IBM

US Navy opens its acquisition business model, transforming its culture.

Overview

Business challenge

The Navy is looking for innovative ways to acquire more than $22 billion annually in warfare systems that take advantage of new technologies to improve operator and system performance. The Navy also needs to reduce the cycle time to develop and field weapon systems. In order to achieve this acquisition transformation, the Navy is developing a new, open business model and organizational structure that will promote more effective collaboration with both internal and external partners.

Solution

IBM helped the Navy's Open Architecture Enterprise Team—which spans 6 organizational domains—to develop open business models that transform acquisition processes, create open system models with well-designed interfaces, and move towards standardized system development, acquisition and testing. In addition, IBM developed tools and performed analyses (using approaches such as Component Business Modeling) that allowed Navy leadership to diagnose expenditures and assess the openness of weapons programs, and helped to change entrenched Navy culture through education, training, and outreach.

Benefits

- Coordination and collaboration have reduced the acquisition cycle time of one program from 7 to 2.5 years, and lowered the acquisition costs of another from more than $200M to less than $11M.

Industry

- Government

Challenge

The US Navy is under pressure to use its resources effectively, and must drive down costs around the acquisition and full lifecycle support of combat weapon systems. In addition, the department is being challenged to develop more open systems that enable them to interoperate with other systems, and to take better advantage of products already available in the marketplace. Specifically, the Navy is looking for innovative ways to acquire warfare systems (approximately $22B per year) which take advantage of new technologies that improve operator and system performance, and to reduce the cycle time to develop and field weapon systems. In order to achieve this transformation, the Navy must break down siloed organizations and enable them to collaborate more effectively with both internal and external partners.

The Department of Navy's Program Executive Office for Integrated Warfare Systems (PEO-IWS) sought an industry partner to help transform the organization in developing a new business model for acquiring and maintaining combat systems built on open system designs and architectures. IBM's Global Business Services Strategy & Change Division was chosen based on IBM's own experience in transforming to a more open, collaborative company (e.g. open source, sharing patented invention, etc).

Solution

IBM supported the definition, establishment, and coordination of the overall Naval Open Architecture organization and operations, including the roles and responsibilities of the enterprise level team, and teams within the Air, Surface, Submarine, C4I and Space warfare system development domains. Additionally, IBM led the development of the Naval Open Architecture Enterprise Team Transformation Roadmap, which detailed the operational direction for the open architecture initiative and aligned short-term tasks with long-term goals. This transformation roadmap served as guidance for OA-related activities across the entire Naval enterprise.

To study the state of the current environment by helping Program Managers assess their programs, IBM led the creation of the Navy's Open Architecture Assessment Tool (OAAT), which provides a metric that illustrates the "openness" of a program on both business and technical axes. IBM also led a review of a sample of Navy contracts to determine how well they incorporate Open Architecture business principles and subsequently led development of the Naval OA Contract Guidebook, which provides guidance to Navy and industry personnel on how to incorporate OA business practices into their contracts.

In order to effect the internal cultural change necessary to break down organizational "silos" and propagate Naval Open Architecture principles, IBM led the development of the Navy Open Architecture Stakeholder Analysis and Stakeholder Communications Plan. These efforts identified the internal and external stakeholders of the Naval Enterprise Open Architecture Initiative, roles of the stakeholders, desired level of involvement of the stakeholders, the vehicles through which communications among stakeholders will be facilitated, and the frequency of formal communications.

Benefits

Under the new model for acquisitions, multi-million dollar contracts are being changed to utilize an open approach, not only in the technology employed, but also in the business processes associated with the acquisition of the system, including collaboration with partners in industry and academia. In one program, the acquisition cycle time has been reduced from seven to 2.5 years, and in another program, acquisition costs have been reduced from more than $200M to less than $11M. The typical cost of a new training system has been reduced by 33%.

Overall benefits include:

- Reduced costs and increased competition
- Reduced acquisition cycle times
- Integrating new capabilities in shortened cycle times
- Reduced risk
- Increased reuse across the enterprise
- Increased collaboration across the enterprise

Why it matters

This engagement is complex because it requires changing a culture and business model that has been ingrained in the Navy for over 30 years. It also requires coordination and collaboration across multiple organizational units to work together to cost-effectively acquire new warfighting capabilities to meet emerging threats. These warfighting capabilities must be interoperable with other Navy and Department of Defense systems.

The scope of this engagement affects the entire US Department of the Navy, worldwide. By adopting a new business model, the Navy will be better able to affordably acquire and support weapon systems to counter emerging threats, and reducing acquisition costs through new business models will enable allocations to address other priorities and meet future challenges.