# U.S. Navy Charts a New Course to Productivity & Cost-Efficiency

Aircraft carriers are much more than ships. They are cities at sea, complete with their own airstrips, nuclear power sources and advanced radar systems. Given the formidable size and complexity of these carriers, it's no wonder that construction schedules are charted in years, rather than months. Despite the generous lead times, however, Naval Sea Systems Command (NAVSEA)—the government agency responsible for these projects—was missing deadlines and losing financial ground by the millions. On the recommendation of a trusted vendor, the Program Executive Office for Aircraft Carriers enlisted the help of DB&A — and, in a matter of months, started getting the job done on time and within budget.

The Program Executive Office for Aircraft Carriers (PEO) is responsible for constructing new carriers, overhauling existing carriers and keeping in-service carriers in top condition. For years, NAVSEA/PEO Aircraft Carriers had been missing project completion dates on a consistent basis, resulting in multi-million dollar cost overruns, strained relations with contractors and naval staff and a loss of credibility among appropriations bodies.

PEO directors were well aware that changes had to be made. And, in the wake of the September 11 terrorist attacks on the United States, it became more critical than ever to ensure that work on our nation's carriers would be completed by the appointed date.

At the time the engagement began, the PEO was faced with heavy turnover. Approximately 90 percent of critical management positions were held by personnel who had been in their position for one year or less, and the PEO was painfully aware of the significant amount of knowledge and experience that was being lost with each retirement, resignation, or reassignment.

The reactive culture of the PEO tended to reward daily "heroics," which reinforced the behavior of going full-throttle to solve the emergency of the day. This not only robbed the team of proactive project management time, it also led to burnout, which was a

## The DB&A Difference

### Actual Financial Results
➤ Realized savings of $300 million on a new construction program
➤ Circumvented a $55 million cost overrun on an existing project
➤ Saved $5.97 million in contractor fees

growing problem for the program. Compounding the problem was the workload associated with Operation Enduring Freedom, initiated during the administration of President George W. Bush, which was projected to increase from $1 billion to $2.3 billion over a five-year period. The PEO requested more money for personnel to fill the gap—but the request was denied.

Perhaps most troublesome, however, was the fact that those in charge weren't finding out about delays until it was too late to get things back on track in time to meet delivery dates.

It was clear that they had no choice but to change the way they did business.

The PEO had brought in consultants before, in addition to launching its own, various internal initiatives. But each time, the efforts stalled. On the recommendation of its largest contractor, Northrop Grumman Newport News, the PEO engaged DB&A.

## DB&A Analysis

DB&A began with a two-week observation of the PEO's Assistant Program Managers (APMs) and day-to-day operations at its Washington, D.C. facility. The findings were varied and significant, but— for DB&A—not insurmountable.

First and foremost, internal communication was virtually nonexistent. Workers who had been with the program for several years tended to do their jobs by memory, with no system in place to share their knowledge with new team members. Because so much operational information existed only "between the ears" of seasoned workers, new employees were having a difficult time getting up to speed. This caused a great deal of frustration among new team members, not to mention a dramatic loss of productivity.

Not surprisingly, DB&A also found that external communication was poor. For example, a number of project delays were directly attributable to the PEO's failure to provide contractors with the equipment, software, or information needed to move forward or notify contractors of issues until it was too late to work around them. Delays such as these are especially costly because, even if contractors don't obtain the tools they need from the Navy, they're still under contract to dedicate their crews to the given project. As a result, cost overruns associated with contractor management could easily reach $12 million to $15 million per month.

In addition to communication problems, DB&A observed that there were no standard operating procedures or schedules in place to keep projects on track. Jobs had deadlines, but no timelines, and the long lead times of seven to 10 years gave workers no sense of urgency. Once delays began to happen, there was no process for getting things back on track in time to meet the deadline.

Armed with these observations, along with vital data gleaned from surveys and interviews with supervisory staff, DB&A went to work on a comprehensive



management program to transform the PEO from a reactive culture to one of proactive, systematic management.

## Implementation Actions

Reverse-Engineering The first order of business for DB&A was to develop a management operating system to ensure that program objectives were met on time and within budget. Consultants laid out schedules for each of the different programs, then worked backward from the ultimate completion deadline to process-map the steps that had to take place in order to meet that schedule. This shifted the focus from long-term deadlines to short-term goals. Principle events and sub-tasks were then made visible on Gantt charts and placed in highly observable locations.

Reducing the Learning Curve Next, DB&A recommended strategies to help teams meet their goals, including periodic management training workshops and the implementation of floor-based metrics to encourage person-to-person information sharing.

Measuring Progress Also recommended was the introduction of a weekly activity log that would

> "Please get out and show the rest of the Navy this program. It is exactly what I want every organization in the Navy to do...now!"
>
> ~ Then-Chief of Naval Operations

enable managers to review and prioritize the tasks that each team member was pursuing; a weekly countermeasures log, documenting what happened, what the potential impact would be, and what corrective actions would be required; and a monthly balanced scorecard, highlighting monthly indicators and tracking performance.

Engaging the Front Lines Bottom-up change is the key to the DB&A approach, and the PEO agreed to institute APM Huddle Meetings every other day. This provided a regular opportunity for workers and managers to review the progress of various projects as indicated on the Gantt charts, keep everyone in the loop at every step and help the PEO gain buy-in from employees at every level.

Managing Proactively The PEO also agreed to implement weekly Operational Review Meetings to discuss key metrics. Did things happen in the order they needed to happen? Were there cost overruns? What action(s) needed to be taken to get back on track? By asking these questions on a weekly basis, APMs became better prepared to identify problems and take corrective action early on that would help prevent missed deadlines—or the possibility of millions of dollars in contractor overtime fees in order to meet the deadline.

Identifying Strengths Another helpful recommendation from DB&A was to have APMs conduct "best practice" spot checks to identify value-added versus non-value-added activities within the financial, logistics, and program management areas. These spot checks also gave APMs a better understanding of their team members' strengths and weaknesses, enabling them to better plan and allocate tasks.

Implementing Methodically While this may sound like a plethora of changes, because the new protocols were enacted with a "spiral-development" philosophy, everything didn't have to happen at once in order to be effective. The PEO had the flexibility to move ahead quickly or slowly, depending on how readily the changes were embraced.

## Project Results

In the case of NAVSEA/ PEO Aircraft Carriers, the process itself was perhaps the most critical part of the solution—and the progress was swift. Almost immediately after implementing the changes recommended by DB&A, NAVSEA/PEO Aircraft Carriers began to see monetary results. The restructuring of the CVN 77 new construction program saved the office a whopping $300 million, while a $55 million cost overrun was circumvented on the CVN 76 project. They also saved $5.97 million in contractors off roll and manpower avoidance. And because the process is repeatable, the client was equipped to sustain and improve upon results without the need for ongoing intervention from DB&A.

The management operating system also gave PEO supervisors the quantifiable data they needed to support the PEO's contribution-based compensation and appraisal system— something that, previously, was measured purely by subjective appraisals. With these objective performance measures in place, a worker's performance could be calculated, rather than estimated.

Based on these quantifiable results and the advice of the then-Chief of Naval Operations, other NAVSEA offices and other departments of the Navy quickly recognized the value of the process and implemented programs of their own, patterned after the DB&A approach.

**Operational Results:**

➤ Provided a repeatable process that NAVSEA could implement without ongoing intervention
➤ Improved communication and information-sharing among teams and between levels of management
➤ Provided quantifiable data to support worker appraisals and compensation
➤ Improved efficiency without compromising quality