WHY ASSET MANAGEMENT IS BENEFICIAL

Companies dealing with returnable transport assets will benefit from being able to track their assets, not just to ensure that hired assets are returned, but also to ensure that the right number of assets are available in the right place and at the right time.

An effective asset management solution helps companies track returnable transport assets, ensures that they are returned, and eliminates the need for overstocking – leading to a reduction in operational costs and an improvement in their competitiveness as a result.

CONTACT INFORMATION

PACK and SEA

Pack and Sea is a joint company founded by companies from 10 Danish fishing harbours: Skagen, Strandby, Hirtshals, Hanstholm, Thyborøn, Thorsminde, Hvide Sande, Bønnerup, Grenå and Gilleleje.

Pack and Sea rents out and handles the administration of the RFID embedded fish crates to the Danish Fishing Industry.

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Lyngsoe Systems

 Lyngsoe Systems is a provider of logistics solutions including Warehouse Management, Supply Chain Visibility, Asset Management, Food Traceability and RFID. Lyngsoe Systems' solutions are based on known and used technologies that enable our customers to improve their customer service, productivity and reduce costs in their business.

Lyngsoe Systems has since the mid-1970s delivered quality solutions worldwide and has built up an extensive knowledge and experience in project management, system design, consulting, installation, support and maintenance of small and large, IT-based logistics solutions. Our reference list is extensive with more than 2,100 installations in Europe, USA, Asia, Australia and includes GAP, Target Stores, Copenhagen Airport, McDonald's, Danfoss, Deutsche Post, HAVI Logistics, Australia Post, United States Postal Service, Reebok, Timberland, and others.

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The Pack and Sea case story
- Automatic tracking of fish crates

PACK AND SEA
www.packandsea.dk

Lyngsoe Systems
elevating logistics

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 standardization of the crates and also to get the possibility of bundling the harbours' purchases of crates in large orders and by doing so save money.
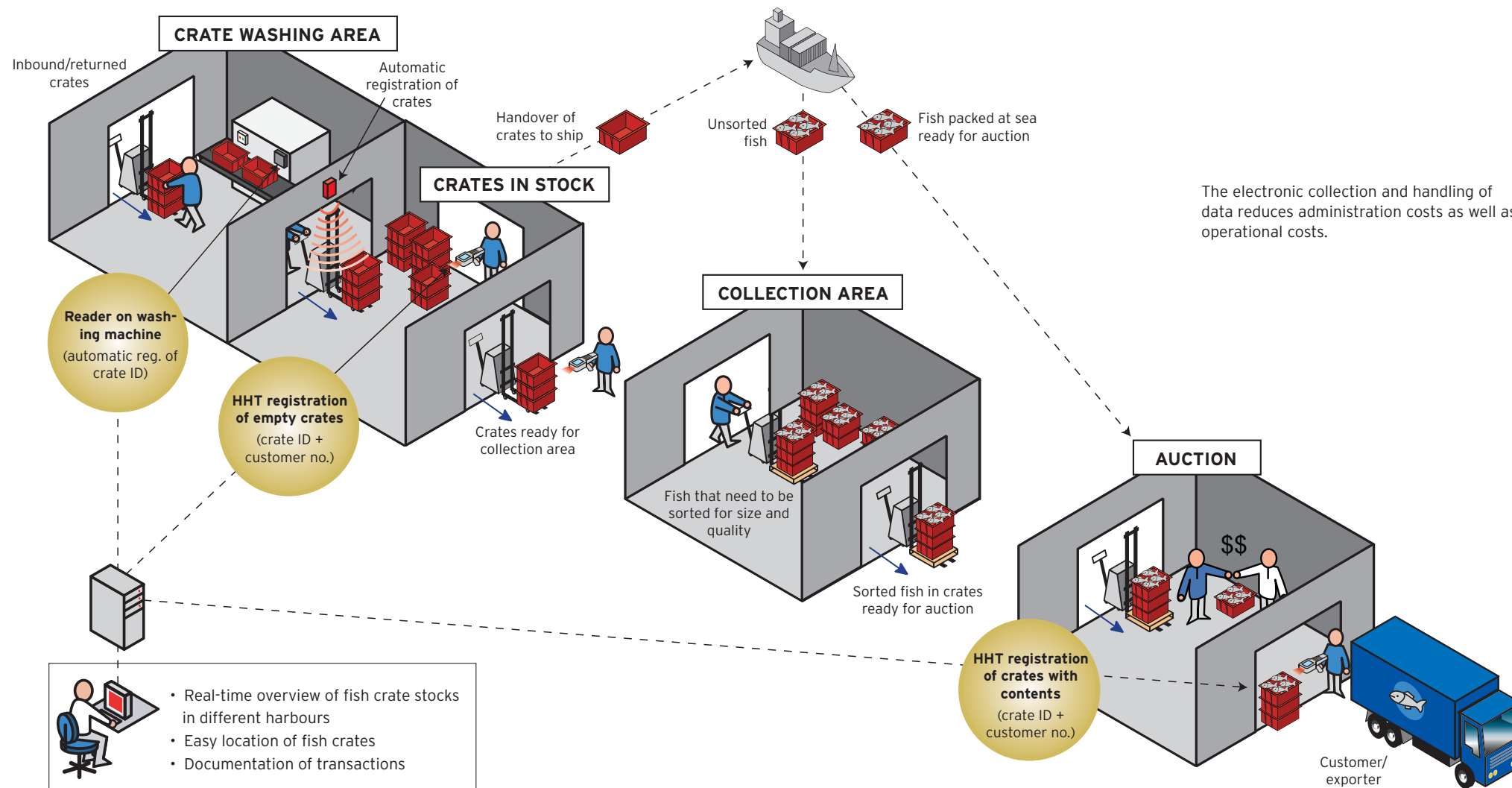
THE CHALLENGE

The different Danish harbours had trouble with the administration of the fish crates circulating between the harbours and their customers. The problem was that there were more than 25 different types of crates as each harbour bought the type of crate they wanted. Furthermore, 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

The harbours' needed to be able to track the crates easily, to reduce the manual handling of crates and to get the invoicing procedure streamlined. To achieve this, they launched the Pack and Sea consortium, with membership from 10 Danish harbours, to handle the administration of more than 200,000 new, identical fish crates with RFID (Radio Frequency Identification) tags.

FULL SUPPLY CHAIN VISIBILITY

Pack and Sea chose Lyngsoe Systems as the supplier of the solution, including the RFID data collection network and the asset management system, in order to obtain the needed supply chain visibility. By taking a holistic look at the flow of fish crates from the vessel to the customer, Lyngsoe Systems' software 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 electronic collection and handling of data reduces administration costs as well as operational costs.

THE SOLUTION

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. This means that the solution will also support food traceability. Full overview of the whereabouts of fish products from trawler to retail store is possible. Information about where the fish were caught and when, by which ship and by what fishing method can be made available to the customer.

Benefits

- Reduce loss of crates
- No manual registration of crates
- Real-time overview of fish crate in stock
- Reduction in the number of misplaced fish crates
- Documentation of transactions for invoicing
- Significant reduction in unproductive time spent searching for fish crates
- Easy to fulfill demands for food traceability in the entire supply chain.

How the system works

The Lyngsoe Asset Management solution is based upon the use of the RFID technology. Every single crate is equipped with two UHF RFID tags with a EPC GRAI (Global Returnable Asset Identifier) code making each crate unique.

Fixed RFID readers are installed at some registration points, and at other registrations points handheld terminals are used. The handheld terminals are connected to the main system; either via wireless network (WLAN) or via a networked docking station or via GPRS. The crates are scanned as they pass in order to document all transactions in the logistics chain. The crates are typically scanned at the washing plant, at the exit point of the crate stock and when the crates are handed over to the next part in the supply chain. Data is sent to a central server, hosted by Lyngsoe Systems, where users have access via web to reports and the follow-up information needed. Data that form the basis for invoicing is sent to Pack and Sea's ERP-system.

Aggressive enviromental challenges

For the project, it was very important to find tags that could withstand the aggressive environment in which the crates are used, e.g. saltwater, rough handling, cleaning products, variable weather and temperature changes, etc. It was also important to find the right equipment, such as RFID readers and handheld terminals.

The web application is used to give users an overview of crate movements and stocks and to give access to the management reports in the system.

It is possible to manage users via the web application - both those using the web and those using handheld terminals. Access for users can be restricted, e.g. to see only a subset of locations. For example, to prevent an exporter from seeing another exporter's customers.

Registrations made by the RFID systems include among other data:

- Crate ID – for the system to know which crate has been registered
- Location – in order to know exactly where the crate has been read
- Registration in – in order to know when a customer has received the crate
- Registration out – in order to know when a customer has handed over the crate to another customer
- Invoicing

Furthermore, information about the contents can be registered via handheld terminals or via data interface to other systems.

THE FUTURE

The plan is to get other European harbours and fishing related companies to use the system in order to make the handling even more effective and thus to lower costs.

Concerns of consumers and requirements from authorities regarding food safety/traceability of products are higher than ever and continue to grow. Therefore the next step has already been taken to implement food traceability as part of the system.

As many fish and shellfish are transported far from where they were caught, a future step to increase the consumers' confidence in Danish fish products could be to add temperature logging to the traceability system. Temperature logging gives the fishing industry a variety of benefits, e.g.:

- Maintains cold chain safety records
- Verifies that products are stored and shipped at correct temperatures
- Protects the value of products in storage and during transport

PACK AND SEA

Pack and Sea is a company founded by crate management companies from 10 Danish fishing harbours.

The 10 harbours are: Skagen, Strandby, Hirtshals, Hanstholm, Thyborøn, Thorsminde, Hvide Sande, Bønnerup, Grenå and Gilleleje.

The idea behind Pack and Sea is to equip the fish crates with RFID tags to give the crates unique numbers in order to lighten the administration of the crates and to to relieve the tenant of the responsibility of the rented crates when they are handed over or returned to the crate washing maschine.

The tracking of the contents/fish will enable the fishing industry to live up to the demands from both the authorities and the consumers. Consumers' trust in food safety, quality and sustainability will hopefully give fish a stronger market position.

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".

"The system has been relatively easy to launch as the fishermen have been very open to the new idea and are able to see the benefits of having identical fish crates, identical prices and having all administration at one place. Furthermore, the fishermen can see the possibilities in tracking the catches and thereby contribute to a higher quality and ensure food safety" he continues.

Knowledge

Together, Pack and Sea and Lyngsoe Systems have a wide knowledge of embedding and attaching RFID tags to transport assets. The two companies are therefore able to advise others on similar projects and provide the service of attaching the tags to the assets. This is especially when it comes to RFID tags that have to be waterproof or have to be mounted on plastic assets.

Bent Kirk says "During the process of equipping the crates with RFID tags we have achieved various 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 simular process with their transport assets or other items."

Bent Kirk, Managing Director of Pack and Sea