153.62 crores and an exclusive coastal berth is being dredged at a cost of Rs 107.53 crores.

**Throughput**
533,049 TEU

**Installed Capacity**
450,000 TEU

**Capacity Utilization**
118 %

**Operator:**
PSA Internaltional & Sical Logistics Ltd

**Capt Madhanmohan**
Terminal Manager

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**Address**
Tuticorin Container Terminal Building
Berth No 7, Harbour Estate, Tuticorin - 628004
Ph - 0461- 2382000
Dakshin Bharat Gateway Terminal

Dakshin Bharat Gateway Terminals (DBGT), terminal commenced its partial operations on 11th May 2014 and full fledged operation with a capacity of 6 lakh TEUs is expected soon with commissioning of quay cranes. The terminal has recorded a growth of 9 per cent in FY 2016-17 while registering volume of 110,173 TEUs when compared with previous year volume of 101,292 TEU.

Presently, Dakshin Bharat Gateway Terminal offers 2 services a week between Tuticorin and Colombo, 1 coastal service and 1 International cum coastal service connecting Tuticorin, Colombo, Mundra, Jebel Ali, Mundra, Pipavav, Cochin and Tuticorin. Commodities like Cotton Yarn, Handlooms, Machinery, Sea Food, Paper, Granite, Coir pith etc., are exported though containers to Europe, North America and almost all Asian Countries. Cotton, Metal scrap, Waste paper, Cotton fibre, Chemicals, Metal and Rubber products etc., are imported predominantly from Europe and East Asian Countries.

A new weekly container feeder service with port rotation of Colombo, Kochi, Colombo, Tuticorin, Colombo commenced from DBGT. The container feeder vessel MV Asiatic Neptune has made the maiden call for the service. Asiatic Neptune operated by Bengal Tiger Line (BTL) is expected to add approximately 40,000 TEUs (20ft equivalent units) per year. The ship has a capacity of 1155 TEUs and maximum draft of 7.8m.

The Ministry of Shipping has allowed spinning mills to import cotton from international markets through Tuticorin port. This could further ramp up the economic activity in the region which will definitely spurt the EXIM activity. In this regard, the Port has been provided with transhipment facility to initially commence by storing around 250 containers of cotton for a period up to 30 days free of cost and another 60 days at a discount rate, with freedom to sell the cotton either in India or any other country depending upon the demand. Indian National Ship Owners’ Association (INSA) and Tuticorin Port authorities have made the coastal movement of cotton between Gujarat and Tamil Nadu a reality and currently transport around 10 lakh bales of cotton per year.

Throughput
110,173 TEU

Installed Capacity
600,000 TEU

Capacity Utilization
18 %

Operator
Dakshin Bharat Gateway Terminal Pvt Ltd

Mr Emerstone K Peter
Chief Operating Officer

Dakshin Bharat Gateway Terminal - Throughput and Y-O-Y Growth during FY 2013-17

<table>
<thead>
<tr>
<th>Year</th>
<th>Throughput (TEU)</th>
<th>Y-O-Y Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>110,173</td>
<td></td>
</tr>
<tr>
<td>2015-16</td>
<td></td>
<td>155%</td>
</tr>
<tr>
<td>2016-17</td>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>

Address
Berth No: 8, V.O.C Port Trust, Tuticorin Container Terminal Rd, Harbour Estate, Muttayapuram, Tamil Nadu 628004
Bharat Kolkata Container Terminal has a strategic advantage of being only container terminal with highest capacity at north eastern coast of India to serve the nearby landlocked countries as gateway port/terminal. It also has a large hinterland spread all the way from landlocked countries Nepal and Bhutan to the North Eastern states, and other eastern states including West Bengal, Odisha, Chhattisgarh, and Jharkhand among others. The terminal has some disadvantages as well, like inadequate infrastructure, high storage charges (demurrage and detention charges), congestion, road traffic restriction and insufficient road and rail connectivity issues, and being a riverine terminal it battles with low draft and can handle vessels size of 800-900 TEUs and there is perennial siltation.

In spite of mixed views, the terminal is projected for better growth in the coming years with implementation of infrastructure upgradation initiatives. The terminal has undertaken regular dredging to maintain a draft of about 7-8 metres, improved turnaround time of vessels and some of the recent policy initiatives like Inland Waterways, GST, and India-Bangladesh coastal shipping agreement is going to contribute cargo growth.

Some new initiatives like implementation of RFID system will eliminate manual checking of documents at port gate and real time tracking of movement of vehicles, men and materials. This would reduce congestion and also cost of operations at the Port. Recently Ministry of Shipping has signed MoU to improve existing road connecting Kolkata Port to NH6 and Kolkata Port to nearby industrial clusters.

The Port gives priority to exports as rail movement from industrial regions of Odisha like Jharsuguda has increased. As a result, the terminal is registering significant growth in export traffic. In a bid to thwart competition this terminal and port extending various sops like fee rebates to containers.

Though the riverine Port has some legacy issues and operational constraints, but technological upgradation in container handling and strong marketing initiatives intensified containers movement and registered positive trend with 479,000 TEUs of boxes being handled in FY2016-17 up to 31st Dec 2016, registering a growth of 13 per cent as compared to the same period in the previous financial year with a volume of 424,000 TEUs and registered 10 per cent growth in FY 2016-17 ending by March with 635,848 TEUs when compared with 577,000 TEUs in the same period last year. The terminal has also registered 2,08,286 TEUs in FY2017-18 up to July, and due to which it will be expecting to outcast the last year volume by the year end.

| Throughput | 635,848 TEU |
| Installed Capacity | 850,000 TEU |
| Capacity Utilization | 75 % |
| Operator: | Kolkata Port Trust, PSA International is O& M Contractor |
| Mr. Suraindran V.R | Terminal Manager |
Haldia International Container Terminal

Haldia International Container Terminal (HICT) has recorded an astounding positive growth of 41 per cent in container volume and handled 89,000 TEUs in April to December 2016 against 63,000 TEUs during the same period previous year. Haldia being an industrial hub has helped the Port to gain in container traffic. As per the latest statistics, HICT has registered an impressive 47 per cent growth in traffic by handling 44,752 TEUs up to July 2017 of FY2017-18 as compared to 30,538 TEUs in same period in FY2016-17. Bharat Kolkata Container terminal (BKCT) losse will be a gain for Haldia as whenever the BKCT get halts with congestion, the traffic gets shifted to Haldia. The container terminal has also benefitted from aggressive marketing efforts and improvement in operational efficiency by JM Baxi Group lead Haldia International Container Terminal. Unlike Kolkata Port, which is constrained due to city traffic restrictions, Haldia has much better rail and road movement.

Giving boost to road connectivity, recently Ministry of Shipping has signed MoU with NHAI to develop expressway from Haldia to industrial hub Panagarh (Durgapur). Some IT and technological initiatives like real time updation & monitoring of containers using vehicle mounted terminal (VMT), hand held terminal (HHT), and modernized terminal operating system has improved efficiency for the terminal with effective berth, yard and gate operation.

Being a riverine tidal port, the terminal has limitations in handling vessels. Hence, the terminal calls smaller parcel size vessels. The terminal as compared to kolkata offers lower terminal handling charges and concession in demurrage fee to tap users in the region. Improved business sentiment in West Bengal and rapid industrialization in neighbouring state Odisha has translated into better business for Haldia. By recognizing trade with Bangladesh as coastal cargo movement, this terminal is also getting benefitted in serving the trade. Traders from Nepal, one of the major contributor to the import containers also contemplating Haldia as an alternative to Kolkata which will further benefit the terminal.

| Throughput | 135,828 TEU |
| Installed Capacity | 250,000 TEU |
| Capacity Utilization | 54 % |
| Operator | United Liner Agencies (JM Baxi Group) |
| Capt. Sudeep Banerjee | (Terminal Head) |

Haldia International Container Terminal - Throughput and Y-O-Y Growth during FY 2013-17

Address
Old P & T Building,
Chiranjibpur Camp,
Dock Zone, Haldia - 721604.
West Bengal. INDIA
+ 91 03224 - 251014/ 17
Upsizing of containerships has been a trend in the shipping industry to achieve economies of scale. However, the pace at which the vessel sizes are increasing in last decade is unforeseen. In global container fleet today, we can see more than 50 ships with capacity exceeding 18,000 teu. Although ordering of new ships has taken a pause, rumours of CMA CGM and MSC ordering 22,000 teu vessels might be a reality soon. However, economies of scale from carriers’ perspective does not always hold true from the terminal operators’ perspective. To accommodate large ships, the ports need to continually upgrade their handling infrastructure apart from increasing the efficiency and productivity to remain competitive.

Being situated on a major trade lane (Asia-Europe), Indian ports cannot remain aloof from the emerging trends in global container shipping. The largest vessels delivered out of shipyards mostly find their home on this route due to the geoeconomic dynamics. Therefore, the average ship size in 2011 on Asia-Europe route was 9,400 teu which increased to 14,700 in 2017, about 60% increase in cargo carrying capacity per vessel on an average. Similar is the case for Indian ports. The average size of container ships handled by Indian ports increased from 3,700 teu to 6,100 teu in 2017. Similarly, the largest ship size also rose to 12,500 teu from 7,400 teu.
The largest terminal on Indian coast by throughput, APM Terminals Mumbai, has embraced Direct Port Delivery. APM Terminals Mumbai currently handles the highest Direct Port Delivery volumes at the Jawaharlal Nehru Port. In the first two quarters of FY 2016-17, the number of Indian importers utilising the pro-active, customer-centered service at APM Terminals Mumbai has tripled, with half of these being small and medium enterprises with less than 100 TEUs per month.
A well coordinated effort by customs and other stakeholders is helping Jawaharlal Nehru Port Trust (JNPT) to handle more cargo through its direct port delivery (DPD) procedure meant to ease congestion and lower logistics costs for shippers at India's busiest container gateway. This shows JNPT’s DPD volume reached 42,594 TEU in the first month of fiscal year 2017 to 2018, making it the highest-ever monthly figure. That compares with 38,394 TEU in the prior month and is an improvement of 11 percent month-to-month.

In April 2017, JN port-owned Jawaharlal Nehru Container Terminal handled DPD of 13,732 TEU, up from 12,321 TEU in March; APM Terminals-operated APM Terminals Mumbai at 19,545 TEU, up from 16,952 TEU; and DP World Nhava Sheva, which includes Nhava Sheva International Container Terminal (NSICT) and Nhava Sheva (India) Gateway Terminal (NSIGT), at 9,317 TEU, up from 9,121 TEU. That progress was reflected in dwell time reductions at JNPT during FY 2016-17 from 2.95 days to 2.6 days at JNCT, from 2.91 days to 2.45 days at GTI, from 3.4 days to 2.5 days at NSICT, and from 3.6 days to 2.8 days at NSIGT.

DPD cargo is required to be removed within 48 hours of landing at the port, and if a shipper fails to meet that time frame, their cargo is shifted to a nearby off-site yard, and stored there at a cost for clearance under the normal customs procedure. A major milestone during FY 2016-17 is achievement of zero congestion at JNPT area and roads. It is estimated that there is an eight per cent reduction of movements on port roads and a gain of Rs.125 crore [about $19 million] to the trade due to savings in fuel in one year alone.

When it comes to container freight stations that established to cater especially import goods are under threat. Top logistics firms, including listed entities that have invested thousands of crores to set up and run container freight stations (CFSs) near India’s container ports, face an uncertain future after implementation of the DPD programme to speed up delivery of cargo containers to importers/consignees. The so-called direct port delivery (DPD) scheme was introduced at the Jawaharlal Nehru Port and Chennai Port.

Many players affected Mumbai-listed firms such as Allcargo Logistics Ltd, Navkar Corporation Ltd, Gateway Distriparks Ltd, Container Corporation of India Ltd (Concor) and Balmer & Lawrie Co Ltd are among the 33 CFSs operating near JNPT. In fact, Navkar went public in 2015 purely on the strength of its CFS business. Continental Warehousing Corporation (Nhava Sheva) Ltd, which runs a CFS near JNPT, has also filed documents with SEBI for an IPO. AP Moller Maersk Group A/S, which runs Maersk Line, the world’s top container shipping company, also runs two CFSs near JNPT.

The government has targeted CFSs to speed up import clearances because it feels these intermediaries take the longest time, as much as 8-9 days, in completing all procedures. The long cargo dwell time in CFSs automatically adds to transaction costs, says the government.

CFS operators argue that the longer dwell time attributed to them is not their fault. Importers prefer to keep containers in the CFSs and move them to factories according to their inventory requirements. CFS is the safest and cheapest way of storing containers.

Importers get the following benefits by facilitating DPD:

i) Timely delivery by the terminal will help in reducing inventory cost.

ii) Saving in transportation from Port Terminal to Customs bonded warehouses.

iii) Handling and storage charges at warehouse.

iv) Container detention charges payable to Shipping agencies.

v) Delivery of DPD container at Port Terminals is on 24x7 basis which is not possible in custom bonded warehouses.

vi) Saving towards dwelling of boxes till clearance at destined custom bonded warehouses.