Lyngsoe Systems and Pack and Sea

For any company dealing with returnable transport assets, being able to constantly track those assets and ensure they are returned and available in the right place at the right time is crucial in order to run an efficient business and keep operational costs down and maintain competitiveness.

For fisheries all over the world, the ability to trace their products is made all the more important given the increased focus on food traceability in terms of legal, consumer and supply chain demands. Traceability of seafood in particular is under scrutiny because of consumers' increased interest in the sustainability and safety of the seafood products they buy.

In 2010, the EU introduced the catch certification scheme for fish to deal with the problems of illegal, unregulated and unreported fishing which threatens the sustainability of fisheries. The EU project TRACE – "tracing the origin of food" – also widened the spotlight on the traceability of fish.

These issues were evident at Denmark's harbours where companies had trouble with the administration of the fish crates circulating between the harbours and their customers.

With more than 25 different types of crates travelling between harbours it was impossible to track the respective harbours' crates. As a result, the harbours were unable to implement rational invoicing procedures for their hire. No one had the total overview of where the fish crates were located; the crates were

disappearing within the logistics chain and it could not be documented how long different customers had them in their possession.

There was a great need for a standardisation of the crates and a system that allowed crates to be tracked easily to reduce the manual handling of crates and to get the invoicing procedure streamlined.

In order to tackle these issues Pack and Sea – a consortium made up of companies from 10 Danish fishing harbours – was founded in 2005 and has been working in partnership with Lyngsoe Systems – an expert in developing intelligent logistics solutions to enable customers to increase their effiency and competitiveness – to develop an asset management solution to handle the administration of more than 200,000 new, identical fish crates with RFID (Radio Frequency Identification) tags.

Pack and Sea chose Lyngsoe Systems as the supplier and system integrator of the RFID data collection network and the asset management system, because of the company's extensive experience in the area.

By taking a holistic look at the flow of fish crates from the vessel to the customer, Lyngsoe Systems developed software that not only delivers a real-time overview of the number of fish crates in various parts of the logistics chain, it also provides documentation of the actual location and status of the individual fish crate; whether onboard the trawler, at the auction, or at the manufacturer.

The solution provides a total overview of the

fish crate flow and also provides an overview of the contents in each crate, which are linked to the crate's ID number – making the system fully supportive of food traceability concerns.

A full overview of the whereabouts of fish products from trawler to retail store is possible and information about where the fish were caught and when, by which Vessel and by what fishing method can be made available to the customer.

According to Simon Johansen, Manager at Lyngsoe Systems, it was important to RFID tags that could withstand the aggressive environment in which the crates are used. He says: "There were originally 25 different crate types here in Denmark so deciding on just two kinds of crate was a complicated process that took some time. We had to do a lot of testing on the physical crates to make sure they could work in this environment with saltwater, rough handling, aggressive detergents, and variable weather and temperature."

The system developed by Lyngsoe Systems for Pack and Sea is ready to be rolled out to other European harbours and fishing-related companies who want to simplify the handling of products and lower costs.

Pack and Sea also intends to improve the food traceability components of the system and the consortium is currently looking at implementing temperature logging to the traceability system.

Bent Kirk, managing director of Pack and Sea, says "All the way through the process we have had very good cooperation with all the parties involved.

"During the process of equipping the crates with RFID tags we have achieved extensive experiences in what works and what doesn't. This experience, combined with Lyngsoe Systems' huge knowledge within RFID technology, makes us a perfect match for companies that want to start a similar process with their transport assets or other items."

Lyngsoe's Johansen adds: "The system allows fishermen to benefit from economies of scale and the system lends itself to improved traceability so it benefits fishermen and exporters but also the industry as a whole.

"The system is ready to be used by other European harbours now. We have a lot of contact with Swedish and German and Scottish fisherman who are interested. I think that there is big interest everywhere."