

## Setting Sail with Smart Tech

*How ports and marinas are capitalising on IoT solutions*

RINGWOOD, UNITED KINGDOM, May 20, 2021 /EINPresswire.com/ -- On-board, berthed, and on the marina, smart technologies are driving widespread digitalisation – a process which has the potential to guide shipping processes into the future.

Digitisation in the maritime industry assists with complex logistics, asset and supply chain management. Smart technologies are taking this a step further, with so-called smart shipping set to address challenges and offer far-reaching benefits for a range of maritime players. From big data and cross-operations visibility to AI, blockchain, and automation, the entire supply chain stands to benefit from these smart, accessible advancements.

And with Brexit adding further complexities to shipping logistics, there's an even greater need to accelerate the adoption of smart technologies that streamline operations and save time, money and resources.

[Smart ports](#) for a digital tomorrow

Through simplified data communications, smart ports achieve high-level efficiencies and reduce costs through an ecosystem of smart security, asset management, and network infrastructure capabilities. Simple, affordable IoT technologies optimise inventory-keeping, container and contents monitoring, provide data-inspired logistics, and are the basis of a formidable safety and security system.



Smarter Technologies Group Logo



Matthew Margetts, Smarter Technologies

Cloud-based reporting offers a real-time, dynamic overview of all tagged assets. It is through these data insights that processes can be refined. The smart port in Rotterdam, for instance, incorporates digital infrastructure to drive predictive maintenance schedules, predictive berthing, and a range of other processes for the enhanced operational running of the physical infrastructure. The improved efficiencies are one focus point for smart ports. Another is the need to pivot around a growing trend of digitised and automated vessels - with port authorities needing to evolve to remain relevant.

### Technology to meet marina challenges

Marinas around the world face many challenges that can be traced back to slow uptake of technology and poor digital services to customers in marinas and tourist ports. At the same time, this is a fast-growing industry with a digitally savvy clientele. This makes the adoption of data-intelligent processes an urgent consideration for operators. In addition, COVID-19 has reinforced the need for contactless, effective digital solutions upon arrival and exit. Smart technologies use data to design highly-effective digital systems around access and inventory control, asset management, and communications. This improves customer experience and paves the way for automation and remote management, allowing operators to concentrate on high service levels and hospitality.

For example, asset tracking devices can be placed on cargo, containers, vehicles, forklift trucks and vessels. By keeping an eye on the location of these assets, ports can make sure that they are where they need to be, allowing operations to run smoothly.

For example:

An asset tracking device can warn the port operator if a cargo or cargo container is damaged or tampered with.

IoT networks can be used to monitor the state and status of equipment to detect potential failure ahead of time.

A temperature monitor can be used to identify a faulty part as heat builds up, allowing for an engineer to take corrective action before something turns critical.

### Safer, streamlined smart ships

On vessels themselves, smart technologies are fine-tuning efficiencies – with the potential to drastically reduce costs. Smart technologies provide data-driven onboard organisation, maintenance planning, and the creation of a digital bridge between at-sea and on-shore operations. The result is elevated safety and reliability. With these outcomes in mind, BOURBON's smart shipping programme in Angola anticipates a future cost saving of 25% - an example of how ships of the future are geared to make better use of resources and increase productivity.

## Going smarter across the supply chain

From the location of ships to the status of individual containers – and beyond to ports, warehousing, and trucking operations – the whole supply chain is getting smarter. By collecting data across meaningful metrics, personnel can check in on cargo and get notifications on undesirable changes around factors like temperature, shock, humidity, gas, and smoke to maintain the integrity of shipments no matter where they are. These actionable notifications give personnel a head start to reduce risk and mitigate losses. Some technologies incorporate two-way communication on this front, which has the added advantage of reduced manpower requirements, safety, and risk of human error.

## Securing vessels against Legionella and other bacteria

Another opportunity presented by smart technology in the shipping industry is the implementation of automated potable water temperature monitoring and flushing systems. These systems can help vessels save thousands of pounds on manual testing and avoid fines, penalties or prosecution.

Maritime legislation in the UK, namely the Merchant Shipping (Crew Accommodation) Regulations 1997 and the Merchant Shipping (Crew Accommodation) (Fishing Vessels) 1975, amongst others, require: “The supply of drinking water and fresh water to be such as to prevent any risk of contamination.”

This legal requirement translates into immense costs for seafaring vessels, which need to perform regular tests for colony-forming units. This can be overcome by adopting an automated system that continuously monitors a vessel’s water systems and provides real-time alerts if safety parameters are breached. Safety parameters are set according to the temperature ranges needed for the formation of colonies, and sensor technology can identify exactly where the areas of risk are present, such as a specific cabin or section of the vessel.

Effective monitoring is the foundation of effective management – and data is, without question, the best way to monitor people, processes, and assets across the shipping supply chain. The benefits of collecting and analysing this data in real time span customer experience, labour requirements, and costs – to name a few.

## About the author

Matthew Margetts is Director of Sales and Marketing at [Smarter Technologies](#). His background includes working for blue-chip companies such as AppNexus, AOL/ Verizon, and Microsoft in the UK, Far East and Australia.

## About Smarter Technologies

Smarter Technologies tracks, monitors and recovers assets across the globe in real time, providing asset tracking systems to the open market and fulfilling the world's most complex asset tracking requirements. Our services cover a vast array of business sectors, products and equipment from container or pallet tracking to military-grade devices.

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