

LIGHTHOUSE

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Regulatory Hurdles are Hampering the Take-Up of Drones

Bishal Das -B.Tech-IV



Unmanned aircraft systems (UAS), which are going through a massive development phase, are finding their purpose in the shipping industry as well. These systems have proven their ability to speed up deliveries, cutting lead times typically seen on traditional forms of last mile delivery.

With a quicker response rate and turnaround time of up to 6 times, drones have the potential to lower shore-to-ship delivery costs by up to 90% in some ports, significantly mitigate risks of personnel accidents and have a reduced carbon footprint.

In an interview with World

Maritime News, Marius Johansen, VP Commercial, Ships Agency at Wilhelmsen Ships Service, said that shore-to-ship deliveries via UAS bring improved safety, productivity and reactivity by replacing the manual delivery of parcels by agents via launch boat with autonomous drones.

He added, however, that development of relevant regulatory and safety framework is slowing the take-up of UAS technology, "but it is necessary and when it comes to safety it is wise to be thorough and pragmatic."

"From a ship owner's perspective, there are so many potential innovative use cases for a drone onboard a single vessel. The key challenge is that as soon as you use it outside of the vessel, it becomes heavily regulated and this varies from country to country."

Wilhelmsen Ships Service was recently elected to help develop the future UAS regulatory framework

for Singapore and will receive dedicated funding for their shore-to-ship delivery project.

"The Agency by Air project we are running has several use cases we are evaluating i.e. parcel delivery to vessel, cargo hold inspections, and draft surveys using drone technology," Johansen explained.

"For parcel deliveries from shore to vessel, we are preparing for a 2-week pilot trial with autonomous drones that is scheduled to start in the last week of September. This pilot trial will be a demonstration of a Proof-of-Concept, involving actual deliveries to vessels at anchorage in Singapore. This is the first time in the world where autonomous drone deliveries will take place in real port conditions."

Wilhelmsen Ships Service said that the key to successful implementation of drone technology and the realisation of the potential business, operational and cost benefits will depend on a number



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Dengue Awareness Camp Organised at RLINS



RLINS & Valayankulam Primary Health Centre Organised Dengue Awareness Programme on 27/11/2018 under the Supervision of Dr.M.Parvatham ,B.S M.S (CENTRE). Mr.M.Subramanian, Advisor - Technical Addresses the Gathering and Mr. BhaskarAgnihotri, Principal Participates in it.



Dr. M.Parvatham ,B.S M.S Giving the "Nilavembu Kashyam" - Siddha medicine to Cadet S.Vijitha , GME.Also seen are Mr.M.Subramanian , Advisor - Technical and Mr. BhaskarAgnihotri, Principal.

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of factors. The first factor is technology, as despite the many use cases, the technology does face some challenges, such as limited battery life and difficulty operating in poor weather, according to Johansen. But original equipment manufacturers and major shippers are keen to improve the technology further and extend the reach and scope of what can be done with drones, he added.

“The second is the uneven regulatory landscape. Regulations

from both the aviation and maritime authorities can potentially be a show-stopping obstacle when it comes to rolling out a global drone delivery service, since the regulations are different in each and every country.”

The company’s project development of UAS together with Singapore’s regulatory bodies runs for a period of 22 months starting in Q3 this year. Following the completion of the pilot trial, Wilhelmsen Ships Service’s next step will be the preliminary design plan for UAS type and design for maritime deliveries that includes key technology vessel localization and landing solution, BLOS communication.

“We will also be looking at developing an end-to-end design and implementation plan, such as forecasting the number of drones required from a logistical perspective with the volume,” according to Johansen.

With the current UAS technology, drones are capable of making last mile deliveries for critical

documents, vital medical supplies and lighter weight spare parts of up to 4kg.

However, at this stage, traditional launch boats are still needed for crew change and the transport of larger supplies to the vessel through tug boats, Johansen said, adding that, dependent on the correct regulatory and safety framework being in place, drones could replace launch boats for deliveries of small, lightweight time critical deliveries right now.

In the shipping industry, drones have typically been used for security, environmental surveillance, emergency response, search and rescue missions, as well as various vessel inspections.

The technological potential with drones is immense, Johansen said, adding that “in the future, when the technology allows a greater range and heavier payload, we will likely see an exponential increase of UAS usage.”

Courtesy: World Maritime News
Image Courtesy: Wilhelmsen Ships Service

Collective Voice on IT Issues in the Container Shipping Industry

Shashi Kaushal-B.Tech-IV

World’s five top-tier liner companies MSC, A.P. Moller – Maersk, CMA CGM, Hapag-Lloyd, and Ocean Network Express have revealed their intentions to set up an association aimed at digitalization, standardization and interoperability in the container shipping industry.

Speaking to World Maritime News, André Simha, Global Chief Information Officer of Mediterranean Shipping Company (MSC) and spokesperson of the

group, said the key driver behind the association was to make something for the customers that are common and open.

“It’s in the customer’s best interest, if container shipping companies operate with common set of standards. When we collaborate, we can deliver better technological changes to our customers and more quickly compared to working alone. Customers don’t



want to connect to multiple different systems, so you need something that is common and open,” Simha said.

The association plans to start operating from early 2019 and the next steps will be to establish it as a legal entity, involving relevant regulators. It has been devised as a neutral, non-profit body, which doesn’t plan to develop or operate a digital platform.



Importance of Cooperation

Simha has been a vocal advocate of industry cooperation on standardization and technology development. When asked why was that important, he said:

“We believe that we’ve reached the point in the carrier world where we need something that is common, open and done in the framework of a neutral and non-profit association. Also, the timing is right because new emerging technologies are creating more opportunities to help our customers’ businesses.

“The plan of the coming association is to discuss the digital future of container shipping by being the industry’s collective voice on issues relating to information technology standards, working towards standardization, setting the frameworks for effective and universally adoptable solutions developed by other parties, exploring possibilities of innovation and in general, moving the industry forward.”

The five members of the association said they were eager to welcome new members.

“Collaboration and getting other carriers joining the association will be key for the success of this initiative. I have personally no doubt it will succeed because there is a strong interest between the members to collaborate and our customers are also asking for more standardization,” he said.

There are numerous alleys to explore in the IT world, which has been very popular in the industry,

including blockchain, big data, the Internet of Things, Artificial Intelligence, and autonomous shipping.

According to Simha, the association is yet to define its priorities in this respect and specific projects would be considered once the association is established.

However, we see some trends in the market such as data standards, blockchain, cybersecurity, that could be of relevance. For example, today, we have hundreds of different types of messages for different ports and terminals around the world, all with the same basic information. That’s an overhead that is inefficient for everyone,” he pointed out, adding it could be important to discuss cyber security best practice in the future association.

Digitalization a Matter of Survival

Digitalization is no longer just a buzzword in the shipping industry, it has been identified as an issue of survival. Namely, those who don’t adopt new digital technologies in the coming years risk being left on the sidelines.

“The container shipping industry is at a fairly low start of digitalization (if we compare it with other sectors like the aviation industry). Hence, the future association aims to accelerate and shape digitalization of the industry to help achieve higher level of standardized processes. The idea is to deliver better technological changes to our customers and more quickly compared to working alone,” Simha said.

As explained, digitalization benefits include:

- For Customers: Less red tape and bureaucracy. Better service.
- For Authorities: One point of contact
- For Container shipping lines: Access to best practice and standards, supporting increased interoperability
- For Ports and terminal operators: Potential for more efficient collaboration with carriers through use of common technology standards.

“Today, implementation of digital technology happens by working in closed silos. It leads to frustration and more bureaucracy for customers and other collaboration partners,” he explained.

“We believe all stakeholders in the industry can benefit from digitalization and standardization leading to increased interoperability.”





Image Courtesy: Pixabay under CC0 Creative Commons license

Liner heavyweights, including Maersk, MSC and CMA CGM have been at the forefront of the industry with numerous projects aimed at transforming the container shipping's way of doing business and improving its efficiency and productivity.

Maersk and IBM teamed up on a blockchain joint venture targeting the need to simplify the entire global shipping ecosystem and the movement of goods across borders and trading zones and make it more transparent.

Other liner majors followed suit as well. For example, MSC is supporting the work of Traxens, the supplier of smart-container monitoring solutions, which also counts CMA CGM among its core backers.

On the other hand, numerous startups are making their way into the shipping industry with the aim of

disrupting business models. Fears have been raised that these startups might be a threat to the traditional players in the industry, especially if they fail to evolve.

Nevertheless, Simha thinks that the trend is not something to be seen negatively.

“Not at all. The future association plans to develop standards, which both their future members as well as other stakeholders in the industry can adopt, as they will be made available to all freely and this of course includes startups or new comers. Future common standards could be a lever to enable the use of new technologies and improve the way existing solutions from different stakeholders work.”

When asked how will the industry cooperation among top-tier carriers impact the separate digitalization initiatives each company has, Simha replied that the association's work will be the facilitator for more collaboration between the different digital initiatives.

“We collaborate on information technology standards and let CEOs and commercial do their part.”

In conclusion, when asked whether digitalization, big data and autonomous shipping can live up to the hype we have seen over the recent period, commenting from a personal perspective, Simha said:

” I have no doubt that this is the future and we're on the right track to tackle those challenges and transformations provided we have standards in place.”

Courtesy: world maritime news

Tuticorin Port Visit

Peetbaran Ghosal (ME-II)

A great opportunity was given to B. Tech. II Year cadets by our institute to visit Tuticorin port, also known as V.O.chidambaram Port. Every one of us was eagerly waiting for the day. Our port visit was on 18th September, 2018. All of us were ready by 0600 hrs. in the morning. We collected our food for the journey from the mess and by 0700 hrs we started our journey. We were accompanied by our OIC Mr Porchezian and our class coordinator. It took us around three and half hours to reach the port. In between we stopped for refreshment

and also we had our breakfast. After reaching the port, our OIC got the permission from the port authorities to have a glimpse of the ships docked on that day and then we went inside the port.

Many ships were anchored at the port. Cadet captain along with our OIC and class coordinator went to take permission from the captain of the ship to see the interior of the ship. It was a tanker from Hong Kong, China, and its name was “Hong Hai”. We were not happy as the permission was not granted though there were many



more ships. Then we were permitted to visit an Indian ship from Mumbai, it was a bulk carrier, “Namdhenu Sun”, carrying urea from Qatar. Its capacity was 42000 metric ton with three cranes. After getting Permission from the captain, in a group of five we boarded the ship by the gang way. The temperature of the engine room was very high, as we were going down the stairs to the engine room, we could feel the temperature was rising gradually.

Inside the engine room we saw various machineries; the main engine had six pistons and cylinders arrangement.

We also saw the cranks of the piston and various pumps:

- Main and auxiliary sea water pump
- Main ballast pump
- Air conditioner and condenser pump
- Fridge pump
- Fresh water generator ejector pump
- Main engine lube oil pump

Tanks:-

- Fuel oil tank
- Lube oil tank

Auxiliary machines:-It does not directly help in ship propulsion but is very helpful and important to carry out related task without which it would be impossible to run the ship smoothly.

- Lube oil purifier
- Diesel oil purifier

After viewing all the machines in the engine room we went to the superstructure of the ship. At first we went to the first floor where accommodation for the crew members were there and then we went to the top most floor and enjoyed the panoramic view of the sea which was great and mesmerising moment. Then we came down and got into our bus. We parked our bus in a park where we had our lunch, after completing the lunch we started our journey back. On our way back we stopped and bought some snacks for the rest of the journey. We were back to the campus by 1630 hrs.

It was a day well spent.

Workshop at Pegasus Institute for Excellence, Pondicherry

Cdt. Himanshu Gupta-B.Tech-IV

A two day Residential Workshop on Team Building, Motivation, Leadership & Communication Skill was conducted by Maritime Training Trust (MTT), established for providing training needs and creating employment opportunities for Indian Seafarers under the guidance of Director General of Shipping (DGS), Mumbai, on 30th September and 1st October 2018 at Pegasus Institute for Excellence, Chettinagar Village, Tindivanam, Tamilnadu (Near Pondicherry). A total of 34 Cadets from 13 different institutes across India took part in the workshop. Cdt. Himanshu Gupta, Cdt. Manishankar Jha & Cdt. Sri

Nanda Kumar R. from B.Tech – IV Year represented from our institute to attend the workshop.

It is generally observed that the performance of Indian seafarers onboard is not up to the expectations of the international standards due to lack of confidence, leadership quality, communication skill, team building spirit, isolation and reluctant attitude to share problems. These factors are the major cause of worries as this will affect the employment opportunities of Indian seafarers. To overcome these problems, MTT had conducted the workshop.

The Workshop focused on the following activities –



Inauguration of Workshop at Pegasus Institute For Excellence by Mr. Amitabh Kumar, I.R.S., Additional Director of Shipping

Activity 1 – Human Web: It is a team activity which requires individual team to critically strategize with respect to opportunity vs people



resource and execute within the stipulated time. The activity process focuses on strategic planning, time, crisis management, self confidence, mutual trust and to understand synergy of team work, coordination, combined efforts towards achieving the team goals.

Activity 2 – Dynamic Delivery:

In this activity, a business situation is simulated in a specially designed activity layout. The task is for the whole group which requires coordinated effort from sub teams to achieve the goal. The team needs to understand that although they start off as sub teams, eventually for the success of the task, they need to share resources and support each other. The activity process focuses on positive & lateral thinking, work collaboration, finding solutions, ownership, accountability, developing and motivating others, customer focus and time management. Cdt. Manishankar Jha from our institute was the leader of one of the teams for this activity.



Cadets showcasing their skills in the Human web activity organised during the workshop.

Activity 3 – Chinese Whisper:

In this activity, a message is passed through all the cadets one by one and the activity focuses on how the message changes while passing through different persons. The objective of this activity is to enhance the listening skills of the cadets.

Activity 4 – Cross Over Bricks:

It is a group activity which requires the sub teams to collaborate and synchronize to accomplish the overall organization goal given the market constraints. The activity process focuses on planning, communication, execution, ability to distinguish what to hold & what to let go and criticality of handing/taking over responsibilities. Cdt. Himanshu Gupta & Cdt. Sri Nanda Kumar R. from our institute were the leader of their respective teams for this activity.

Activity 5 – A-Frame :

It is a demanding team exercise which requires perfect communication & coordination among team members to achieve the task. The activity calls for individuals to align with the team, support each other, synchronize with every member of the team, focus on quality and time management. The activity process focuses on the need to adapt own styles depending upon the situations, understanding & adaption to organizational goal and the importance of “Pulling” & “Letting Go” when required.

Activity 6 – Production House:

It is a high-energy activity which requires clear understanding of the objective, constraints and customer’s expectations. The individual teams need to strategize, define process, clearly outline individual’s role to maximize production output within the allotted tact time. The activity calls for individuals to align with the team, focus on his own task, understanding the importance of every role and how mistakes done by one can affect the overall deliverables. The activity process focuses on team work & conflict

management, appreciating others perspectives, time management and establishing process. Cdt. Himanshu Gupta from our institute was the leader of one of the teams for this activity.



“A-Frame” Activity is in progress with participants representing from various marine institutes.

During these two days of the workshop, we also had few interactive sessions with Capt. Sudarshan Srinivasan & Capt. Swamy from Synergy Marine Group in which we discussed on the “Challenges faced by the Seafarers On-board Ship.” Mr. Kalra from Maritime Training Trust (MTT) & Mr. Amitabh Kumar, I.R.S., Additional Director of Shipping were also present in the session.



Dynamic Activity is going on with participants from various maritime institutes.

At the end of the workshop, Mr. Amitabh Kumar, I.R.S., Additional Director of Shipping handed over the certificates to all the cadets and wished them for their bright future.



1st Batch of OCTCO Course & 10th Batch of ETO Course - August - 2018.

10th Batch of ETO Course



(L-R) Mr. Ananda Das, Mr. M. Subramanian-Advisor - Technical, Mr. Bhaskar Agnihotri -Principal.

1st Batch of OCTCO Course



(L-R) Capt. S. Ramesh, Mr. M. Subramanian-Advisor - Technical, Mr. Bhaskar Agnihotri -Principal, Mr. D. Naga Subramanian.



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