



# HOW EMBRACING DRONE USAGE CAN TRANSFORM YOUR SEAPORT FORTUNES

By: Chris Mason, business development, EMEA at Rajant

**W**hilst the military has been exploiting air-based drones for years as part of its efforts to improve safety, without affecting performance or facing increased cost, businesses and governments across the globe are beginning to realise the importance of drone usage and the opportunities it can bring forward. From agriculture to oil and gas to border control, these unmanned aerial vehicles (UAVs) have the ability and flexibility to be utilised in various markets, helping to improve business' results considerably.

As their use becomes more ubiquitous, so must the networks they run on because autonomy demands 365/24/7 connectivity. This is particularly essential for dynamic environments, such as seaports, where all assets including cargo, people, and vehicles are constantly on the move. In short, drones can only be as good as the supporting network infrastructure.

## Seaports

Drones are transforming the way organisations operate around the world. While most are prevalent in the military and defence industries, seaports are climbing up to the top of the list of sectors which can directly benefit from successful drone deployment.

Used across the entire supply chain, from container and cargo management through to data storage, logistics management, and national security, drones can be utilised effectively across various fields. The immense benefits that drones can provide have not gone unnoticed by companies so far and include improved navigation in smaller areas to aid ground-based port operations and to help navigate ships into ports.

Seaport operators can also maximise their potential by taking advantage of small, lightweight drones which have unrivalled

positives compared to the alternatives available. These aerial vehicles can collect and transfer large amounts of information, work around a range of obstacles that the environment presents and can operate for prolonged periods to travel over long distances - enabling port terminals to achieve transformative productivity and improved efficiency.

## Mission-critical connectivity

To be considered a viable solution that can deliver a whole range of communication services, drones need to operate and communicate on the same network infrastructure that supports all port assets that need to transmit and receive communications, be it a quay crane, RTG or straddle carrier. Seaport operators can schedule an autonomous drone, or swarm of drones, to take flight by simply pushing one button to launch an entire mission without

human intervention.

This "eye in the sky" enables ports to increase the visibility of moving vehicles and the monitoring of road traffic as truck drivers constantly work their way in, out and through a port. The vantage point the autonomous drone provides enables operators to reduce lane blockages and congestion, which speeds up stacking times. This is especially critical in December when demands on cargo shipping dramatically increase. In addition, logistical support with a birds-eye view of a port's operations and its infrastructure is a key advantage, instead of the alternative of a truck driver searching for a container manually which can be time-consuming and drain their resources. By minimising the level of vehicle and container movement, ports can significantly boost daily operations and reduce expenditure.

### Securing seaports

With 90 per cent of world trade carried by the international shipping industry, ports pose high-risk targets for terrorism, theft, and trafficking. Therefore, the ability to



navigate and move into difficult to reach locations for search and rescue operations using drones is another notable advantage. What's more, a drone's flight data and video streams, albeit from one or multiple drones in the field, can be quickly sent to a ground station operator, allowing them to scan a large area quickly.

It is becoming increasingly easier to

identify defects in a port's equipment as drones can be used to proactively inspect and diagnose a wide range of issues. Additionally, port operators can free up their staff from repetitive and laborious tasks by redirecting those to the drone. Human talent can be redeployed to other areas of the business requiring greater levels of discretion and expertise.

## Helideck Certification Agency



**NOW OPEN  
IN UAE**

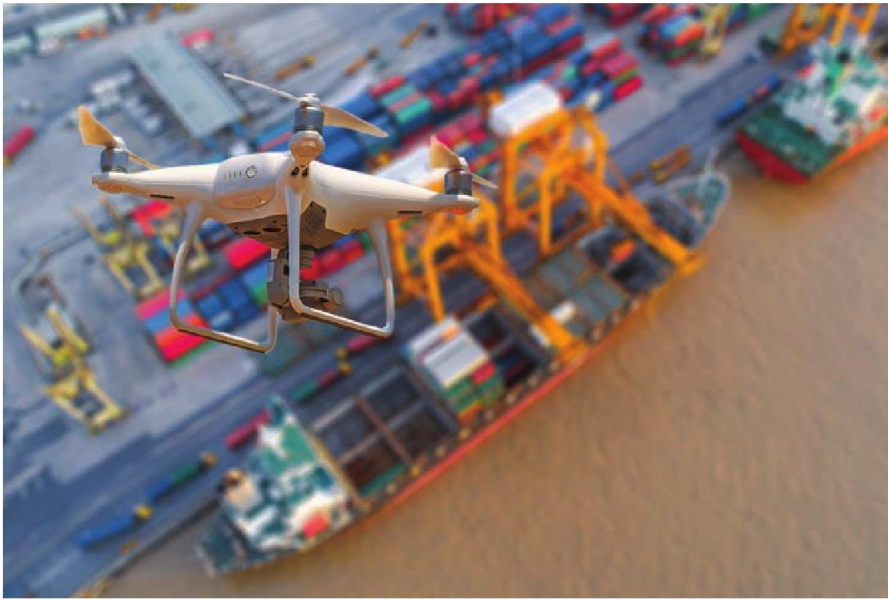
### Our Services

- ◆ Helideck inspections to CAP 437, CAAP 71, Normam 27 and Super Yacht code
- ◆ Consultation on Helideck design and approval assistance.
- ◆ Helideck and Helipad Friction testing
- ◆ Helideck Awareness Trainings

026 544 098 📞

0547 926 622 📱

andy.tulloch@helidecks.org  
www.helidecks.org  
Abu Dhabi, UAE



### The right network makes the difference

Drones can add a whole host of capabilities and, if deployed within the right network, they can enable seaport operators to make smarter decisions, safely, securely and productively. To make this a reality, operators require a network that is scalable, dynamic and operational in real-time to keep up with a port's fast-paced environment.

However, the harsh and unpredictable environment of an intermodal port makes constant connectivity a challenge.

Wi-Fi networks are not designed to provide reliable connectivity over widespread and complex areas such as port environments, especially when assets within that environment are highly mobile and the storage landscape is continuously changing. Port operations will suffer the repercussions of any drop in connection. If there is latency

or delay in data transmission to a drone, for instance, it will stop functioning and this effectively nullifies its productivity and efficiency benefits. Moreover, large metal equipment and cargo containers which are constantly in motion create signal inferences in the network, which present further hurdles for operators looking to benefit from access to data in real-time.

For seaports looking to implement drones, the number of interconnected devices, cameras and sensors on site will inevitably continue to grow with usage. Traditional network infrastructure isn't sophisticated or functional enough to cope with this level of mission critical connectivity.

### Going greater distances with drones

With the right infrastructure in place, organisations can quickly and easily establish a broadband network for their drones. For seaport operators, this can provide them with a secure system which they can scale with various payloads, providing them with the true mobility and flexibility to ensure port-wide access and reach – transforming their network into a strategic asset.

## ICR Integrity announces acquisition of drone company

**ICR Integrity (ICR), has acquired Sky-Futures Partners Limited (Sky-Futures), a leading provider in delivering drone-based inspections and drone pilot training for the energy, industrial and government sectors.**

The transaction facilitates the next phase of ICR's inspection service offering, augmenting its existing leading global provision of integrated maintenance and integrity solutions to the oil and gas, power, chemical and nuclear industries. The acquisition also strengthens ICR's infrastructure to support additional growth and expansion through the company's existing established networks.

With over eight years of experience in 28 countries, Sky-Futures is leading the development of commercial Beyond Visual Line of Sight (BVLOS) drone operations; the next evolution in remote inspection through the application of long endurance, BVLOS drone technology.



ICR's CEO, Bill Bayliss, said: "This is a very exciting time for the ICR business and its continued growth in the inspection space. We see a huge opportunity with Sky-Futures becoming part of the ICR Group as they are a world leader in the use of drones for data capture and its subsequent management. This acquisition, combined with a number of existing product lines within the ICR service portfolio, will provide our global client

base with industry leading technologies to both extend the life cycle and improve the integrity of an asset."

Sky-Futures Co-Founder and COO Chris Blackford said: "The acquisition of Sky-Futures by ICR is an exciting next step in our journey. The combination of ICR's technical services with drone-based inspection operations provide a highly differentiated offering that will stand out in the market."

Sky-Futures is headquartered in Hayes, Middlesex with a training academy in Moreton-in-Marsh, Gloucestershire. The company has an established global footprint with a franchise in Malaysia and partners in the Middle East which provide the platform for the company's ambitious growth plans and align with ICR's strategic plans.

ICR is backed by funds provided by Graphite Capital, ICR's private equity investors. The terms of the transaction were not disclosed.