

2005 Award Recipient
Naval Air Systems Command
Sigma Project: Implementing mySAP ERP

2005 ASUG
Impact Award

insight
excellence
achievement
reward

Recognizing Strategic
Business Results

Special
Report





ASUG wishes to thank the 2005 Impact Award Committee members

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Learn

“A model from which ASUG members can learn — serving as an inspiration for other SAP teams to emulate.”

In a consistently changing industry that expects superior results based on efficient methods and planning, members of the Americas’ SAP Users’ Group (ASUG) continually surpass expectations within their own organizations. It’s these accomplishments that create a model from which other ASUG members can learn, serving as an inspiration for other SAP teams to emulate. By sharing best practices, members help each other better leverage the full value of their SAP investment.

In late 1998, ASUG introduced the Impact Award program to recognize the achievements of ASUG members. This program recognizes member organizations that achieve significant business results through their company’s implementation of SAP. Impact Award submissions are evaluated based on their description of the return on investment generated, strategic alignment goals met, SAP product scope utilized, best practices developed, service improvements demonstrated and the degree on innovation reflected in their approach.

Selecting the 2005 ASUG Impact Award winner was no easy task, as all submissions were quite impressive. This year’s winner, **Naval Air Systems Command** (NAVAIR) demonstrated how they excelled with an SAP implementation based on the criteria above. As you will learn, NAVAIR benefited greatly from their implementation. ASUG congratulates NAVAIR on their achievement and is proud to share their success story with our members.



2005 ASUG Impact Award

Naval Air Systems Command (NAVAIR)

Organizational Background

A significant technological accomplishment that occurs on a daily basis is a U.S. Navy aircraft landing on an aircraft carrier in the middle of the ocean. With little more than a few hundred feet of runway, U.S. Navy pilots perform this routine task daily with the confidence that the Naval Air Systems Command (NAVAIR) has provided them with the equipment they need to complete their mission. NAVAIR is a \$23 billion per year enterprise that provides weapon systems to the men and women of Naval Aviation.

Another significant technological accomplishment is NAVAIR's SAP implementation, which is the largest implementation in the public sector to date. With more than 16,000 SAP users at 173 locations, NAVAIR's singular focus is to provide cost-wise readiness and dominant maritime combat power to make a great Navy/Marine Corps team better. NAVAIR is more than just aircraft and weapons systems, it accomplishes total system capability and sustainment from end to end, including acquisition management, test and evaluation, repair and modification, and logistics and technology service and support.

The Problem and the Solution

Downsizing and shrinking budgets within the Department of Defense (DOD) have made "Reinventing Government" a high priority within the Department of the Navy (DON). In order for the Navy to best support its forces, the business infrastructure had to transform, yet remain flexible, responsive and adaptable.

In January 1999, the Navy's Revolution in Business Affairs Working Group decided that the Navy needed better insight into the Naval Aviation enterprise. Following the Revolution in Military Affairs effort, the Revolution in Business Affairs Working Group was looking to streamline processes and provide real time information to facilitate better business decisions.

After researching several options viewed as best practices, the group decided that an Enterprise Resource Planning (ERP) solution would provide the greatest benefit to the Navy. In order to prove its research, the group commissioned four Navy ERP Pilots:

- **Sigma** – NAVAIR Project Program Management – focus was weapon systems acquisition, program management, financial management, and human resource management.
- **SMART** – Naval Supply Systems Command / NAVAIR Aviation Supply Chain / Maintenance Management – focus was the material requirement, vendor/supply management, transportation/distribution, maintenance management and financial management.
- **Cabrillo** – Space and Naval Warfare Command Project Warfare Center Management – focus was the Navy Working Capital Fund financial management process.
- **NEMAIS** – Commander Atlantic Fleet/Naval Sea Systems Command Regional Maintenance Workforce Management – focus was the Regional Maintenance Management

Enterprise Resource Planning at NAVAIR

Implementing an ERP system in the private sector is difficult, but implementing in the public sector adds a level of complexity that makes the task even more challenging. NAVAIR is funded using taxpayer money, and along with that funding comes regulation, policy and significant oversight.

Before ERP, each NAVAIR program office established their own processes for program planning and budgeting with no common tools or integration. Some program offices had very sophisticated applications while others used basic excel spreadsheets. This lack of common processes created many problems including lack of data integration and a steep learning curve for employees who moved between program offices.

The lack of timely data was also impacting the command. If program managers wanted to know how much money they had remaining in their budget, they would query their business financial managers, who provided an approximate number after hours or even days of analysis. Before NAVAIR's ERP, much of the data was up to 12 months old when it was published.

In addition to no real time data and no common processes, NAVAIR maintained more than 400 independent data system applications, costing the command millions of dollars in stove piped efforts.

Introducing Sigma

In June 1999, NAVAIR officially stood-up the Enterprise Solutions Program Office, with the tasks of benchmarking industry's benefits from ERP systems and performing a gap analysis to determine which NAVAIR processes could be encompassed in the new ERP solution.

As soon as NAVAIR fully staffed their team, they hit the road, beginning the Business Blueprint phase of the implementation. The team interviewed more than 1,000 members of the Command, covering all the major functional areas. From the interview data, the team defined the scope of the program.

After the scope was defined for the project, it was renamed to Sigma. The term Sigma means integration, making it a perfect fit for an ERP program designed to bring integration to NAVAIR's business processes.



"We used to use a planning system and separate execution system to do our financials. Sigma brought those two systems into one integrated system which allows us to see our execution against our planning which allows us to see and monitor the execution in a more executive way."

Scott Retzler, Commander, US Navy
Business Financial Manager for the F/A 18 program

SAP Product Scope

Sigma was comprised of SAP R/3 4.6 (c) with the following modules and functionality:

- FI/CO/SD/FM for financial accounting and controlling and federal funds management
- SAP Industry Solution for Public Sector (ISPS) to take advantage of extended functionality customized specifically for businesses in the public sector
- PS for Project Management and Project Cost Planning
- BW for business analytics and reporting
- MM for Purchase Initiation Documents, purchase requisitions, funding documents, standard supply requests, supply and shipping status and purchase card
- HR for a common approach to civilian employee performance management and appraisals, organizational relationships, supervisor and employee relationships, standard reporting and awards
- Employee Self Service (ESS) for time and attendance submission and approval, individual development plans, training requests, scheduling and history, leave requests and emergency address info
- Workflow (WF) for the automation of Engineering Change Proposals, Training Requests, Funding Documents, Purchase Requests, Purchase Orders, Purchase Card, Awards, Leave Requests, Individual Development Plans and Budget Exhibits
- “Bolt-on” systems such as e.Power (workflow / document management) and Oros (ABC), Jet Forms (Forms Management) and Webmethods /MQ-Series (Middleware)

Project Sigma was implemented to NAVAIR in two deployments. The first deployment was for the General Fund organizations including Headquarters, Patuxent River, MD; The Naval Air Technical Data and Engineering Service Command, San Diego, CA; NAVAIR Training Systems Division, Orlando, FL; the Naval Aviation Pacific Repair Activity, Atsugi, Japan; and the Naval Aviation Mediterranean Repair Activity, Naples, Italy. The second deployment was for the Navy Working Capital Fund organizations to include the Naval Air Warfare Center Aircraft Divisions at Patuxent River MD and Lakehurst NJ; and the Naval Air Warfare Center Weapons Divisions at Pt. Mugu and China Lake, California

Go Live!

In October 2002, the Sigma system officially went live for the General Fund activities, closely followed in January 2003 by the Navy Working Capital Fund activities. The solutions office celebrated into the wee hours of the morning, but the real work had just begun.

Challenges

Attempting any new initiative in an organization is a challenge, especially when it brings a new way of doing business with a brand new tool. As the largest SAP implementation in the public sector, NAVAIR learned to shed the existing stovepipes so common in many government agencies.

NAVAIR's civilian, military and contractor workforce adjusted to the gigantic changes in business and technology, but not without resistance. In no area was this change more apparent than the time keeping area. There were drastic differences between how each site, business unit and program kept time and attendance records. Headquarters had difficulty keeping time and attendance records due to the type of funding they received. With the new system, each person would be responsible for entering his or her own time into Sigma. No timekeepers, no exception reporting – each week, everyone from the Senior Executive Service level down had to use Sigma and enter their hours.

Early into development, the program office learned that a parallel effort was coming to fruition – the conversion of the Navy's entire information technology infrastructure to the new Navy Marine Corps Intranet (NMCI), linking more than 300,000 desktops across the Navy and imposing stringent network access standards to tighten security. NAVAIR was to be one of the first Navy Commands to be converted to the new NMCI system and the implementation happened to be phased during the scheduled Go-Live date for Sigma. The program managers immediately opened lines of communication with NMCI and kept them open, leading to the day that Sigma received certification and inclusion in the NMCI system. Often called the “Perfect Storm”, the deployment of these two initiatives required close coordination in order to have the least amount of impact to the users.

In addition to NMCI, NAVAIR is connected to many DON and DOD information systems. Sigma interfaces with 28 different systems, allowing Sigma to share data. Constructing reliable interfaces to large, sometimes-older information systems mandated by the Department of Navy and Department of Defense proved to be a daunting challenge for the team. Today, the challenge continues, as these 28 interfaces require daily monitoring and close coordination of data flow.

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Return on Investment

To date NAVAIR has retired 52 of the 59 intended legacy information systems, saving the Command millions of dollars in licenses, maintenance and upgrades. Additionally, the reduction in applications facilitates single entry and single source for data to further decrease manpower requirements. This success directly supports the Navy's mission to reduce the number of duplicative or redundant business systems currently supported.

NAVAIR has achieved faster cycle times on many of its processes through Sigma. One significant reduction is in the Engineering Change Proposal (ECP) process, in which the end result is providing required changes to aircraft platforms, support equipment or training equipment to our sailors and marines across the globe. Before Sigma, the ECP cycle time was around 87 days. Today, that function is completed in less than 25 days.

Sigma Is Supporting NAVAIR's Business Operations:

- Over 15,000 Users Access the System Per Week
- 10,472 Funding Documents Processed Monthly
- 100 Contract Actions Processed Per Week (Via Standard Procurement System interface)
- 9,687 Funds Active in SAP
- \$810,937,412 Value of Fixed Assets in SAP
- 470,235 Vendor Master Records in SAP
- 2,916,639 Material Master Records in SAP
- \$151.7B Gross Obligations to Date Since Go-Live
- \$116.2B Gross Expenditures to Date Since Go-Live

Improved Service

NAVAIR is now in the Operations and Support (O&S) phase of the Sigma life cycle. Although the road to O&S has not been easy, NAVAIR program managers and decision makers now have tremendous insight across the enterprise with timely and accurate data.

One of the most significant benefits, but the hardest change to implement, was the standardization of NAVAIR's business processes. NAVAIR now has documented, common business processes derived from industry best business practices.

NAVAIR is also able to develop monthly and year-end financial statements to meet the accelerated timelines from external organizations, such as the Defense Financial Accounting Service (DFAS). During development, NAVAIR quickly realized that it needed to partner with the external agencies for which they had a reporting relationship. DFAS quickly responded to NAVAIR's call by supplying several individuals to consult with NAVAIR on its development.

NAVAIR developed a disaster recovery system that allows the ERP system to be brought back up within 48 hours if there were a problem at the main server location in Patuxent River. With this system in place, NAVAIR will lose no more than two hours worth of data in the event of a failure of the main servers.

NAVAIR has automated many former manual processes, as listed in the Project Scope, reducing cycle times and lost paperwork and providing group inbox capability to expedite approval.



The 2005 ASUG Impact

Award identifies an

ASUG Installation

Member company that

has achieved significant

business results due to

an SAP implementation.

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Best Practices

Timing is everything

- Avoid “going live” at the same time another major deployment is occurring (such as the Navy Marine Corps Intranet (NMCI))
- Choose a “go live” date that is a clean breaking point from the legacy system and / or where there is time for the organization to adapt to the change (such as the new fiscal year)

Leading through change

- Accomplish business process re-engineering (BPR) ahead of the ERP implementation to avoid the cost of another change
- Establish a marketing and demonstration team
- Some users will want the new system to be like the old system in their requirements
 - Obtain their ownership in the new system
 - Show them the advantage of the change
- Authoritative data source, information availability and insight into business create organizational change with accompanying resistance
- Enable a strong change control process that challenges deviations from agreed upon scope resource plans for implementation schedules

Institutionalize business rules and processes

- Maximize the use of system validations to enforce your business rules and processes
- Maintain, update and publish your business rules, processes, desk guides, command policies, instructions and training material

New organizational responsibilities are required to support the ERP implementation

- Master data control and management
- Production support and scheduling
 - Includes processes, interfaces, and external reporting
 - Optimize based on business or mission need
- Business activity monitoring
 - Establish thresholds to monitor performance and execution
 - Feedback loop for issue identification and resolution



Develop strategies with interface owners to allow for aggressive test routines using state of the art connectivity software, maximizing connectivity and security while minimizing errors

- Develop and enforce third party MOA's and MOU's with external interface partners
- Avoid surprises through planning conferences
- Seek dedicated test bed to avoid delays

Take the time to recognize the team's efforts

- Plan ways to celebrate your successes
- Bad news travels fast, good news sometimes doesn't travel at all

Conclusion

NAVAIR's implementation of SAP has served as the flagship of public sector implementations of SAP. Due to overwhelming demand, the Sigma program office has established quarterly demonstrations to standing-room-only audiences of potential SAP customers representing numerous government agencies and including the Assistant Under Secretary of Defense for Logistics Systems Management. The attendees want to see the system for themselves and listen to a team who has “been there and done that” successfully.

As the Sigma Team continues to support their Navy customers, the Navy is moving forward with its plans to integrate the four existing Navy ERP pilots into one Navy-wide ERP program. The Navy ERP program is currently in the realization phase and is scheduled to be deployed to NAVAIR in fiscal year 2008. The Navy ERP Program Office is taking advantage of lessons learned and experiences from NAVAIR's SAP deployment to provide the best possible implementation to the Navy.



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Dear ASUG Community:

The Sigma team has delivered a capability that is revolutionizing the way NAVAIR and the Navy does business.

As the NAVAIR Comptroller, I was familiar with the many accounting and financial management systems that hampered our ability to report our financial status and make business decisions on how to best spend our money. When the Navy decided to implement an ERP system, I pledged my support to this venture, backing up my words by providing the program my best and brightest personnel.

I personally witnessed the first transaction within Sigma. Since that date, I have seen the program encounter and overcome many challenges, including deploying at the same time as the Navy Marine Corps Intranet (NMCI) and coordinating and incorporating numerous electronic interfaces with federally mandated accounting and human resources systems. Working as a close-knit team, the program overcame each obstacle with innovative solutions and tireless dedication to prove the system's value.

Today, Sigma is stable and running NAVAIR's business as our financial and business management system. The system is allowing incredible insight into the enterprise and we continue to use the system to monitor and defend financial performance using real-time commitments, obligations and expenditures data. Our program managers are using the system to obligate and execute funds, plan multi-year projects, and wisely execute their budgets and resources. NAVAIR users are confident in the data and business processes within Sigma. Sigma's success has long been lauded at the Department of the Navy (DoN) level and now our Sigma program will serve as the financial management baseline for a Navy-wide ERP system.

We look forward to the challenges ahead and are certain that our Sigma team will continue to meet and exceed our expectations. I am proud to nominate the Sigma Team for the 2005 ASUG Impact Award.

Sincerely,

Patricia M. Fox
Acting Comptroller



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ASUG would like to also recognize **Bristol Myers Squibb** as a finalist for the 2005 Impact Award.