

Callidus News

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NVOCC, THE UNDERRATED SERVICE PROVIDER IN GLOBAL LOGISTICS



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Non Vessel Operating Common Carrier (NVOCC or NVO) or sometimes called Box Operators are those carriers who offer port to port services similar to Main Line Operators (MLO), by issuing their own Bill of lading, but at the core they do not operate vessels, but rather own the fleet of containers and file the slots with Vessel Operators (VO).

NVOs have played a major role in logistics history, as one of the central players in carriage of goods, by sea, among other service providers, i.e. Main Line Operators & Freight Forwarders (FFs).

The highest number of NVO's are most likely in the US market; according to Federal

Maritime Commission (FMC) database, there are approx. 6000 registered NVOCCs operating in USA and large number of them are active in Asia Pacific, Europe, Africa and Middle East regions.

Although NVO's acts as carriers and freight forwarders, while at the same time offering variation of services to customers, they are yet to be considered as a reliable service providers, especially in Asia, where shippers prefer to get their cargo loaded by MLO, rather than to obtain NVOCC services.

The main reason of this choice stems out of a set of "clichés" that:

➤ NVOs are expensive and they offer

high freight levels.

- NVOs transit time and sailing frequency are uncertain.
- NVOs local tariff is very high.
- NVOs charge high slabs of detention.
- NVOs take unjustified charges under different heads.
- NVOs do not offer quality services.
- NVOs are aimed at making high revenues & the most lucrative one and so on....

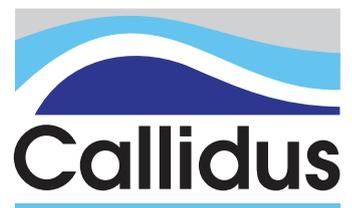
If all these assumptions are analyzed you will learn that the reality is different from assumptions and Clichés that float around NOV's.

Being in the NVOCC industry for the last several



"Stay committed to your
Decisions; but stay flexible
in your Approach"

TONY ROBBINS



years and running my own NVO, I will not only defend but also like to clarify all these elements which presumably project a NVO to be a non-stable entity, more so in current global situation of shipping & logistics, are quite unfounded.

Today NVO's have to compete not only with large number of freight forwarders but with MLOs in different areas and have proved their mettle by taking up a firm & large share in logistics market.

If a shipper goes to any main carrier to know their route and Transit Time (TT) for a particular port, many of the MLOs may offer fixed routes, which are likely to including long TT; whereas NVOs on the other hand offer different routes with the variation of Transit Time including the shortest one, in order to serve shipper/customers as per their requirements.

Similarly, in terms of local tariff including detention slabs NVOs are the most flexible with their rate, they find the middle ground & offer feasible packages to customers, which you will not commonly experience with MLO. Moreover, it is an Era where customers prefer to finalize the Destination tariff (before loading) and that is what they will pay, as per their own convenience, so there is no question of overcharging at all.

As far as freight levels are concerned, if you review the global market, you will come to know that

it is the NVO's who literally offer the most competitive rates, considering the Win-Win approach, with the variation of numerous services; for if they offered high & out of market rates, they would be wiped out by the competitors.

In fact, apart from all common routes which MLO offers, NVOs exclusively propose ad-hoc and special routes, which are not served by MLOs, due to certain limitations; further many formalities in documentation & operations, for specific needs are also offered, by NVOs, which MLOs do not particularly like to provide.

NVO's are the most affected entities in current scenario due to high freight & slot rates, shortage & high prices of containers, space allocations & port congestions where every single entity is trying to get the maximum advantage of recent unpredictable situation.

To give you a quick scenario in the current circumstances, in many Port Pairs or Port Stretches, NVOs have to work with negative cost structure, which means that their cost is higher than the recoveries, but they have to sustain their services in order to be a part of competition thus,

- They have to pay fix handling charges to terminals/depots, despite what they will recover.
- They have to pay higher slot charges, but get meager recovery

in a form of freights in most of the Ports, due to high competition.

- They have to pay the General Rate Increase (GRI), which is implemented by VO's, with no surety even for the partial recovery.
- In the current situation, they have to buy containers at the highest price offered by container traders, at times even thrice the amount of the earlier value.
- In addition, when the vessels are full, NVO's have to struggle getting space from VO's, who prefer to load their own boxes, rather to accumulate SOC containers, but on the other hand, it is the NVO who also supports the VO when they are in desperate need of boxes to be loaded on their vessels.
- Last but not least, NVO's sometimes have to compromise on some of their basic revenues, by offering waivers/ discounts, which the major MLOs do not even consider or think of.

So to sum up, NVO's are successfully catering to the industry and doing a lot for their survival in current situation; wherein they have to retain their potential customers, by all means, in order to sustain their presence, in logistics world. One cannot deny the crucial role and importance of an NVOCC, as a dynamic service provider, in the current scene, of global shipping industry

SMART SHIP vs DIGITAL TWIN – THE INEVITABLE CHANGE IN SHIPPING

The International Maritime Organisation (IMO) Strategic plan of 2018-2023 was one of the first steps taken by the Maritime Safety Committee (MSC) of the IMO to adapt to the advancement of technology in the Shipping sector. The strategic plan demonstrated the need to include and integrate the advancing technology within the Regulatory Framework. This included finding ways to establish a balance between the safety and security concerns of the

parties and the advancing technology, mitigation of cost and environmental damages etc. The advancing technology brought into the picture two alternatives for the shipping industry i.e., Smart Ships and Digital Twins. Although, both these alternatives may sound synonymous, in reality, they differ. It is imperative that every shipping company understands the difference so as to make the best choice possible for meeting its business needs.

SMART SHIP

Fuel consumption, energy efficiency and carbon emissions are three of the most debated concerns in the shipping industry. These three problems are addressed once Smart Ships are brought into the picture. The Commercial-off-the-shelf (COTS) technologies being used in the ship when coupled with the available Internet of Things (IoT) and Information and Communication Technology (ICT), brings



to life, a cloud-based monitoring system, which analyses the performance of the vessel and addresses the issue of optimisation of fuel consumption levels, energy efficiency and control or limits of the CO2 emissions for the entire life of the vessel. The use of Artificial Intelligence (AI) and Machine Learning (ML) allows faster data processing methods thereby avoiding human errors/accidents and help in achieving greater autonomy. Stena Lines, a European Enterprise dealing with exports, was able to reduce crew and passenger accidents, improve fuel efficiency and also reduce the use of plastic on board with the help of AI and ML-based calculations. The use of AI-based sensors on board the vessel, will allow tracking of the cargo throughout the journey via AI-based apps. This allows the evaluation of real-time data by all the parties involved in the shipping of the cargo. Other forms of real-time data might include information about vessel position, speed of the vessel, fuel and emission reports, wind speed etc.; the huge volume of data being collected will also help in determining future shipping operation and processing needs. Other advantages include efficient reduction in vessel turnaround time i.e., once data regarding vessel position and movement are received by ports, AI can further analyse the time of arrival and departure. This not only helps the incoming vessel but also allows the

port to efficiently manage and guide other vessels as well, thereby reducing the overall time for which a vessel stays at the port. Remote sensing technology, has simplified the means of off-shore management of vessels. With the ability to constantly monitor the operational efficiency of both old and new vessels, the incorporation of Smart Ships would enable IMO to achieve its Greenhouse Gas (GHG) strategy which aims at reducing carbon emissions in the shipping industry by 40% by 2030.

DIGITAL TWIN

A digital twin, as the words suggest, is the digital representation of a physical entity i.e., the digital representation of the vessel and its machinery. It is a virtual environment wherein all the data and simulations which would have occurred during the lifespan of the vessel can be studied and analysed in real-time. The technology allows analysis of billions of possible outcomes, design systems, fuel management techniques, simulator-based testing, virtual system integration etc. It helps the shipping company analyse the best possible solution which it should implement for the efficient management of the vessel. This technology is not limited to providing real-time analysis, but also future forecasts, regarding the vessel. Shipping companies are involved in providing a wide range of services and in order to have an upper hand, it is important to understand the market

trend and move accordingly. The Digital Twin analyses, past and present trade patterns and market transactions, so as to provide future scenarios/possibilities thereby aiding in better operational and strategic decision making. It also helps in strategic planning at ports. A Digital Twin model incorporates past and present data of the port and provides suggestive improvements in port design, its capacity etc and predicts increase or decrease in future arrivals in the port allowing the port managers to run simulations and identify necessary steps to be taken for accommodating the vessel efficiently. Connected Digital Twins allows all stakeholders to view and analyse the vessel during the voyage. Tests w.r.t future risks, structural reliability etc. helps the stakeholders to improve efficiency during the voyage by making suitable changes. Apart from this, Digital Twins can be used to deal with cyber-security threats as well. With the advancement of technology and smart ships using several IoT and AI-based tools, a huge amount of data is now available over the web and could be remotely accessed, if proper measures are not taken for its protection. The creation of a Digital Twin helps with, supervision, maintenance and control over such data. It analyses the data network over the web and provides strategic inputs, as to both external and internal cyber-security threats. It predicts real-time as well as future threats, thereby aiding in the identification of such threats at the early stages and elimination of the same, with minimum damage. It helps create simulations, where a variety of cyber threats could be analysed and tested for with practical solutions thereby increasing preparedness for real-time cyber threats.

KEY DISTINCTION BETWEEN SMART SHIPS AND DIGITAL TWINS

In layman's language, a Smart Ship is a vessel that is embedded with a large number of sensors that are linked with AI and Big Data for the collection and analysis of all possible data about the

vessel, at rest and during the voyage. Whereas, a Digital Twin is a virtual copy of the vessel that is generated in an off-shore office, for conducting simulations and for obtaining real-time and future data of the vessel, thereby enabling the shipping company to choose the best course of action. While a Smart Ship relies on various IoT based sensors attached to the ship for monitoring and analysing the vessel in real-time and does not focus on running algorithm-based simulations, the Digital Twins rely on the IoT based sensors on the ship to create a virtual image of the vessel, for the sole purpose of running simulations and providing future forecasts. Smart Ships focus on AI-based real-time data sharing of the vessel thereby allowing real-time analysis and optimization whereas Digital Twins rely on past and present data to analyse and optimize the working of the vessel even before the voyage begins.

Smart Ships use big data analysis for the purpose of real-time strategic decision making for all the stakeholders, whereas Digital Twins use big data analysis to influence both real-time and future decisions based on billions of possible circumstances. Smart Ships are less expensive, but also less technologically advanced, specifically when it comes to making strategic decisions, in comparison to Digital Twins. On the other hand, Digital Twins are more expensive, technologically advanced and offer accurate predictions, based on the available data, when compared to Smart Ships.

WHAT DOES THE FUTURE HOLD?

With China Shipbuilding Industry Corporation (CSIC) launching the Unmanned Freighter Project and Japan launching the Smart Ship Application Platform Project, the world is moving towards making the dream of Smart Ships, a reality. The European Union

has initiated the Maritime Unmanned Navigation Through Intelligence in Networks (MUNIN) project to build and develop a fully unmanned automated vessel by 2035. Similarly, Rolls Royce led, Advanced Autonomous Waterborne Applications (AAWA), is set to achieve the goal of autonomous ships, by 2035. Globally renowned companies, such as DNV-GL, INTENS, MPA Shipping, SINTEF etc, have dedicated time and resources, towards the development of Digital Twin, in the maritime industry. The digital and technologic revolution, has led the maritime industry to largely focus on technology-based automation in the shipping industry. The world which has already seen self-driving vehicles and unmanned spacecraft's will soon see unmanned artificially intelligent ships, sailing in the open sea. A simulated environment created by Digital Twins coupled with Smart Ship technology, is no doubt the future of a safe, efficient and progressing Maritime Industry.

 **HOT NEWS**

Rail Linked CFS – Another Golden Feather to the Multimodal Logistics



The Container Corporation of India Ltd (CONCOR) added one more rail linked multimodal logistics Park by commissioning a rail linked CFS, in

Mundra Port Area and despatched its maiden rake on 23rd of October this year, from Mundra to Dadri. The consignment of 2160 MT Red

Lentils was arranged for loading at Mundra in 80 domestic containers and was moved to Dadri on a rake, thereby offering a huge saving in the

road transport to the consignee.

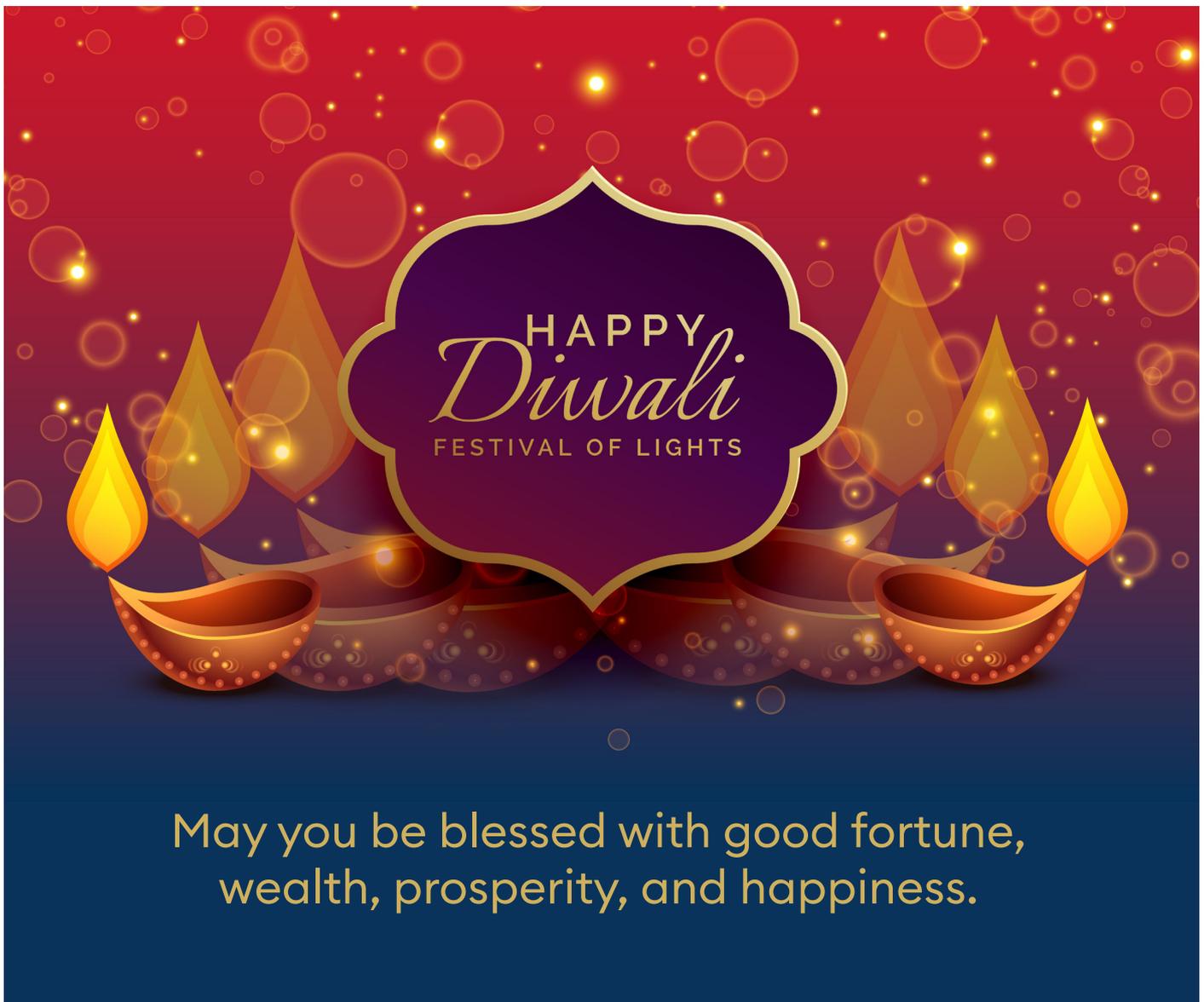
CONCUR's Mundra CFS is the only rail linked CFS in the Port of Mundra with the siding services provided in association with APSEZL (Adani Ports and Special Economic Zone Limited). The CFS is linked with a traffic less road in SEZ area connecting the Port directly, thereby reducing the distance to 20kms from CFS to the Port.

With the massive inventory of domestic containers and highest no. of container rakes, CONCOR envisages attracting long haul EXIM consignment from Northern and NCR region. Similarly, import consignment can be cleared in CONCOR CFS and moved by Rail either in ISO or CONCOR containers to NR/NCR region. CONCOR intends to provide effective Multi-modal

Logistics Solution to the EXIM Cargo industry at Mundra.

The Container Corporation of India Limited, incorporated in 1988, under the ownership of Indian Railways, Ministry of Railways and Government of India is aimed to provide responsive, cost effective, efficient and reliable logistics solutions to its customers

Courtesy: www.indiashippingnews.com & www.concorindia.co.in



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