GCN Award Winner for Government Agency IT Achievement - 2008

AGENCY U.S. Navy-Navy ERP Program

Project: The Navy Enterprise Resource Planning Program (ERP)

Nomination Submitted by: US Navy – Navy ERP Program

Following is the nomination letter submitted for this project, summarizing the project's accomplishments, the technologies used and innovative steps taken to achieve them, and the resulting impact the project had in improving the agency's efforts.

Accomplishments:
[Nature of challenge] The evolution of business management in the US Navy reflects the history of the organization, written in the necessities for independent autonomous operation of warships at sea in an era of limited communication. The Navy's traditional need for commanders who could exercise autonomy leading their commands in the operational, war fighting Navy began to confront the changing business requirements of a modernizing, growing Navy. Commanders were increasingly presented with requirements for coordination and synchronization of activities necessary to more efficiently and effectively manage the business needs.

The Navy was not and is not a business enterprise, but the ability to operate the financial, managerial, human resource, supply and maintenance activities of an increasingly complex and sophisticated enterprise would, properly executed, better serve the defense and maritime strategic mission of the Navy. Such an efficient and effective business operation would also allow the Navy to more precisely report to Congress and the American people the status of the resources entrusted to it by the taxpayers. Ever increasing improvements in communication, reaching a zenith in the digital revolution, began to provide opportunities to transform the business management affairs of the organization. New systems emerged providing the capability for financial transparency and total asset visibility in the "provider enterprise," Navy supporting organizations including, in large part, acquisition organizations known as the Navy's Systems Commands.

Those systems commands are faced with the substantial challenge to budget and staff for allocation,
engineering, purchasing, testing and evaluation of the ships, aircraft, and weapons systems the Navy requires to accomplish its mission. As the systems commands represent, together with the Manpower, Personnel, Training, and Education domains of the Navy, more than two-thirds of the allocated budget of the service, initially focusing the transformation of business affairs of the service in the systems commands is the most logical and efficacious approach to the challenge. Therefore, the Navy needed to organize all business procedures of the multi-billion dollar enterprise so they are

standardized across the provider enterprise and modernized to reflect the best practices of modern business concerns. The management capability needed also to provide financial transparency and total asset visibility to the leaders and managers of the several provider enterprise commands and to their leaders. Finally, the capability needed to do all that in a way which produces effective and efficient provision for the needs of sailors and logical and coherent reporting of the Navy's financial stewardship to the Congress and the American people.

[IT Solution] The Navy Enterprise Resource Planning (ERP) program has developed an acquisition, logistics, and financial client-server system residing in a single instance of SAP to provide integrated support to US Navy Operations. By using industry best practices and a commercial off-the-shelf (COTS) enterprise software product developed by SAP, Navy ERP has delivered the first of three major ERP system releases that provide an integrated business management system to modernize and standardize all Navy business process operations. Navy ERP will provide unprecedented management visibility across the Navy and enable increased effectiveness and efficiency resulting in better direct Fleet support and readiness. This first successful release (Release 1.0) was delivered to 15,000 users at the Naval Air Systems Command (NAVAIR) October 1, 2007. The new system integrates financial and acquisition management operations across NAVAIR and, when fully implemented and operating across the Navy, will upgrade, standardize, and integrate business services for 88,000 Navy users at four major systems commands in more than one hundred locations around the world. It will be one of the largest public sector ERP system implementations ever accomplished. The Navy ERP Program maximizes the use of COTS products and adopts commercial best business practices to transform the Navy's business operations. The Program is using an incremental deployment strategy to deliver such an immense capability efficiently. Configured increments will provide a logical, progressively complete set of functionality to scheduled deployment sites. Release 1.0 will address financial, personnel, supply, acquisition, and maintenance across the Naval maritime, aviation, nuclear, sustainment, and supply business areas. Release 2.0, the Navy's single supply solution, will manage the retail and wholesale aspects of the services' wide-ranging supply system. Release 3.0 will provide the management system supporting the intermediate level maintenance requirements for ships, aircraft and weapons systems across the service.

The system supports integrated processes, uses a single set of data, automatically distributes information from one entry to all parts of the process where it will be required, and makes the entire end-to-end information stream visible to users and managers with responsibility over the processes. The result is a business management system that uses and provides data that are consistent and understandable across the organization, and that the manager can report in any format required.

Duplicate tasks are eliminated, saving program dollars, and the simplified consistency of the business processes used to complete tasks dramatically reduces re-training hours, promotes increased skill levels inside the workforce, and results in more efficient overall operations. [What was innovative…] The Navy's ERP system is among the largest such implementations ever attempted in government or out. While ERP implementation protocols were available, none included the size or complexity demanded by a public sector defense organization. The Navy ERP team needed to take known, executable program planning models and expand them to meet extraordinary requirements, yet remain executable.

Preparing the product for delivery required more than 265 business blueprint workshops, over 1500 unique SAP product transactions, and over 200 custom reports, interfaces, conversions and enhancements to the standard ERP product. During the development of Release 1.0, program personnel executed more than 21,000 test scripts, tracked in excess of 1500 requests for configuration changes, converted 52.7 million objects in support of a series of 5 mock conversions, and loaded approximately 13.5 million data objects for the initial go-live with a 99.99965% success rate. The program team also built 14 web based courses and 65 instructor lead courses which were used to train 14, 000 initial end users. Each of these activities was more complex than any IT business operating system ever accomplished in the Department of Defense.

The Navy ERP Program's QA/Test Team was tasked with ensuring requirements were met from the blueprinting phase through Development, Test, and Evaluation (DT&E) and Operational Test and Evaluation (OT&E). The team achieved this task by executing detailed test scenarios that represented "a day in the life of the user," placing business processes end to end within the integrated solution, using all the required business interfaces and bolt-ons. Further, the QA/Test Team had to ensure that the total solution provided an effective and cost-efficient system for the Navy. The system testing included three test cycles, three dry runs, plus a successful User Acceptance Test and regression test. The system was well vetted to be executed with minimum possible disruptions without creating the false expectation of a perfectly seamless introduction, given the size and complexity of the undertaking.

The Navy ERP program is a Department of Defense Acquisition Category I AM Program and is among the largest public sector ERP system implementations ever accomplished. The technical requirements were immense. The total solution will provide the Navy an integrated solution for its Financial, Program Management, Supply, and Maintenance activities. The Navy ERP program assumed the System Integrator role in Calendar Year 2006. This proactive managerial change immediately mitigated risks associated with third party system implementation in a government/military environment. This acquisition approach ensured the government exercised full control over all phases of the program including the integration and development processes. It also facilitated a fully integrated

Work Breakdown Structure (WBS), Integrated Master Schedule (IMS) and Earned Value Management (EVM) system. The program also benefited from a corps of talented contractor personnel,
technical experts from across the country. The Navy declared the system had achieved Initial Operating Capability, an acquisition program development milestone, in May 2008.

Technology:
The Business Process Reengineering and transformation of the Department of the Navy (DoN), including modernization of information systems and recapitalization of business systems compelled the introduction of Navy ERP.
Re-engineered, leaner, and standardized business rules delivered by Navy ERP are a pre-condition for transformation. One key objective of the Navy ERP Program is to act as a catalyst for transforming key acquisition, logistics, and financial business activities into an integrated network of decision making processes and business activities. Toward this objective, the Navy ERP focused on applying proven Commercial Off-The-Shelf (COTS) software that embodies best business practices with pre-engineered, ready-to implement, integrated application models.

Navy ERP chose commercial software developed by the largest provider of ERP solutions in the world,
SAP. The technology package from SAP allows the Navy ERP program to leverage delivered, benchmarked improvements in process performance from the commercial sector by standardizing processes and information requirements. These tightly integrated processes are accessed through a single data source that provides consistent, up-to-date information to all the functional modules thereby reducing or eliminating time-consuming system reconciliation. The Navy ERP solution is based on SAP ECC 5.0 software along with SAP's NetWeaver technology stack and takes advantage of Web technologies. The login will be to a Citrix client or to an HTML version of the graphical user interface.

Users sitting at their workstations will access Navy ERP via a portal and execute their transactions from there. A very important aspect of the Navy ERP solution is that the system operates on the Navy/Marine Corps Intranet (NMCI). NMCI has been a separate but very important initiative for the Navy and the implementation of this enterprise wide ERP is the culmination of an NMCI vision, which is to be the standard enterprise infrastructure on which enterprise applications can ride. Navy ERP and its technology fully support that vision. NMCI also provides a properly secure environment within which to deliver this enterprise capability. Navy ERP brings NMCI to an important milestone, enabling the implementation of an enterprise information system.

Navy ERP could not have implemented this comprehensive Navy-wide system without the NMCI infrastructure. Additionally, the technology being used in Navy ERP is fully operational via interface within the broader base of applications in the Department of Defense (DoD). In the first increment of capability, Navy ERP will be interfacing with 49 systems, 12 of which are DoD financial systems. Other interfaced systems include the Defense Travel System, the Defense Civilian Personnel Data System (DCPDS) and existing supply systems. Over time as Navy ERP expands many of those systems will be replaced by Navy ERP.

Impact:
The Navy ERP Program has implemented, in one interoperable system, the functions required to operate the multiple business activities of the Navy's four major acquisition commands, fully integrating what previously had been multiple, stand-alone systems. Each of the systems commands implementing the system will experience: Increased efficiency and mission effectiveness — Increased transparency of useful, consistent data up, down and across the organization, provides leaders more rapidly available information, more consistently and broadly aggregated. Near real time, reliable, well understood information drives better informed decisions, providing leadership the ability to operate most effectively.

Reduction of Life Cycle costs —The enterprise system combines information, functionality, and
uniform business rules previously held in multiple systems, locations, and commands. The Navy ERP system interfaces with twelve Navy programs and eighteen DoD programs; multiple redundant, individual systems were required previously. When fully implemented, Navy ERP will interface with more than forty-nine Navy systems and twenty-two DoD program systems. Leadership and process owners operating with the increased efficiency and effectiveness, reach informed decisions more rapidly than previously possible. Acquisition and supply task cycle times are reduced, services provided more rapidly, operational timelines reduced without reduction in services, and all can be accomplished within previously planned risk tolerances. The Navy ERP Business Case projects the return on investment at a minimum of 4:1, and when personnel efficiencies are included, ROI is as high as 8:1. Innovative use of IM/IT — the consolidating effects of the Navy ERP system facilitate operations that previously required multiple databases and multiple other sources.

Those sources contained data collected in as many ways as there were commands and programs that kept the data. The financial transparency and total asset visibility afforded by the common database underlying Navy ERP is driving an efficiency of operations and an effectiveness of outcomes not possible absent a consolidated, integrated management system. Increased interfaces with Navy and Department of Defense systems further integrate Navy operations. Increasing pressures on Navy resources required reevaluation of all operations.

Segregated, stove-piped business systems serving the four major acquisition commands were duplicative, costly, and resulted in multiple sets of data, inconsistently held. Segmented management systems provided limited useable information to those who made decisions for the enterprise. The Navy ERP program has delivered its initial implementation at the Naval Air Systems Command on time and within budget. Today the system directly serves more than 14,000 users across nine sites, assisting them in financial, program, and workforce management functions that standardize and modernize the business processes and add financial transparency required in the modern Navy.