

**The Portland Fish Exchange automates inventory management and daily auctions with SonicMQ<sup>®</sup> and OpenEdge<sup>®</sup>.**



**CASE STUDY**

**CHALLENGE**

The organization's existing legacy inventory management application was costly to manage and lacked the flexibility required to meet the needs of the business.

**SOLUTION**

The Portland Fish Exchange automated its inventory management of fresh fish and its daily auction using applications based on Progress<sup>®</sup> SonicMQ<sup>®</sup> and Progress OpenEdge<sup>®</sup> developed by Progress Application Partner DC Systems.

**WHY PROGRESS<sup>®</sup> SOFTWARE**

Progress solutions would increase operational efficiency and provide the reliability and availability necessary to support online auctions.

**BENEFIT**

The Company has realized tremendous productivity gains, reduced administrative functions, expanded its business and expects a full return on its investment (ROI) within four years.

The Portland Fish Exchange is owned by the City of Portland, Maine and managed by a Board of Directors representing seafood buyers and sellers as well as city residents and government leaders. Its primary function is the offloading and auctioning of seafood. Commercial fishing vessels are offloaded in the early morning, and employees sort each catch by species of fish and market size. Each catch is then weighed and arranged in the facility's refrigerated warehouse for inspection. Buyers arrive throughout the morning to inspect the quality of the day's catch and an auction is held mid-day.

The organization had a legacy inventory management application in place but was frustrated by its lack of flexibility and expensive support costs, so management evaluated alternatives and selected and deployed applications from inventory management experts DC Systems, Inc. that are based on the Progress OpenEdge business platform that communicates in real-time using the SonicMQ, the industry's most robust and resilient standards-based enterprise messaging system. The new applications were selected because they would allow the Portland Fish Exchange to increase operational efficiency and help the Exchange better support the needs of buyers and sellers.

"Our legacy inventory application is a leader in the fishing industry, but it never provided us the productivity gains we wanted and we relied on manual data entry," said Bert Jongerden, General Manager of the Portland Fish Exchange. "We needed a way to better manage our inventory and share that information with buyers and sellers, and we wanted a way to expand our market by creating daily online auctions."

**BAR CODING THE DAILY CATCH**

The sellers are about 100-125 boats each year, and the buyers are largely seafood wholesalers supplying supermarkets and restaurants. About 90 percent of Maine's groundfish are sold through the daily auction, and the Portland Fish Exchange moves between ten and 20 million pounds of fish annually. Groundfish—including cod, flounder, and pollock—are largely sold throughout New England, and the Portland Fish Exchange wanted to expand its market to address potential buyers throughout the eastern United States.

The previous process for preparing fish for auction was time consuming and labor intensive. The Portland Fish Exchange has two piers, and is sometimes unloading fish from four boats at the same time. Workers would unload the fish from each ship, sort and weigh the inventory and stage it in the 19,000 square foot refrigerated warehouse for inspection by buyers. Previously, information on each catch was recorded manually on the piers and then inputted into the database. Because of the many steps in this process, the Portland Fish Exchange manually double-checked the data to ensure accuracy, which required the organization to virtually close down for about 45 minutes every day.



“We have unique inventory requirements, and DC Systems tailored SeaTrak and Auctioneer to our needs. We’re able to run the applications without the need for an internal DBA, and the Progress technology and DC Systems applications provide the reliability, flexibility and availability we need to support an online auction seven days a week.”

— Bert Jongerden  
General Manager

The Portland Fish Exchange

“The 2002 Farm Act places rigid reporting requirements on the seafood supply chain, and we have to be certain each day that the information we capture is accurate and clearly reported,” said Jongerden. “We track the weight of each lot and the ship that delivered it and generate reports to the National Marine Fisheries Service so they can safeguard the food supply and enforce regulatory requirements.”

Manually tracking information on each catch and generating the reports was a major effort for the organization. Management considered customizing its existing application to better automate data collection and information sharing, but concluded that it would be less expensive and more efficient to start over with a new solution. The Portland Fish Exchange issued a request for proposals and carefully evaluated alternatives before selecting a new auctioning application from DC Systems supported by an established inventory management system and the use of emerging technologies—including bar coding and enterprise messaging.

## INVENTORY MANAGEMENT

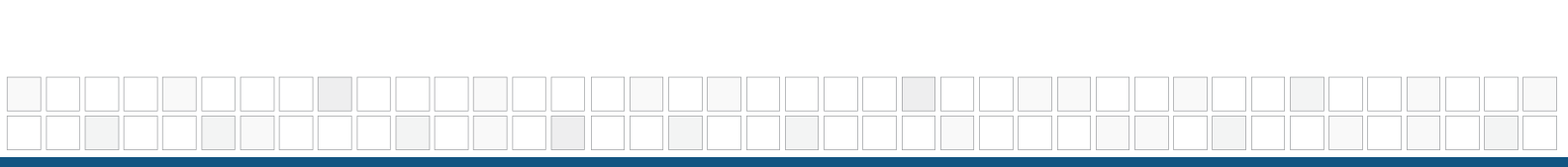
DC Systems is a Progress Application Partner and developer of Distribution Center Allocation Manager (DCAM), a proven inventory control system that directs the flow of goods throughout a facility using barcode labels and wireless networking technology.

“We hadn’t even considered bar coding but DC Systems proposed an innovative solution to our problem of improving productivity and information sharing,” said Jongerden. “DC Systems understood our inventory process and recognized we had unique inventory requirements. They understood how important it is for us to accurately and efficiently capture and share information every day, and unlike other alternatives we considered, DC Systems recommended the use of bar coding on the docks to capture information.”

The Portland Fish Exchange had considered alternative solutions to automate data collection, including ruggedized PCs that could be deployed on the docks. “But manually entering data at a pier is likely an error-prone process,” stated Jongerden. “DC Systems understood our data collection, communications, inventory and warehousing requirements and proposed an innovative solution that was very appealing to us. Bar coding not only saved us tens of thousands of dollars in capital equipment purchases, it also allowed us to increase data collection accuracy and employee productivity. Employees never have to touch a keyboard to enter information, and they can do their jobs on the piers without worrying about keying in data.”

DC Systems had recently developed its SeaTrak application, which is based on DCAM but customized to support the needs of the fresh fish industry. DC Systems deployed SeaTrak and selected wireless handheld scanners that communicated with the Exchange’s existing scales. The upgraded scanner/scale interface would be used at the two piers where employees unload fish from incoming boats. After unloading the fish, employees now sort it by species and size, weigh it on a scale and print bar code labels for each container of fish.

The scanners and scales send real-time messages to SeaTrak, which runs OpenEdge on a server inside the warehouse, and inventory is scanned as it is moved from the docks to the refrigerated warehouse. The Portland Fish Exchange gains immediate access to updated information on available inventory, and has dramatically improved productivity and reduced the volume of paperwork required to track and manage inventory every day.



The containers of fish are then moved off the piers onto a staging floor and a processing room, and all movements throughout the workflow are tracked using messages sent over the SonicMQ to the OpenEdge business platform.

Using SeaTrak, the Portland Fish Exchange is able to easily maintain its inventory of 5,000 totes—plastic fish boxes that hold up to 100 pounds of fish. Prior to using SeaTrak, managing these containers was a laborious project of counting and maintaining spreadsheets. With SeaTrak, the process has been completely automated. As the container lots of groundfish are weighed on the pier, Exchange employees bar-code label each tote with specific information as to species, unload date, weight and vessel name. After the auction is completed, the totes are then assigned to the appropriate customer, and during the shipping process the system pushes any relevant information directly into the company's financial management system.

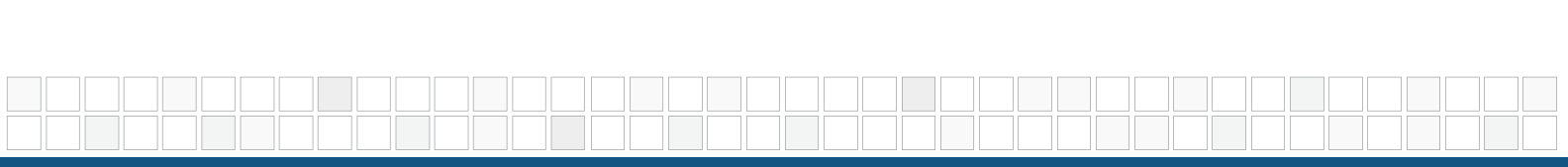
Customers also benefit from what Jongerden calls a “mini version” of SeaTrak that they can access from their own office. It allows buyers to see what vessels are hailed through the course of the week, what species are coming across the dock, and even provides access to some real-time information as the boats are unloaded. Customers can also access grading information. “For instance if I’m a buyer of fish in New Bedford and I’m sourcing my product out of Portland, I can hire a person here at the Exchange to create grades. Just like meat, fish has varying degrees of quality. As a customer is buying fish online, the system will provide detailed information about the species, lot and grade,” explains Jongerden.

According to Don Hills, President of DC Systems, “The supply chain for fresh fish has some unique attributes that need to be effectively managed, and a backbone network is needed to transport real-time information. Lot sizes vary substantially each day, and the inventory has a very short lifecycle, since most of it is unloaded, sorted and weighed, graded, auctioned, sold and transported in a single day. We knew that a powerful database and real-time messaging were keys to dramatic productivity gains, and bar coding was the most efficient means of tracking items throughout the daily workflow.”

## **AUTOMATING THE AUCTION**

The Portland Fish Exchange also selected the Auctioneer application from DC Systems, which is linked to SeaTrak and supports Internet-based auctions. Only pre-approved buyers are allowed to bid, and graders assess the quality of each lot of fish. This information is stored in SeaTrak and available to approved buyers via the Web.

The auction is held at the facility, and buyers tunnel into a Virtual Private Network (VPN) using thin clients communicating via SonicMQ. Sellers have the option of declining bid prices and selling fish privately after the auction is completed. When this occurs the Portland Fish Exchange can easily account for lots removed from the auction. “Other applications we evaluated did not support the ability of the seller to decline bids, and Auctioneer better supported the needs of our sellers in a very supply and demand driven market structure,” explained Jongerden. The Portland Fish Exchange has realized tremendous productivity gains from its investment in inventory management and auctioning infrastructure, and Jongerden expects an accelerated return on investment with a full payback within four years.



DC Systems worked closely with the Portland Fish Exchange to design the system so that it closely mimics the process customers and sellers were familiar with at the live shout-out auctions. “The learning curve for users has been extremely short because the online process is almost identical to the process people were used to at our live auctions. It has absolutely helped with user adoption,” says Jongerden.

The daily auction—which was conducted onsite by an auctioneer for the past 23 years—is now conducted entirely online. Buyers and sellers now have the option to buy and sell remotely; allowing more business flexibility and cost savings. And the Portland Fish Exchange has reduced its own costs, eliminating the need for an expensive professional auctioneer as well as a full-time position previously associated with manual data entry.

Once the auction process has been completed, the Portland Fish Exchange is also able to offer a reboxing service to its buyers using SeaTrak. Some buyers may have specific requirements such as having the fish de-headed prior to shipping. SeaTrak is able to manage those additional services and track the associated fees.

### **EXPANDING THE MARKET**

The online auction has allowed the Portland Fish Exchange to attract new buyers, expanding its business beyond Maine and across the Eastern seaboard. As fish stocks continue to drop due to ever-increasing federal regulations, many buyers are now required to source from numerous ports. Using the Auctioneer application a buyer in Boston can now purchase groundfish online through the Gloucester, Portland or New Bedford auctions. The Portland Fish Exchange can now easily reach new markets, and its buyers no longer incur the costs associated with having to pay for a full-time person to physically attend the auctions.

“I believe that there is an untapped market out there for us, particularly for site-specific areas,” says Jongerden. “With this system, we have the ability to auction product from another port other than Portland. We’re even contemplating being able to auction a vessel’s catch prior to landing here at the Exchange; the software would integrate very nicely into those different locations.”

According to Pierre Aubuchon, Jr., CEO of DC Systems, “Inventory management is a critical success factor for many industries, and automation of the Portland Fish Exchange makes the auction more efficient for buyers, sellers and for the Exchange itself. The SeaTrak application allows the Portland Fish Exchange to efficiently manage inventory and Auctioneer has allowed the organization to successfully move its daily auction online and explore new market opportunities.”

### **AUTOMATED REPORTING**

All of the data recorded on each catch is stored in the OpenEdge database, and the Portland Fish Exchange also tracks which boat supplied each lot, the price paid for each lot and the disposition of the fish. Reports are automatically uploaded to the National Fisheries Service, eliminating the need to manually generate reports.

“Our reports have to be extremely accurate, and in the past this was a problem because so much of the data was entered manually,” said Jongerden. “Information was recorded on paper at the piers and then keyed into computers in the office. Keyboarding errors and transcribing errors occurred regularly, and we wound up double-checking all of our numbers to ensure accuracy. Now, we capture accurate information the first time and automatically track the progress of each lot. We can easily generate customized reports and more efficiently comply with government regulations for reporting.”

Pricing reports are generated daily and posted to the Portland Fish Exchange Web site, and SeaTrak includes flexible reports that can be easily configured and generated to support the information needs of management, buyers, sellers, and regulators. SeaTrak also provides end-to-end lot tracking and standard reports for Country of Origin compliance.

### **MOVING ITS BUSINESS FORWARD WITH RELIABLE, FLEXIBLE TECHNOLOGY**

“DC Systems sat down with members of our organization and went through our operations procedures in excruciating detail,” said Jongerden. “We have unique inventory requirements, and DC Systems tailored SeaTrak and Auctioneer to our needs. We’re able to run the applications without the need for an internal DBA, and the Progress technology and DC Systems applications provide the reliability, flexibility and availability we need to support online auction.”

In the near future Jongerden says the organization hopes to also integrate SeaTrak with another program called Bluefin which they use to manage vessel trip and landing reports. “We are hoping we can export the data directly from SeaTrak into Bluefin to eliminate one more point of manual data entry. It is absolutely critical that this information is exact, otherwise we could end up closing a fishery because we are over-reporting it.”

According to Jongerden, today virtually all of the Portland Fish Exchange’s business processes are now run through its DC Systems applications. “The systems are so flexible that they easily integrate with our existing applications and support any additional requirements or change. DC Systems has been a true partner for us. They really listen well to what our needs are, and they have been very cooperative and creative about developing the right solutions and getting those solutions up and running for our business. They are terrific to work with and I am sure that as our needs evolve and change they will be there to support us each step of the way.”

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### **ABOUT PROGRESS SOFTWARE**

Progress Software Corporation (NASDAQ: PRGS) provides application infrastructure software for the development, deployment, integration and management of business applications. Our goal is to maximize the benefits of information technology while minimizing its complexity and total cost of ownership. Progress can be reached at +1-781-280-4000.

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