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# Digitalisation in the UAE

Are technology partnerships a catalyst to growth in the Middle East?



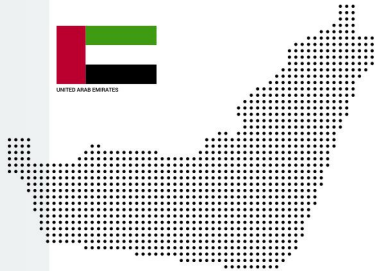
## Digitalisation in the UAE

Are technology partnerships a catalyst to growth in the Middle East?

The latest Seatrade Maritime UAE Special Report highlights an emerging trend in the Middle East, with growing businesses investing resources into digital roadmaps and partnerships.



UNITED ARAB EMIRATES



## Digitalisation in the UAE

### Cross-pollination with external industries

Over the last few years the approach to business management in the maritime industry seems to have taken a change in tack. Applying more innovative and digitally thought-out roadmaps are now becoming the norm, with the aid of capital investment, consolidation and partnerships of course.

What we are seeing is the introduction of industry third parties such as IBM, Microsoft, even Elon Musk and the Hyperloop, as well as other start-ups. These partnerships are bringing a perspective of unconventional thinking to an otherwise conventional industry.

The cross-pollination of these partnerships allows this 'new' perspective to influence and help shape the maritime industry into a more dynamic, efficient and innovative sector.

**Here is an example of how the requirements of other industries can stimulate innovation:** The first cordless power tool was unveiled by Black & Decker in 1961. In the mid-1960s, Martin Marietta Corporation contracted with Black & Decker to design tools for NASA. The tool company developed a zero-impact wrench for the Gemini project that spun bolts in zero gravity without spinning the astronaut. Nowadays, there is nearly no other option than a cordless power tool - but it took two completely different industries to create this tool based on their business requirements.

And the reality is, it makes total sense. For businesses to thrive in a pressured economy they must evolve and adapt to survive change in an environment they can little control. In this way businesses are looking to third party influences and adopting technology solutions such as big data, blockchain, AI, IoT...

The maritime industry is no exception and is now eagerly embracing the idea of 'smart' shipping, following the lead of other sectors such as manufacturing, supply chain, logistics, retail, wholesale and distribution.

Is the region connecting the dots on technology?

# Digitalisation in the UAE

Businesses in the UAE are utilizing digital assets

Seatrade's annual UAE Special Report contains a variety of examples of how shipping-related businesses in the Middle East are doing just that: studying their sectors of the marketplace and employing the right technologies to remain competitive, relevant and deliver exceptional customer service, as well as improved efficiency and cost savings, however incremental.

The UAE is a prime example of a country that has flourished through innovation, and now it is applying its energies to harnessing the full benefits of digitalization.

This whitepaper, an abridged version of Seatrade Maritime Review's UAE Special Report, looks at how a variety of different shipping-related businesses in the UAE are utilizing digital assets to ensure their businesses remain relevant and customer-centric.

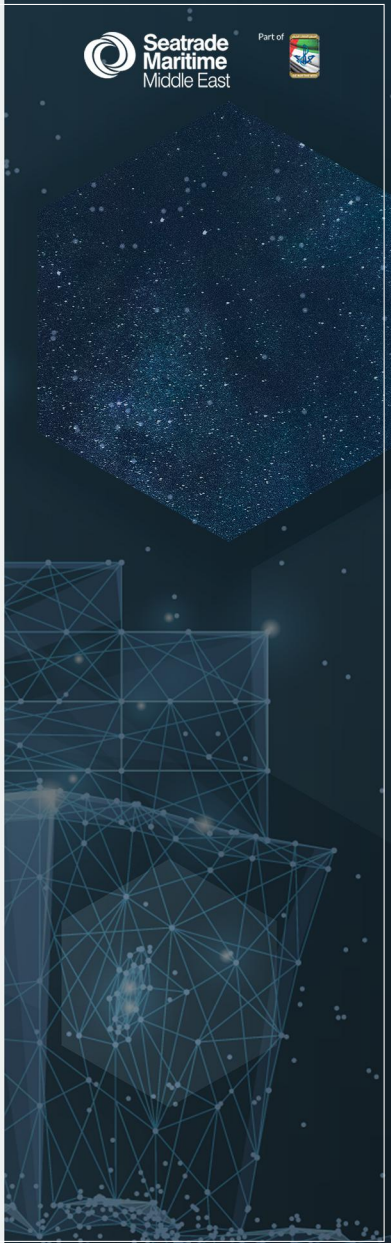
Companies featured include DMCA, DP World, Khalifa Port, Lloyds Register, Tristar, ABS, Mubarak Marine, Bureau Veritas, DNV, GL, GAC, ClassNK and Middle East Fuji.

While there is no single best practice for strategic digital direction in the industry, all are now showcasing what is possible with emerging and established technologies – such as advanced management systems, automation, drones and connectivity, to name but a few - and having a real impact on business development and growth in the region.

The future is now.

 **Seatrade  
Maritime**  
Middle East

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## Digitalisation in the UAE

### DMCA enhances customer experience with self-service portal

In the regulation sphere, and starting with optimising the customer service experience, Dubai Maritime City Authority (DMCA) is embarking on an innovation and intelligence transformation. H.E. Sultan Ahmed Bin Sulayem, chairman of DMCA, comments: "We are simplifying, accelerating and facilitating government services."

Earlier in 2018, DMCA rolled out a new digital payment and services portal, which it hopes will enable it to process transaction and queries more speedily and efficiently, reducing the number of visits to its customer service centres by 80% by the end of the year.

This gateway allows users to track application statuses, verify crew and craft licence validity, as well as deal with penalty objections and payments, among other services. This streamlined approach to business management throughout its service centre will enhance DMCA's service offering to clients as well as deliver cost savings to the business through a reduction of administration.



سلطة مدينة دبي المارitime  
DUBAI MARITIME CITY AUTHORITY

### DP World to boost annual capacity to 22m teu

Already the world's 10th busiest container port handling 14.7m teu in 2017, DP World has embarked on further expansion of its flagship Jebel Ali facility. When the fourth terminal is completed, capacity will reach 22m teu, informs Mohammed Al Muallem, DP World's ceo and md, UAE region.

DP World already employs state-of-the-art technology in its Jebel Ali Terminal 3, where highly automated ship-to-shore cranes are controlled at distance from a remote operations centre.

DP Worlds is also using latest advances in connectivity to create a seamless Dubai Logistics Corridor comprising Jebel Ali port, Jebel Ali Free Zone (Jafza) and Al Maktoum airport, even looking into Hyperloop technology as a way of speedily transferring cargoes without creating landside congestion.

## Digitalisation in the UAE

### Khalifa Port (Abu Dhabi Ports) looks to go paperless with blockchain

Khalifa Port, which already boasts semi-automated operations, is continuing to invest in digital optimisation and service operations by introducing further automation. The investment will centre around blockchain, with these new technological developments better connecting management processes and enhancing access to information which, if successful, will turn Khalifa into the world's first 'paperless' port.

New technology will act as a catalyst to the port's infrastructure development. Khalifa's growth strategy will see an expansion to 12 quays, thereby increasing capacity from 2.5m teu to 5.3m teu by 2020, as well as a comprehensive review of the potential business benefits associated with utilising rail technology.

Shipping line MSC's subsidiary Terminal Investments Ltd recently signed a 30-year concession deal with the port worth AED4bn (\$1.09bn) over its 30-year lifetime. Law firm HFW will be working on a financing deal covering development of automation during the second phase of the port's development.



### Gulftainer upgrades technologies for productivity & service quality

Management system upgrades are also taking place at other leading port players in the region, such as UAE-based Gulftainer, which claims to be the world's largest privately owned independent terminal operator. It is undergoing a major technology upgrade designed to boost productivity and improve service quality.

The company successfully implemented its advanced Marine and Container Handling (MACH) Terminal Operating System at Sharjah Container Terminal last year, and is now rolling out the system across other terminals in the UAE.



## Digitalisation in the UAE

### Tristar to bolster supply chain transparency

Tristar Group, a fully integrated liquid logistics solutions provider and expert in handling oil, lubricants, chemicals and liquid gases, is also looking to the future with investments in technologies to support the growth of the business. This is accompanied by a strategic move into ship owning and a further focus on partnerships in digital innovation.

The group has received a strategic investment worth \$100m from Gulf Investment Corporation (GIC) for expansion and acquisition, including development of a ground-breaking proof of concept for use of blockchain technology, thereby creating the roadmap for the group's digital transformation strategy.

Intent on increasing transparency, Tristar will highlight the visibility aspect of blockchain to its clients by enabling access to real-time updates and data along the entire supply chain, at the same time as removing human intervention and manual handling of data.



### Drydocks World embraces advanced technologies and IT

Since its takeover by DP World, the focus at Drydocks World is on upgrading and diversification, which will include a close look into more innovative and specialised business opportunities, leveraging advanced technologies and IT systems to streamline processes.

The move highlights Drydocks World's confidence in the region, and the yard anticipates strong growth prospects through this process of consolidation and focus on innovation. The organisation plans to use the benefits of digitalization to offer cost-competitive and reliable solutions to its clients based on greatly improved operational efficiencies, laying the foundations for positive results in the future.



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### Mubarak Marine weathers the storm with digital strategy

Mubarak Marine has focused on investments in technology to weather the storm that has hit the international offshore shipping community - in the Middle East in particular - since the oil price slump of 2015.

The business implemented strategic procedures immediately to diversify its fleet and services, at the same time investing in software to enhance visibility, reporting and management of business operations such as monitoring costs and planning fleet maintenance schedules.



### ABS places emphasis on cyber security

Protecting digital assets is becoming ever more important with a series of hacks and malicious attacks on maritime business technologies in recent years.

Class society ABS is playing a leading role in addressing shipowners' concerns over cyber security, having introduced the ABS CyberSafety program which deals with clients' fear about safety challenges, and guiding them on the way threats should be addressed.

ABS CyberSafety is claimed to be first risk-based management tool developed by the industry to quantify and mitigate risks connected with new technologies and cyber security - the safety of automated systems, data integrity and software verification.

"There is now much greater focus on environmental compliance and operational performance, with many ship owners and operators in the marine and offshore industries shifting their attention to electric propulsion and non-conventional sources of power..."

"We continue to work with owners to find new ways to adapt technologies and innovations to their fleets and develop solutions that support operational efficiencies and regulatory compliances," comments Darren Leskosko, ABS regional vp - Middle East and Africa.





## Digitalisation in the UAE

### Lloyds Register strengthens cyber with acquisition of Nettitude

Further championing the importance of cyber security is Lloyds Register (LR), which earlier this year strengthened its expertise in the sector with the acquisition of Nettitude, an award-winning cyber security specialist solutions provider.

"Cyber security has been on the boardroom agenda as organisations worldwide look to improve their resilience against a backdrop of high profile and increasingly sophisticated cyber attacks", comments Alastair Marsh, chief executive of LR. "The number of breaches is up an average of 27.4% year-on-year, with 86% of firms around the world reporting having experienced at least one cyber incident since 2017."

Embracing new cyber security measures to combat these threats is a major priority at LR, which has joined forces with the University of Southampton, renowned for its world-class marine engineering and naval architecture courses, to set up the Southampton Global Technology Centre. It also has a Singapore Global Technology Centre with project partner A\*Star to advance technical innovation and support economic growth in the Asian region.



### Bureau Veritas rolls out compliance apps; pioneers 3D printing

Bureau Veritas (BV) is now offering an app, suitable for use on PCs, laptops and mobiles, to help shipowners prepare for Port State Control inspections. The app trains crew to detect, correct and avoid deficiencies, providing access to statistics, data and news on PSC development.

BV has also developed a comprehensive approach to support shipowners in addressing maritime cyber risks. A new series of classification notations, guidelines and services enables owners to comply with regulatory requirements, safeguard their crews and protect their assets from both malfunction and malicious attacks.

BV says its continued investment in developing services and skills will help its clients leverage the power of digital systems to further improve fleet efficiency and performance, all the while keeping their ships crew and data safe.

Furthermore, the class society has also been working with other partners on the application of 3D printing techniques in the maritime sector. "Our aim is to develop the world's first class-approved 3D printed ship's propeller, to be called the WAMMpeller," says Sergej Krstanovic, BV Marine Division's chief executive for the region. "It is also likely to be the first time that a metal 3D printed maritime component is approved by a classification society," he adds.

The introduction of a class-approved 3D printed ship propeller further highlights the transformational effect that digitalisation is having on the maritime industry in the region and further afield.

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### DNV GL reduces survey times with drones

Fellow classification society DNV GL now employs drones in the Middle East and elsewhere to conduct surveys with greater efficiency and therefore lower cost for its clients.

First started by DNV GL in Poland, the drone surveys employ two-person in-house teams consisting of a drone pilot and surveyor, who work together with an advanced camera that delivers pictures of exceptionally high quality. Using drone technology to survey hard-to-reach areas results in a significant reduction in survey time and therefore costs less for the client.

Among other services being offered by DNV GL is assistance to clients on EU MRV (Monitoring Reporting and Verification) compliance, its advisory team based in Dubai guiding clients in all procedures for compliance with new European Union rules on fuel emissions.

DNV GL is also advocating the use of battery operated, zero-emission passenger ferries in UAE waters since the class society's work has shown these to be viable in Norwegian coastal areas, and area manager Geir Fuglerud feels they might also suit Gulf conditions.



### ClassNK streamlines BWTs retrofits with 3D modelling

Japanese class society ClassNK has been devoting much attention of late to advising owners in the Middle East on how to best retrofit Ballast Water Treatment Systems (BWTs) by the required deadline, which for many operators will be 2019.

It recommends that the best way to complete these potentially costly and timely projects is through optimisation of the technologies employed. In particular, it proposes use of 3D modelling of the spaces affected by the retrofit to ensure complete diligence throughout the retrofitting process.

ClassNK's PEERLESS software can be used to speedily build up a 3D model based on laser scans of the areas in question, thereby saving time and ensuring better management and implementation of retrofitting projects.





## Digitalisation in the UAE

### GAC integrates supply chain offering

Supply chain integration is the aspiration of many, and "as a pioneer since 1956, GAC has grown to become one of the largest integrated providers of shipping, logistics and marine-related services on the planet," in the words of Ronald Lichtenegger, md of GAC Dubai.

"Our complete suite of integrated services allows customer to enhance operational efficiency, control costs and increase revenue," he adds, "driving towards long-term growth."

GAC supply chain solutions stretch from traditional areas such as ship agency, bunker fuels and ship supply, to innovative services such as weather routing, vessel performance management and underwater hull cleaning using the award-winning HullWiper ROV (remotely operated vehicle).



### Middle East Fuji standardises management systems

Another example of the burgeoning adoption of digitalisation in the region is Fuji Middle East's investment in a global software system for its supplies business to integrate with the main system of its parent organization back in Japan. This standardisation of their global software will contribute to an operational streamlining of the business through consolidation and integration of data throughout the group.





## KEY FINDINGS

Further to the findings of this whitepaper, experts from across the region and beyond will be coming together to discuss the use of innovative technologies at a series of highly focused conference sessions, and on the exhibition floor, at the Seatrade Maritime Middle East 2018 event in Dubai on October 29-31.

The event will take place at the Dubai World Trade Centre and is being held under the patronage of HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, as part of UAE Maritime Week.

The Seatrade Maritime Middle East conference will introduce the eagerly awaited Parliamentary Debate where well-known figures from the shipping industry will contest whether the maritime industry is really ready to embrace the full advantages of digitalisation and 'smart' shipping.

To find out more, or book your place, please see your invite below.



29-31 October 2018

Dubai World Trade Centre (DWTC)  
DUBAI, UAE

Under the patronage of His Highness  
Sheikh Hamdan bin Mohammed bin  
Rashid Al Maktoum, Crown Prince of Dubai, UAE

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## YOUR FREE INVITATION |

### Seatrade Parliamentary Debate

Seatrade is pleased to invite you to the first parliamentary debate to be held at Seatrade Maritime Middle East, which will provide the opportunity for opinion and debate on a complex and thought provoking topic:

**“ This House believes that the shipping industry is not ready to embrace smart shipping. ”**

Centred around smart shipping and chaired by Jasamin Fichte, Managing Partner, Fichte & Co, the debate will bring together speakers for and against the motion to put forward their opinions, before opening up the debate to all participants. The Debate will conclude with a vote by all attendees.

Place: Keynote Theatre, Hall 8, Dubai World Trade Centre (DWTC)

Date: Monday 29 October 2018

Time: 1430 - 1600hrs

[www.seatrade-middleeast.com](http://www.seatrade-middleeast.com)



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