

THE NAVAL AVIATION SYSTEMS TEAM -A MODEL FOR THE 21ST CENTURY

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Change

Change is one of the most difficult experiences an individual or an organization can endure. However, change also brings opportunity.

There is a natural human aversion to change. People and organizations become comfortable with familiar processes, methods, and surroundings. They tend to deny or defer the effects of change on their lives. Recognizing the need for change, accepting change, and making change work for the better is key to successful corporate and personal well-being.

The Naval Aviation Systems TEAM knows about change. Between now and fiscal year 1999, we will realize a 30% budget reduction, a 44% reduction in Civilian Personnel (military 25%), we will close 8 major facilities including three depots, and we will relocate 10,000 people.

The Naval Air Systems TEAM is taking the lead in the Department of Defense (DoD) to make meaningful value-added changes and adapt to the new environment. While other organizations are playing the "wait and see" game, the Naval Aviation Systems TEAM is reengineering itself and consolidating its facilities in a right-sizing scheme designed to provide world class, yet affordable, products and services for the fleet in the 21st century. This forward thinking was recognized recently when the TEAM won the 1994 Presidents Award for Quality. (The only government agency to receive such an honor in 1994, and the only organization to win it twice). This award was granted largely as a result of the pro-active role NAVAIR has taken to implement change through consolidations, downsizing, and implementation of a plan to transition from a geographically diverse Matrix organization(s) to a single competency aligned organization with Integrated Product Teams (IPTs).

In order to meet the demands of the new environment, the Naval Air Systems Command (NAVAIR) has developed a plan for organizational re-alignment and facility consolidation commensurate with anticipated budget reductions, despite a relatively stable workload. This new environment will require that the Naval Aviation Systems TEAM work smarter and with fewer people. In order to cope with this dynamic, NAVAIR has tapped into the modern thinking of today's management "gurus". We have taken a re-engineering approach and developed a comprehensive transition plan which will transform the organization from a predominantly functional and site oriented structure with diverse values, to a structure aligned along competency areas from which IPTs will be formed to meet customer needs.

Current Organization and Business

In order to appreciate the magnitude of this effort, it is necessary to describe the current organization and the business we are in. The Naval Aviation Systems TEAM consists of the Naval Air Systems Command (NAVAIR) Headquarters, the Aviation Program Executive Officers (PEOs), the Naval Air Warfare Center (NAWC), the Aviation Supply Office (ASO), and the Naval Aviation Depots. The TEAM is a partnership that is charged with providing high quality, technologically superior aircraft and related systems which can be operated, based, and sustained at sea. The TEAM develops, tests, delivers, and supports the products throughout the lifecycle including:

- Carrier and other air capable ship based aircraft and systems
- Integrated air anti-submarine warfare and anti-surface warfare mission systems
- Marine expeditionary forces aviation systems
- Maritime air launched and strike weapons
- Training systems for aircrew and maintenance personnel

The TEAM exists because the Navy must have an organic capability to manage the processes and control the decisions governing the life cycle management of its naval aviation systems. By maintaining in-house authoritative centers of expertise and a cadre of experts, we are able to provide a corporate memory of lessons learned, assess and evaluate competing technologies, prioritize amongst various approaches, access multiple contractors, minimize risk, control costs, and translate fleet requirements and operational issues into viable, supportable, world class sea-based system solutions.

In 1993, the TEAM managed \$17.3 billion worth of business that spanned some 200 programs. The TEAM employed over 47 000 military and civilian personnel headquartered in Washington DC and located at 18 major technology and engineering

centers, test and evaluation facilities, depots and logistics support activities nation-wide.

Re-engineering the TEAM

In the spring of 1993, COMNAVAIR appointed a group of senior personnel from throughout the TEAM to gain a thorough and visionary perspective of the overall organization. The group focused on "defining the perspective of the organization and its structure - in light of BRAC'93 and the budget outlook" and adopted the term "CONOPS" (Concept of Operations) to describe their study. This CONOPS study team (subsequently renamed the Re-engineering Study Team), concentrated on how we should operate our business and how potential restructuring could accommodate and build upon consolidation challenges.

The study team reviewed the various approaches to restructuring the NAVAIR organization and the concept of operations for support of programs. The team examined NAVAIR's business areas to identify demands of customers and their requirements. The team used benchmarking with a number of major corporations and the Air Force as a key part of the study. The study team's approach centered first on formulating a concept of operations and then on defining an organizational structure to support the concept.

The Re-engineering study culminated with an operating concept for the TEAM and an attendant organizational structure to satisfy the concept. Two major thrusts of this concept were:

1. Focus and concentrate resources on the needs of the customer, and
2. Preserve and regenerate those resources in order to meet the future needs of Naval Aviation.

Integrated Product Teams and a Competency Aligned Organization

The re-engineering study proposed a reshaping of the TEAM to focus on Integrated Product Teams (IPTs) fully empowered to manage their assigned programs from concept to disposal; and a Competency Aligned Organization (CAO) to develop and sustain TEAM resources in support of IPTs and other needs.

The CAO will link people with like capabilities across all NAVAIR sites into competencies. This will provide both an organization- wide pools of talent and the leadership opportunity to unite people doing similar work by common practices. Instead of thinking of a specific site's personnel and capital resources to solve a

problem, NAVAIR will be able to use the strength of the total TEAM. The central functions of the CAO will be to develop and nurture processes, prepare and train people, and provide facilities to support the success of the IPTs.

The study team identified eight competencies.
They are:

1. Engineering
2. Logistics
3. Program Management
4. Contracts
5. Corporate Operations
6. Industrial
7. Test and Evaluation
8. Shore Station Management

A competency will consist of the people, processes, and facilities necessary to provide products and services to the customer. The overall role of the competency leader will be to size and train the workforce, and to establish standards and processes for the competency to meet the needs of the teams and other customers. A formal organizational structure, to include supervisory responsibilities, will be established in each competency. Within the CAO, emphasis will shift from checking results to developing and sustaining the TEAM's personnel and capital resources. The competency leader will establish non-intrusive methods of evaluating the efficiency of that discipline to ensure continuous improvement of team operations.

The IPTs will focus the people, processes, and critical competencies into program manager led multicompetency teams, with the responsibility and authority to manage all aspects of TEAM programs to meet OPNAV and Fleet requirements .

Implementation Plan

The implementation plan will be accomplished in three phases. The phases were selected to allow sufficient time to carefully plan and to ensure that NAVAIR is well coordinated with the required BRAC 91/93 actions affecting consolidation to Patuxent River and the remaining Depot sites. BRAC 95 impacts will be incorporated when those decisions are final.

Phase I (October 1993 - October 1994) concentrates on changing the current organizational structures (most of which are unique to each site) of the various NAVAIR elements to a common framework based on the eight competencies.

Effective 1 October 1994, each element (defined to be NAVAIR Headquarters, Naval Air Warfare Center Aircraft and Weapon Divisions, and the Naval Aviation Depots) will be aligned in accordance with the approved CAO structure. Although the individual elements will be aligned by that date, the current reporting chains and accountabilities/responsibilities of those Commands will not change as of that date. The Competency Planning Leaders will continue the development and implementation of common processes and policies across the sites.

Key corporate decisions such as the mapping of people and facilities, establishment of workforce partnership agreements, and selection of key positions and transition leadership will be addressed during this phase. Significant efforts by the Competency Planning Leaders to initiate the development of processes and procedures and to address the eventual transition from site based competencies into unified multi-site competencies will be accomplished during this phase. Likewise, IPT leadership will develop operating standards for IPTs such as resource allocation, supervisory relationships and performance evaluations, collocation of assets and resources, program review and oversight, team training and communication, etc.

Phase II (October 1994 - October 1995) will emphasize the shift from the organizational framework to competency and teaming development. Each organizational element will be aligned by the various approved competency levels in accordance with the final mapping agreements. Program management will be executed through IPTs under the leadership of PEOs and Program Managers Air (PMAs). Key IPT processes will be implemented. As practical, team-building, improved communications and work flow at various sites will be encouraged through collocation of local IPT efforts. Likewise, organizational elements and IPTs will begin using standard business and corporate reporting practices as the procedures and facilities are developed. Common investment and planning processes will be developed to assist in the corporate decisions, particularly those decisions which will impact 1997 and beyond.

By the end of October 1995, each competency will establish initial linkages among organizational elements.

Phase III (October 1995 - October 1997) will emphasize the completion of the competency linkages across the geographically dispersed organization. Since most of this phase will be driven by the respective competency transition plans, no further details are currently spelled out.

The "People Strategy"

In order to mitigate effects of this transition and downsizing, NAVAIR chartered three Quality Management Boards (QMBs) to develop a "People Strategy". These three QMBs are chartered to address Placement, Development/Skills, and Safety. The Placement QMB will focus on developing and implementing a placement program that takes care of the needs of the employees and the organization. The placement process will include flexible accession guidelines to support movement of employees within the TEAM as well as to help members of the TEAM displaced by base closure and relocation find other jobs. The Development skills QMB will focus on implementing a comprehensive development program which supports the competency aligned organization. The Safety QMB will focus on the processes of improving the safety and health of all TEAM employees.

The Goals of NAVAIR's "People Strategy" are:

1. Help place all TEAM members affected by downsizing and relocation.
2. Ensure people are well informed, have good quality of work life and a safe environment.
3. Provide a means to satisfy training needs; provide access to educational resources at all sites; and develop the mechanism for career development programs.
4. Ensure the TEAM provides a means to reconstitute the workforce at remaining sites.
5. Ensure the rewards and recognition processes are well understood and utilized.

Besides the tremendous organizational changes underway, we are embarked on a consolidation concept as a part of the 1991 and 1993 phase of the Base Realignment and Closure Act (BRAC-91/93).

Consolidations and BRAC

Under Navy consolidation plans put forth in BRAC-91 and in BRAC-93, a goal of significant infrastructure reduction (base closures and realignments) and personnel reductions of approximately 40% is being pursued while at the same time retaining the capability required to develop, test, and support maritime systems.

Under BRAC-91 the Navy is consolidating its Research, Development, Test and Evaluation (RDT &E), and parts of its manufacturing, and in-service engineering into Warfare Centers. The Warfare Centers are the Naval Air Warfare Center, the Naval

Surface Warfare Center, the Naval Underwater Warfare Center, and the Naval Command and Control and Oceanographic Systems Center.

The Naval Air Warfare Center (NAWC)

The Naval Air Warfare Center (NAWC) consolidation reduced the number of RDT&E laboratories and field activities from nine to five. The NAWC consolidation is focused at two hubs - the Aircraft Division, headquartered at Patuxent River, MD and the Weapons Division, headquartered at China Lake, CA. The ongoing consolidation efforts consist of the relocation of the former Naval Air Development Center, Warminster, PA and parts of the Naval Air Propulsion Center, Trenton, NJ to Patuxent River plus the relocation of the functions of the former Naval Weapons Evaluation Facility in Albuquerque to China Lake.

The outstanding feature of the Naval Air Warfare Center (NAWC) is the integration of our research and development (R&D) and our Development Test and Evaluation (DT&E) capabilities thus providing a full spectrum of capability for life cycle support of maritime aircraft and their associated weapons. The ongoing consolidation further enhances the Navy's ability to do more with less. Facilities that were once used primarily for R&D or DT&E will now be used across the total life cycle of systems from concept exploration through in-service support. Personnel that once supported only one phase of a system's life cycle will now support several phases.

NAWC Weapons Division

The NAWC Weapons Division combined the former Naval Weapons Center (NWC) China Lake, with three other Navy shore facilities: the Naval Weapons Evaluation Facility (NWEF), Albuquerque, New Mexico; the Naval Ordnance Missile Test Station (NOMTS), White Sands New Mexico; the Pacific Missile Test Center (PMTTC), Point Mugu, California. These organizations, founded during World War II and the post-war period, have contributed to the design, development, and cradle-to-grave support of many of DoD's airborne tactical weapon systems. These organizations have also contributed to naval surface missile systems and tactical as well as strategic deterrent Weapons.

Now, the NAWC Weapons Division integrates the full-spectrum activities of these former organizations. Closing the NWEF Albuquerque facility and consolidating its elements into the Weapons Division, provides a much more focused, efficient approach to support an expanded capability for research, development, test, and evaluation throughout the weapon system life cycle.

Combining the remaining facilities under the Weapons Division brings together the air, land, and sea ranges constituting an integrated weapons test range complex. The complex contains 1,700 square miles of dedicated land test ranges, underlying more than 17,000 square miles of restricted airspace, and 36,000 square miles of sea test range with overlying airspace. Besides the vast integrated range areas now available, establishment of the Weapons Division integrates the most capable and complete spectrum of weapons systems laboratories and test facilities within the DoD.

NAWC Aircraft Division

The Navy currently has an unsurpassed and unique full spectrum RDT&E capability and infrastructure invested in our NAWC Aircraft Division, Patuxent River. The Aircraft Division is responsible for developing, testing, and providing life cycle support for maritime fixed and rotary wing aircraft and aircraft systems. We have deliberately decided to build on that capability with consolidation of aircraft acquisition, development, and in-service engineering support .

Bold Initiatives

BRAC-93 was another bold step for Naval Aviation as we initiated the relocation of the Naval Air Systems Command to Patuxent River. Upon completion of this move in 1997, Patuxent River will form the nucleus of the Naval Aviation System TEAM.

The Naval Aviation Systems TEAM integration at Pax River is the Model for the 21st Century for integrated maritime aircraft acquisition and life cycle support. When the move to Pax River is complete, the Navy will have achieved the degree of down-sizing and consolidation that is mandated by today's environment, at far less cost than any of the other consolidation proposals put forth within DoD.

By 1997, Navy aircraft acquisition management, systems engineering, technology base, R&D, T&E, and in-service support will be collocated at Pax River. This consolidation will bring together the Naval Air Systems Command, Naval Air Warfare Center Headquarters and Aircraft Division, (consisting of the former Naval Air Test Center Pax River, Naval Air Development Center Warminster, Naval Air Propulsion Center Trenton), the Naval Aviation Depot Operations Center, the Naval Aviation Maintenance Organization, Operational Test and Evaluation Squadron (VX-1), Composite Squadron 6 (UAV), and the Navy Training Command.

Besides the advantages of collocating the Naval Aviation System TEAM at Pax River, this plan offers the TEAM other significant advantages such as:

Close proximity to the Atlantic Fleet.

Close proximity to the Surface and Undersea Warfare Centers -- primary surface and subsurface systems development and test is done in mid-Atlantic area.

Close proximity to the Atlantic Undersea Test and Evaluation Center (AUTEC)

In addition to the significant Navy investments at Pax River, we are leveraging \$480M worth of NASA airfields, launch facilities, and range instrumentation investments at Wallops Island. (The Navy AEGIS test site at Wallops is the primary candidate for the Navy's portion of the Ballistic Missile Defense test program).

It is worth mentioning that other consolidation proposals centering around fixed wing aircraft testing have been circulating within DoD. These proposals center on breaking out pieces of the capability at Pax River and transferring them West. However, significant new investments would be necessary in order to duplicate the capabilities already existing at Pax River. More importantly, the breakdown of synergy caused by geographically dispersed facilities and personnel, along with their associated costs, exacerbates the current and projected fiscal constraints. While some cost savings might be realized for specific tasks, it is false economy based on sub-optimization of resources. All of the current alternatives have been proposed and analyzed in the past and none of them offer DoD the cost effectiveness and cost savings the Navy, and DoD, has and will continue to accrue as the ongoing consolidation at Pax River.

It is also worth noting that only Pax River has the capability and capacity to support the full spectrum of maritime aviation testing requirements including: flying qualities and performance, engine performance, carrier and shipboard suitability, catapults and arresting gear, avionics/weapons systems, extensive modeling and simulation capabilities- including the most advanced installed systems test facility in the world (ACETEF). During deliberations effecting future consolidations, it is important that decision makers in the Pentagon understand and acknowledge that other Service flight test requirements are in-fact a subset of Navy and Marine Corps flight test requirements. While Edwards can support fixed wing flying qualities and performance and avionics/weapons systems testing, the sea level environment at Pax River is mandatory for fixed and rotary wing shipboard carrier suitability testing. There are other ranges that can accommodate some parts of fixed wing aircraft testing, but they

do not have adequate facilities to perform the full spectrum necessary to meet our unique maritime aviation requirements .

THE Naval Aviation Systems TEAM

The consolidation of R&D and T&E mark a significant step in bringing together similar functions which require similar, if not identical, skills and facilities. The consolidation of people and facilities, along with the formation of a "Right-Sized" Competency Aligned Organization with Integrated Product Teams is the right model for the next century, and the Naval Aviation Systems TEAM is leading the way.