

IOT: THE ANSWER TO INTERCONTINENTAL SHIPMENT TRACKING

With many supply chain operations facing unprecedented challenges, Internet of Things has stepped up as an unlikely ally in revolutionising the way we use data to solve complex shipping and tracking issues.



BY LOIC BARANCOURT, CEO AND CO-FOUNDER OF THINXTRA

It's no surprise we are seeing more and more supply chain organisations demanding accurate, real-time data about the location and condition of shipments on both a national and intercontinental scale.

Throughout the COVID-19 pandemic – and more recently the MV Ever Given crisis in the Suez Canal – unprecedented challenges were created for supply chain management. The ongoing situation has been described as a sea freight crisis, with prices going up and services going down. Within the past 12 months, the cost of one container shipment between China and Melbourne increased from US\$2000 to US\$5000, while only 44 per cent of ships arrived when they were scheduled to. At the same time, the Shanghai Containerised Freight Index grew by 280 per cent from US\$1100 to

US\$2800 in just one year.

In these times of great uncertainty, access to dependable, real time data is a huge challenge for most supply chain operations. Reliable information about where the container is, and when it will arrive at the destination, has become difficult to obtain. In our world of on-demand supply and lean manufacturing, this is clearly a huge risk.

Today, the Internet of Things (IoT), while not an obvious solution, offers the exact location and condition information that organisations such as Michelin use at scale to mitigate risk. The company felt the pain of inefficient freight tracking and decided to take control by partnering with Sigfox, the world's leading IoT Service provider and inventor of the OG Network technology, and Argon & Co, a global management consultancy specialising in

operations strategy and transformation. The result was Safecube, an IoT solution provider which specialises in locating intercontinental shipments and tracks their transport condition, including temperature, humidity and shock. All of a sudden, Michelin's problems were solved.

"IoT-based track&trace solutions automatically give reliable and granular data about shipments: it opens many opportunities to improve your operational performance. First, there are quick wins related to better steering of your flows thanks to real-time visibility. Moreover, data can be leveraged to spot optimisation opportunities, improve transport schemes, have a more balanced relationship with transport providers, and offer better customer service," Raphael Anasthase, Sales Director at Safecube says.

Sea freight is in crisis, with prices going up and services going down.





We are now seeing the significant impact of sea freight dynamics in our local Australian and New Zealand markets. With containers and assets having become scarce and globally imbalanced, lead times have increased, and reliability has decreased, resulting in escalated costs and risk. Frans Verheij, Partner at Argon & Co says having real-time location and status visibility of containers is more important than ever to efficiently manage end-to-end supply chains. Argon & Co provides transformational and digital supply chain consulting services to maximise the operational effectiveness of Safecube's technology. Partnering with Thinxtra, The IoT Telco, the trio provides a comprehensive global end-to-end solution.

HOW IT WORKS

Despite reverse logistics being notorious for its negative implications – such as the loss of revenue for companies and supply chains resulting from initiatives like free returns – it actually has a positive role to play when it comes to the implementation of reusable IoT tracking devices. Safecube utilises reverse logistics to save on costs by sending back their tracking devices to be re-used again with shipments already on their way back. The devices travel with the shipment inside the container, and upon arrival at the destination, are returned for re-use in the next shipment. The tracking device is able to send real-time communication via the global oG Network and vessels' automatic tracking system (AIS) at any point during the journey. It sends real time alerts and data insights to help track and monitor from the beginning to final point of delivery.

The innovative solution is the answer to putting a stop to endless emails and phone calls in an attempt to find out what is really going on with shipments. This makes supply chain operations less dependent on their service providers, while at the same time getting their control back. In Europe, exporters have been deploying low cost tracking for intercontinental cargo – and the result is always knowing where your container is.

“Safecube's IoT solution enabled Michelin to transmit the location of the goods to our customer quickly.



Reusable IoT tracking utilises reverse logistics by sending back devices with shipments already on their way back.

This avoids the need to mandate an emergency air transport and therefore to preserve the customer relationship,” says Frédéric Jeandin Service, Distribution Manager at Aircraft Tyre Michelin. Operational scalability allows seamless tracking, with long battery life of the devices allowing tracking without the need to recharge.

In terms of data, insights deliver much more value than knowing where the shipment is and how it's doing. The end-to-end track and trace solution data enables a multitude of benefits with day-to-day operational savings. Reduced in-transit lead time and inventory, reduced demurrage fees and detention costs, alerts of delay or transport conditions and visibility and better service for customers are just a few of the benefits achieved through data insights. Condition monitoring data enables the management of deviation in real-time, which allows the identification and tracking of responsibilities. The technology can even deliver flows re-engineering, sea routes optimisation and transport mode balance, which informs flow performance assessments and the testing of new transport solutions.

NUMBERS TALK

After the implementation of Safecube, Michelin quickly saw real results in its operations. The company achieved a four-day reduction of in-transit inventory on a route from Antwerp to Chicago and saved 40 tonnes of CO₂ for each shipment by transferring from air to sea freight. It was also able to successfully reduce detention costs by €150 per day (about AUD\$230), per container through container sleeping alerts in arrival ports.

Evidently, the IoT is able to deliver the transparency supply chain operations needed to gain the data insights for better decision making and better customer experience. Our new normal has clearly lifted the importance of risk management and operational agility over yesterday's cost reduction objectives. The close collaboration between Thinxtra, The IoT Telco, with our solution partner Safecube and the management consultancy Argon & Co brings all the elements together required to leverage the power of IoT. ■

For more information, visit Thinxtra.com, argonandco.com or safecube.com