



THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY

ORGANIZATION:

U.S. Maritime Administration (MARAD)

PROJECT NAME:

Virtual Office of Acquisitions (VOA)

Summary

When the U.S. Department of Transportation Maritime Administration (MARAD) needed to reduce its overhead so more resources could be dedicated to improving the nation's maritime transportation, it implemented the EMC Documentum enterprise content management system. Through this solution, MARAD has successfully established an infrastructure that can efficiently and effectively manage all of the agency's enterprise content, from acquisition proposals to contracts. This has cut the time required for bid and proposal management of large acquisitions and contracts in half. It has also saved thousands of hours of personnel time, both for the agency and companies bidding on contracts. MARAD's new system also aligns with the Federal Enterprise Architecture (FEA) initiative to improve key processes, such as electronic government (e-Gov), and complies with recordkeeping regulations of National Archives and Records Administration, Department of Transportation, and other U.S. government entities. With each new application, its new enterprise content management foundation is saving MARAD more time and money—and improving the agency's ability to fulfill its mission.

Introductory Overview

As the world's largest trading nation, the United States imports and exports about one-fourth of all global merchandise. The largest parts of this global merchandise – more than one billion tons of cargo – are moved from one country to another by water transportation. Another billion tons of cargo is distributed via water within the United States and serves more than 90 percent of the nation's population. By the year 2020, inland waterway traffic will significantly increase as U.S. and foreign trade is predicted to grow by more than half its current tonnage.

Reporting to the U.S. Department of Transportation, Maritime Administration (MARAD) is the government agency mandated with strengthening the U.S. maritime transportation systems—including infrastructure, industry and labor—to meet the economic and security needs of the nation. Recently, MARAD developed a strategic plan to maximize the agency's technology investment so it could devote more time to making the nation's water transportation system more efficient, cleaner and secure. The initiative also supports the U.S. Office of Management and Budget (OMB)'s Federal Enterprise Architecture (FEA), a business-based, common frame-

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work for improving key government areas, such as budget allocation, information sharing, performance measurement and electronic government (e-Gov). Lastly, the initiative is designed to meet the goals of the President's Management Agenda (PMA) of making information more available to the public.

Before this project, the agency had a manual, complex, time-consuming bid and proposal process for selling obsolete ships and spare parts or outsourcing ship-related services. As part of its strategic plan, MARAD set out to find a solution that would improve the agency's technology inefficiencies and organizational processes. In addition, MARAD wanted this solution to help it more easily comply with recordkeeping regulations issued by the National Archives and Records Administration (NARA), Department of Transportation and other U.S. government entities. MARAD also wanted to integrate document management, record keeping, bid and proposal management into one solution so that it could eliminate the time its IT organization required maintaining each product individually.

After researching the different options, MARAD decided to implement the EMC Documentum enterprise content management platform. The agency appreciated that in addition to document management and records management, Documentum also had publication services, built-in business processes, workflows, a collaboration toolset and more. To top it off, all of these components were already integrated in a common infrastructure that linked to the FEA model. The FEA model allows the OMB to better understand the inner workings of MARAD and to identify sharing opportunities with other agencies.

To improve collaboration even more, MARAD replaced shared Microsoft Exchange folders and paper files with EMC Documentum eRoom. Documentum eRoom is a secure, highly flexible, web-based work space for geographically distributed workers to collaborate more efficiently. In addition to sharing processes and version-controlled documents in a secure, central, easily accessible place, MARAD eRoom users rely on built-in eRoom project management tools, such as group calendars, automatic e-mail notification, and issue and resource tracking to further facilitate collaboration.

MARAD hired EMC Documentum services partner Stanley Associates to help the MARAD's lean IT staff develop and implement a centralized enterprise content management architecture that could meet the agency's diverse content management needs now and in the future. As of late 2005, approximately 300 MARAD employees were using the EMC Documentum system to manage enterprise content. The agency's 16 eRooms were also overseeing different programs or projects, such as agency certifications and accreditations, guaranteed loans, capital planning and investments.

Benefits

One of the first applications developed for the new Documentum content management infrastructure was the Virtual Office of Acquisitions (VOA). It has completely changed the way MARAD employees work. VOA is a paperless system that manages the bid and proposal process from bid solicitation through award notification and contract administration. The application was built in accordance with the FEA business reference model and complies with the PMA's goal of making information more accessible to the public.

Previously, the mostly manual bid acquisition process involved posting a bid solicitation at



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www.FedBizOpps.gov (the website for federal government procurement bids over \$25,000), receiving and validating proposals and evaluating and comparing proposals--each with its own unique stipulations and qualifications. The process also included writing and awarding the final contract filing copies in different locations and so on. These manual tasks created mountains of paper and consumed literally hundreds of hours of personnel time, internally as well as for those companies bidding on the acquisition.

Once a contract was awarded, MARAD staff spent additional days managing the documents resulting from the transaction. This time-consuming error-prone process involved making multiple copies, sending them to different entities, amending them, sending them again, and keeping track of different versions. If a contract was contested, additional weeks or even months could be spent producing detailed reports to justify the agency's decision. All the time spent working on the bid and proposal process was time that could have been spent on more value-added activities to further the agency's mission.

Since deploying VOA, MARAD has cut the time spent on the bid and proposal process for major acquisitions in half. As a result, MARAD has much greater efficiency, control and accuracy through improved information sharing—another business area highlighted by the FEA business reference model—between MARAD and vendors as well as internal communications between contracting specialists, program managers and MARAD management. Furthermore, MARAD expects to reach its goal of reducing the entire bid and proposal cycle time an additional 25 percent before the end of 2006.

The new bid and proposal system also minimizes the impact of having an awarded contract contested by the vendors that were not chosen or from the public. In the past, when an award was disputed, not only could the contract be stalled for months, but weeks of otherwise productive time could be consumed with producing the thousands of pages of reports to justify the selection decision. Today, MARAD staff can produce such reports in minutes as well as supply auditors with requested information electronically rather than having to produce reams of paper. In addition, making contract documents available via the VOA has reduced the number of Freedom of Information Act requests.

Moreover, VOA has dramatically reduced the amount of IT support time required to integrate the many different technology products that the agency owned. The MARAD staff used to spend weeks of precious time integrating different technology products and resolving issues caused by redundant but not identical content. Now, MARAD's content management solution seamlessly integrates document management, record keeping, bid and proposal management and more. It has eliminated content redundancy and freed up staff time so that they can be productive on other projects that more directly improve the quality of maritime transportation in the United States.

The Importance of Technology

EMC Documentum enterprise content management software has allowed MARAD to significantly improve agency efficiency, content quality and associated business processes. With a single solution, EMC Documentum software allows the MARAD staff to collaboratively create, manage, deliver and archive the content that drives the agency's mission.

Through the VOA application, the bidding and proposal cycle time has been cut in half. The



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faster cycle time is a result of automating much of the multi-step bid and proposal process:

- After a bid solicitation is created in MARAD's contract writing system, which is integrated with the EMC Documentum system, a workflow component automatically deposits the solicitation in the VOA.
- VOA provides a link to www.FedBizOpps.gov and allows vendors to submit proposals electronically using online EMC Documentum-based .net forms.
- VOA automatically tags in XML the data contained in the proposals and stores it and the associated proposal documents in the EMC Documentum repository.
- Using EMC Documentum Web Publisher, a PDF rendition of each submission is then published for the vendor to validate.
- After validation, MARAD technical and cost evaluation teams use customized reports that help analyze and compare the proposals to the original solicitation and established source selection plan.
- Team members record their comments in online forms that the team lead consolidates into a final report provided to the selection official, who makes the official selections.
- Contract documents are created in the contract writing system and automatically stored in the EMC Documentum repository.
- VOA is used to electronically distribute final contract documents, eliminating the need to copy and mail large documents to multiple organizations, and allowing vendors immediate access to documents.

EMC Documentum eRoom is also important to this project because of the improved sharing, effective collaboration and security they provide. Documentum eRoom Enterprise, which provides native integration to the Documentum environment, links content in eRoom folders and automatically synchronizes the content in repository folders, regardless of which content server client is actually used. As a result, the MARAD project teams using EMC Documentum eRoom are significantly more productive and efficient than they were before. They no longer have to wade through an electronic dumping ground of files or worry about the security of documents on the server. In addition, they no longer have to experience the hassle and confusion resulting from emailing documents back and forth and attempting to track and consolidate comments from project participants.

As of September 2005, the agency had 16 eRooms managing different programs or projects, such as agency certifications and accreditations, guaranteed loans, capital planning and investments, and so on. Eventually, MARAD intends to have EMC Documentum drive all the content for its employee portal. Ultimately, all MARAD users will have access to all the applications, documents and communications they need from the portal. eRooms will be a major component of every user's portal workspace.

Originality

One of the exceptional aspects of the enterprise content management project is that it is not only making MARAD employees more efficient, but the external users of the system as well. Companies participating in the new acquisition process applaud it because it makes bidding on



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contracts and acquisitions easier and faster for them too. A company that won a ship manager contract (described below) credited the new system with saving its staff hundreds of hours putting together the winning proposal.

This project is also helping MARAD respond to the reality that nearly 70 percent of its work force is eligible to retire within the next five years, taking with them a lot of knowledge. This issue has now been addressed because current and historical documents are stored in a centralized Documentum repository that facilitates easy archiving and powerful search and retrieval. MARAD is also planning to scan an additional 400,000 archived paper documents into the Documentum repository, further increasing the amount of information that is easy to access and manage.

Success

This project has exceeded its goals and is saving hundreds of hours in the bid and proposal process for both agency and customers. For example, MARAD has used the VOA to award a number of very large contracts, including a \$2 billion contract for ship management services.

Iris Cooper, MARAD's Director of the Acquisition Department, said, "Using VOA has saved us hundreds of hours. For instance, the last time we solicited bids for a significant contract; two dozen employees spent 30 long days evaluating proposals. This time, with all of the data in an electronic format and customized reporting functionality, we were able to complete the evaluation phase in less than two weeks. In addition, 2,000 hours of agency personnel time were freed up for more value-added activities that lead to improved maritime transportation in the United States."

With VOA, MARAD is supporting e-Gov and other FEA initiatives. MARAD's e-Gov program relies on the Internet to make it easy for citizens and businesses to interact with the government, save taxpayer dollars and streamline citizen-to-government communications. Companies using the new system also appreciate that it makes bidding on contracts and acquisitions easier and faster for them.

This project has also exceeded the initial expectations because the agency keeps finding new uses for the Documentum solution.

Donna Seymour, MARAD's Chief Information Officer, said, "The EMC Documentum solution has become our development environment for all existing and future applications. It has given us the ability to re-use services and modules across multiple business functions. This has lowered our costs for development efforts and allows us to maximize our expertise in a flexible tool set that fulfills numerous needs. We are finding new ways to use Documentum every day."

For instance, one of the more recent implementations involves the Credit Portfolio Management eRoom, which facilitates the electronic receipt of financial statements electronically from obligors (companies receiving loan guarantees). Data can be tagged in XML, as is done now in the VOA application, and is used to automatically generate reports that help ensure compliance with loan terms and automatically notify the appropriate people when a loan needs attention. MARAD also plans to rely on eRooms to oversee OMB Circular A-123 internal controls tracking. Documentum implementations, such as eRooms, can be modified or copied to serve other content management needs at MARAD or at other federal agencies seeking to further implement e-Gov.



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Difficulty

The biggest issue MARAD had was overcoming the resistance to implement its Virtual Office of Acquisitions. MARAD's partners and vendors originally had security concerns and were not sure of how the online bidding and proposal system would work with their current processes.

The VOA project team overcame these issues by listening to what the vendors and partners had to say and developing a final solution that addressed their requirements. MARAD also spent time educating these companies about how the system would work and the benefits it would provide. The agency also gave demonstrations of the new system and showcased the features, provided examples, testimonials, and additional detailed information. Eventually, the vendors and partners felt comfortable with the new system and look forward to expanding their use of it as the time and cost savings continue to accrue.

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