

Towards a combined ERP/TOS solution

Through a series of acquisitions, the port enterprise resource planning (ERP) system originally developed by WM-data of Denmark has become integrated into the familiar Microsoft software environment.

WM-data originally developed its FlexPort and FlexShip ERP products in the late 1990s by adding industry specific functionality to the Axapta software developed by Damgaard Data A/S. In 2000, Damgaard merged with Navision Software A/S, and the merged entity was acquired by Microsoft Corporation in 2002.

The Axapta product is now known as Microsoft Dynamics AX and is Microsoft's flagship ERP software system. Since developing FlexPort and FlexShip, WM-data has itself been acquired and is now a division of LogicaCMG, a major IT house with over 40,000 staff worldwide.

Wide functionality

Microsoft Dynamics AX includes standard ERP functionality such as accounts payable/receivable, inventory management, project management, resource management, customer relations management and human resources. FlexShip and FlexPort overlay port and shipping specific functions such as bookings and call management, container services, voyage calculations, port expenses, third party vessel services, agency fees and freight inventory and management functionality.

Indeed, the functionality is too extensive to list. There are, for example, more than 1000 calculation methods for services such as warehouse rent, crane usage and berthing fees. Any process or event

The WM-data division of the LogicaCMG group is developing a comprehensive port management tool on the Microsoft AX platform by adding graphical planning functionality to its ERP systems for ports

such as a particular vessel call or a maintenance item can be identified as a "project" and reports generated showing all cost and revenue figures, equipment used and manpower requirements.

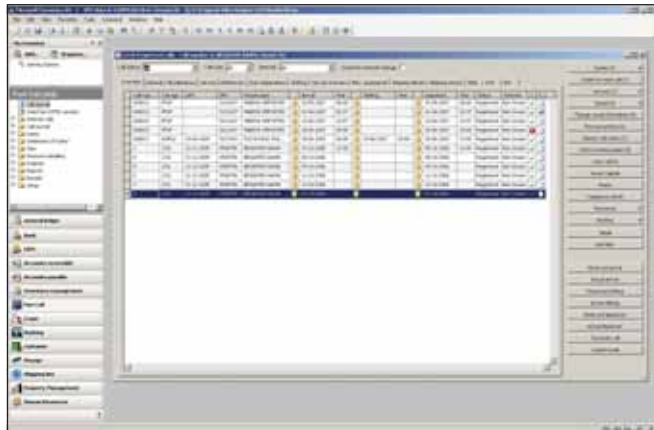
Container position information and status can be linked to a specific booking, shipper or shipping line, bringing together operational and business processes. Another product, FlexProperty, is an ERP solution for handling lease contracts such as those managed by landlord port authorities.

Strong presence

WM-data has a strong presence in Nordic and Scandinavian ports and shipping where customers include Oxelösunds Hamn AB, Hirtshals Havn, Arhus Havn and Odense Havn. Customers elsewhere in Europe include LBH Shipping and Europe West Indies Line in Rotterdam and Port Kembla in Australia.

In attracting additional clients, WM-data is trying to leverage two key advantages in particular - the cost competitiveness of its Flex products versus other ERP products and the Microsoft environment. The current base price for FlexPort is €17,000 for a site licence and €1,000 per user. The maintenance fee is 16% of the list price, Microsoft's standard for its ERP products.

Microsoft has developed Dynamics AX to integrate into its



Screenshot showing the Microsoft AX ERP system with FlexPort functionality developed by WM-data

standard Enterprise Service Bus capabilities. Simply put this means it uses the same infrastructure as other Microsoft products, such as the .NET framework, Sharepoint and BizTalk server to integrate applications and processes.

The latest version of Dynamics AX is closely integrated with other Microsoft products and the user interface is the same format as Microsoft Outlook. Data can be input, exported and reported in standard applications such as Word and Excel.

ERP integration

The basic theory behind an ERP system is to integrate all data and processes of an organisation into a unified system. Leaders in the market such as Oracle and SAP have

different advantages in different industries and it is not easy to identify the market leading ERP system within the port market.

What all systems seem to have in common, however, is that they do not have the graphical planning tools for ship and yard planning - the core operational functionality needed by container terminals. Because this is a relatively niche application - the industry leader Navis has around 200 port customers - port terminal operating systems (TOS) have developed as a separate industry.

WM-data channel manager Ole Andersen says WM-data is now developing graphical planning functionality for FlexPort, similar to that found in port TOS products. In doing so, however, it

faces the same problem of the comparatively small customer base and Andersen says it will have to move to a module-based pricing model for the new component. Optimisation tools are a key aspect of TOS functionality and WM-data is currently developing its own optimisation engine and expects to have an announcement about a new product in mid 2008.

End-to-end solution

Although there has always been some overlap between "traditional" TOS software and ERP systems, for example in billing and invoicing functionality, this is believed to be the first time a total terminal management system has been attempted from within the one product by the one supplier.

P&O Ports' Integrated Stevedoring Information System (ISIS) aimed to provide a similar end-to-end solution, but took the approach of integrating different products from different suppliers. Terminal operators will always say the only thing standard between container terminals is the size of the containers and different operating practices, Customs regulations etc are an obstacle to such a "universal" operating system.

WM-data's Henrik Danielsen, however, believes it is possible to have a single "set" of software that suits ports all around the world. Different practices can be incorporated into the standard system and configured for each site or added as a customer modification.

It is not just large stevedores that are interested in this approach. Smaller ports are also trying to rationalise their IT structures. In a presentation at TOC in Hong Kong this year, Parke Pittar from

the Port of Nelson in New Zealand discussed how Port Nelson has integrated its operational and business process software.

Nelson was running separate harbour management, statistics, finance, payroll and TOS systems and its management reporting was based on spreadsheets compiled from non integrated systems. Nelson took a different route to what WM-data intends for FlexPort and decided to base its IT system around its Jade Master Terminal (JMT) TOS. It licensed the harbour management functionality within JMT and replaced its aging finance and payroll systems with a Navision Finance solution and the PayGlobal payroll software.

The three systems are tightly integrated via a data warehouse that holds all the data for the three applications. Jobs are only entered once into the JMT system and finance, payroll, cargo and ship management information is available from a single desktop application.

Service not wanted

WM-data has talked to several ports about the possibility of providing FlexPort via the software as a service/application service provider (ASP) business model, but Andersen says it has yet to find any interest from customers.

While software as a service seems ideal for smaller ports that have more limited resources, such customers are in fact unwilling to move away from the traditional installed software model.

Andersen says there is no technical difficulty delivering Flexport on a service-based model and thinks there will be a market for it in the future, but WM-data is not pushing it at this stage. □