



Ports Company Navigates Business Process Challenges with Microsoft Office SharePoint Server 2007 and InfoPath 2007

Overview

Country or Region: Australia
Industry: Shipping

Customer Profile

Formerly part of P&O Ports, the Australian division of DP World operates container terminals in Adelaide, Brisbane, Fremantle, Melbourne, and Sydney.

Business Situation

Having been acquired by DP World in 2006, the Australian operations of the former P&O Ports was given the power to devise its own national IT infrastructure. A solution was needed to manage and standardize business processes across all five ports, including port security, incident management, and document collaboration.

Solution

DP World devised forms in InfoPath 2007, using InfoPath Form Services within SharePoint for browser-based delivery. Nintex Workflows were used to extend SharePoint's workflow capabilities and standardize business processes.

Benefits

- Better regulated business processes.
- Reduced liabilities for port incidents.
- Greater accessibility to safety manuals.
- Improved collaboration among company professionals.

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Derrick Wheeler, National Manager, Information Technology, DP World, Australia

When Dubai-based DP World acquired P&O Ports in 2006, the company's Australia Region was given the opportunity to develop its own national information management system. The region's priority was to improve the Sydney office's control over critical business processes at the company's five domestic container ports. In late 2006 and early 2007, DP World implemented a suite of Microsoft products centered on the enterprise edition of Microsoft Office SharePoint Server 2007. By designing web-based electronic forms with InfoPath 2007, publishing them using InfoPath Form Services 2007, and generating workflows in SharePoint, DP World created forms-based processes that were accessible from Microsoft Office and a browser. As a result, staff were able to manage and track key port operations processes wherever they worked. Improved document management also resulted in better collaboration between civil engineers, enhanced port security, and improved version control over critical port safety manuals and procedures.



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Information Technology, DP World, Australia

Situation

DP World is one of the world's largest marine terminal operators, with 45 ports in 29 countries*. The company employs nearly 30,000 staff, handling more than 43 million 20-foot containers or equivalents per year. In 2006, the company acquired P&O Ports and its five Australian container terminals – in Adelaide, Brisbane, Fremantle, Melbourne, and Sydney.

At the time it was acquired, P&O Ports was about to roll out a new global IT system. This proposed system was put on hold, and with limited recent investment in other IT, the company's existing infrastructure was not up to date.

“We had three main problems,” says Derrick Wheeler, National Information Technology Manager, DP World, Australia. “First, our desktop infrastructure needed a refresh. We had a Microsoft stack, but with an old version of Exchange, and an old SQL server. Secondly, as a consequence of the acquisition, we lost a lot of in-house technical skills. Thirdly, we needed a new Australia-focused IT architecture because of the regional strategy from head office.”

DP World's IT requirements reflected the complex and varied operations of its ports. Its greatest challenge was in document management, with some critical business process that were ill-defined.

“Lots of our documents and business processes were kept on disparate systems,” says Andrew Hertsch, Solutions Architect, DP World. “For example, a lot of our port safety manuals were kept on a web application, but they weren't particularly easy to find.”

Another key requirement was managing port access, which had become a sensitive and important responsibility. The company

needed to provide access to numerous contractors or port visitors as well as regular employees who arrived for shift work at all times of the day and night. Many visitors required government clearance, yet access was managed via ad hoc spreadsheets, which security guards would update as information became available.

Similarly, a paper-based process for reporting damaged containers exposed the company to undue insurance liabilities.

“Paper reports of damaged containers were posted in pigeon holes at each port, and the company had to hunt them down if a claim was made against us,” says Wheeler. “Claims for damage frequently become quite aggressive, but we had no visibility, no audit trail, and no back-up to buttress our defense. Since we have about 10 reports of damaged containers per site per day, this represented a huge process inefficiency and exposed us to significant financial liabilities.”

Finally, the company wanted staff in different locations to be able to collaborate more easily. Civil engineering projects were frequently undertaken at the company's ports but, according to Hertsch, there was no central repository for design drawings.

“The result was that as many as 20 different versions were being emailed between staff,” he says.

As P&O Ports, the company had already implemented Microsoft SharePoint 2003. However, according to Wheeler, this had been done as a ‘proof of concept’, but had not yet been fully implemented across the enterprise, nor had its potential been fully explored.

* As of 1st August 2008

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Derrick Wheeler, National Manager,
Information Technology, DP World, Australia

Solution

As a newly absorbed entity in a global group with responsibility for its own IT, the Australia Region of DP World had to move fast. Since its ports and regional office already used Microsoft products, Wheeler’s instinct was to see whether a combination of Microsoft products could help systemize core business processes.

“The logic of going with Microsoft was based on our ability to maintain whatever we put in place,” says Wheeler. “It’s comparatively easy to source good Microsoft skills and we wanted the flexibility and efficiency of a solution that was readily maintainable.”

With a leaner department, it was also important to rationalize vendors and skills to help manage the various products from multiple vendors. Wheeler contacted Microsoft directly to see whether its product range could be adapted quickly to DP World’s information needs.

“They needed consistency between the ports,” says Ian Palangio, Business Productivity Solutions Specialist, Microsoft Australia. “They also needed a ‘self-contained’ solution, because after the acquisition they needed to operate as a single IT entity.”

Wheeler initially believed the company would have to invest separately in a collaboration tool, a document management system, and an intranet to manage the different information, documentation, and business process requirements.

“However, when I saw SharePoint 2007, I realized that it could meet all three requirements,” he says. “Most importantly, Microsoft assured me that there was an InfoPath functionality within SharePoint that would mean anyone could fill in the forms

regardless of whether they had Microsoft Office on their desktop.”

Says Palangio: “With InfoPath Form Services, – a component of SharePoint 2007 – people can fill out forms through a web browser or client application. This was ideal for DP World, because there were so many port-based processes that were forms-based.”

Another advantage of SharePoint 2007 was the strength of workflow development work undertaken by Microsoft’s technology partners, in particular, US-based Nintex. DP World could extend SharePoint’s workflow capabilities by using Nintex Workflow to power InfoPath forms.

“Nintex helps regular operational staff create workflows,” says Palangio. “By making complex functionality simple to use, Nintex pushes sophisticated workflow features towards the end users. The result is that more people in the business can create workflows without having to cut code.”

Starting at the end of 2006, the Australia Region of DP World implemented Microsoft Active Directory and Microsoft Exchange 2007. Roughly 700 desktops were upgraded to Windows XP in preparation for Microsoft Vista, though because many jobs are done in shift work, the number of staff affected was over 1,000. In addition, the company upgraded to Microsoft SharePoint 2007 and Microsoft Office Communicator, and deployed Microsoft Dynamics CRM to help organize communications with shipping lines and also to assist Human Resources.

By early 2007, the software packages had been installed at all the ports and the Sydney office, and Wheeler and his team began to develop SharePoint workflows, concentrating first on a system to help log and track damage to containers.

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Derrick Wheeler, National Manager,
Information Technology, DP World, Australia

Benefits

By upgrading its desktop and operating environment with the latest releases of Microsoft products, DP World has lowered its support and maintenance requirements and increased management agility. Business processes are more transparent and efficient, saving the company money and reducing commercial, legal, and security risks. As a result, the Australia Region of DP World has emerged as a technologically self-sufficient unit of the global ports company.

Lower liabilities

DP World used InfoPath 2007 to design forms that can be filled out by port operations staff to record damage to containers as soon as they are offloaded or moved.

“We designed the forms and included drop-down menus with tick boxes to make it easy for our staff to enter the data,” says Wheeler. “This means that we can record when and where damage occurred or was first noted, and attach photos straight to the report, providing valuable evidence.”

SharePoint workflows direct the container damage report forms to the appropriate department, and the basic incident data never needs to be re-entered on any of the company’s systems.

“Different types of damage are accorded a particular code, which ultimately feeds through to accounting,” says Wheeler. “The forms also flow into our CRM system, so a report becomes a claim and then becomes a case if the matter becomes one of legal dispute.”

The combination of SharePoint and the Presence technology in Microsoft Office Communicator means that staff in the Sydney office can see exactly where a damaged container form is in the workflow process and immediately identify whether the person

responsible for processing that incident is available for contact. The result is that head office staff can get immediate answers to matters they have to manage.

In addition, because information on damaged containers is centralized, the company can see clearly the port in which damage to a container originally occurred. This helps the company avoid the risk of incurring multiple claims against a single incident, which is a liability when damaged container reports accumulate at a rate of 10 per day.

“Ultimately, this lowers our insurance risk, especially when you consider we are talking about roughly 50 cases per day,” says Wheeler. “There is a cost gain in the efficiency with which we log and track all damaged container cases, and we can reconcile claims much faster. And if lawyers need to track through events, then we can search and find the information we need.”

Better tracking

Impressed with the success of InfoPath and workflows in tracking damaged containers, DP World’s staff have started to establish workflow-based business processes for many areas of the business.

“Often we don’t understand the finer details of a business process,” says Wheeler. “Workflows provide a method of self-documentation and process organization, as port staff develop the workflows that are required for them to complete any business process.”

Because DP World deployed SharePoint InfoPath Form Services as well as Office-based InfoPath, forms and workflows can be accessed and operated by any staff with access to a browser. The result is that across all its ports, there are few activities that staff cannot track on InfoPath forms.

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“This means that we can actually document processes, and then start asking questions such as ‘how long does it take’ and ‘how much does it cost?’

“However, it means that SharePoint becomes a tool to enable us to analyze the efficiency of internal processes. We think that we can add more than three per cent to our bottom line by improving the efficiency of our internal processes.”

For example, DP World has begun to automate its Site Visitor Registry. Documents on SharePoint provide a central location for registering proposed visitors, recording the purpose of visit, and establishing security clearance.

“Security guards used to spend 2–3 hours every day reviewing the list,” says Brett Clarke, Solutions Architect, DP World, Australia. “Now it’s done on one file, and it is accessible to anyone that needs to know.

“The company knows exactly who is due to come in, what form of ID they need or have, whether that person has government clearance, and who is assigned to escort them while they are at the port. We can also keep track of them while on-site, and can log when they depart.”

Content management

By establishing document libraries within SharePoint, DP World has also been able to organize critical documents in a way that means they are accessible and up to date.

“SharePoint is the right tool for our information management job,” says Wheeler. “Historically we used email for document storage. This was inefficient because there was no version control, and no one to decide when a document was redundant. Now we can store set policies in standard places, and

our staff know that they are looking at the right versions.”

DP World’s management of safety procedures improved immediately. These documents, frequently updated, stipulate the correct course of action to be taken by port staff in the event of particular incidents.

Says Clarke: “Now, if an accident occurs with a container that has bio-chemical contents, staff can instantly get hold of the correct manual that tells them what they must and must not do.”

Similarly, DP World’s contracts and legal documents – including leases – are centrally collated and readily accessible.

“In the past, we found Quay Line Lease documents hard to manage,” says Hertsch. “These are complex documents that precisely detail customs, security, and quarantine obligations. Now we know when they are coming up for renegotiation, and we are properly prepared. We also can manage the service level agreements within the documents more effectively.”

Lastly, SharePoint has improved project management for civil engineering projects at DP World’s Australian ports. Engineers are able to share drawings related to all projects, and work more efficiently irrespective of where they are based.

“SharePoint has made a big difference to how our staff can collaborate,” says Wheeler. “From that perspective, it’s a very nice, neat package.”

Improving the business

The company believes that its integrated workflow-driven approach will enable the Australia Region of DP World to develop consistent and costable processes across all ports.

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: www.microsoft.com

For more information about DP World products and services, call +61 2 9364 8400 or visit the Web site at: www.dpworld.com

For more information about Nintex products call (425) 425 3818 or +61 39606 9222 or visit the Web site at www.nintex.com

Says Clarke: "This means that we – the IT department – can be more proactive. We can help identify and drive efficiencies. We simply have more time to make the business work better."

"Ultimately, that makes us a much more impressive business," comments Wheeler. "In Australia, we have put in place a comprehensive and very scaleable solution. It will almost certainly catch the attention of other parts of the DP World group."

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Software and Services

■ Products

- Microsoft Office SharePoint Server 2007 Enterprise Edition
- Microsoft Office InfoPath 2007
- Microsoft Office InfoPath Form Services 2007
- Microsoft Active Directory
- Microsoft Exchange Server 2007
- Microsoft Dynamics CRM

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Document published July 2008

* As of 1st August 2008