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REPORT IN BRIEF

Examination of the U.S. Air Force's Aircraft Sustainment Needs in the Future and Its Strategy to Meet Those Needs

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The U.S. Air Force weapon system sustainment enterprise is extremely large in terms of scope, workforce, and associated costs that amount to billions of dollars annually. In addition, budget constraints will make it more difficult for the Air Force to continue on its current wartime-like operations. This report highlights many sustainment issues and offers recommendations aimed at improving the efficiency and effectiveness of the Air Force weapon system sustainment enterprise—a process that is enormously complex and, therefore, requires a comprehensive management approach.

Background

The total cost of Air Force sustainment activities, which is in the billions of dollars, exceed the operating costs of such industry giants as American Airlines and Delta Airlines. The ability of the Air Force to keep its aircraft operating at an acceptable operational tempo has is essential to fulfillment of its mission. Maintaining this capability, however, has become much more difficult today since the Air Force has effectively been operating on a wartime-like footing for the past 20 years. In addition, its aircraft have become increasingly more expensive to operate and maintain while future military spending will face growing constraints. Nevertheless, there are several actions the Air Force can take to improve the efficiency and effectiveness of the Air Force weapon system sustainment enterprise.

Examining Aircraft Sustainability

U.S. Air Force weapon sustainment enterprise includes the support functions for maintaining the readiness and operational capability of weapons systems, subsystems, software, and support systems. The Air Force has always made it a priority to keep its aircraft operating at the ready for any mission the nation's leaders direct. This is determined by the number and variety of aircraft, the technology of the systems involved and the global deployment of the fleet.

The fleet's diversity—which ranges from aircraft designed and deployed in the 1950s to the world's most advanced high-performance fighters—weighs on the enterprise's operation. Additionally, the fleet mix has changed over the past 10 to 15 years from being typically hardware-oriented to today's platforms that are dependent on software for up to 80 percent of their functionality. The enterprise has become more complex over time, not only because of the fleet's increased growth and diversity, but due to global politics and regulations as well.

Incorporating Sustainability into Future Design

Today, sustainment activities are undertaken by numerous Air Force offices and organizations. The system has repeatedly met national and global threats, largely because of the dedication of the men and women responsible for the detailed tasks of sustainment. Sustainment activities require significant coordination and communication across a myriad of functions and organizations. At present, however, this process is largely facilitated by interpersonal relationships rather than clear, concise lines of authority and modern enterprise reporting and planning tools. These limitations result in escalating costs and inefficiencies.

While aircraft availability was considered a measure of merit, the Air Force did not provide any officially sanctioned sustainment goals. The lack of these goals affects the entire Air Force. That is, weak or overly broad policies, minimal governance and unnecessarily complex organizational structures contribute to systemic shortcomings that span the weapon system life cycle. The Air Force should establish sustainment goals that are specific and can be understood by all acquisition, contracting, engineering, and sustainment professionals. Headquarters offices should set the tone for Air Force sustainment. While field-level commanders and directors should take action to sustain their fleet, they deserve clear guidance and should be held accountable for execution.

In addition, continued reliance on aging aircraft—such as the B-52, C-130H, A-10, F-16 and C-5B—which have exceeded or will exceed their originally designed life spans, makes new materials, inspection systems and vehicle health monitoring technologies increasingly important. The Air Force should develop a "technology for sustainment" plan that identifies processes, technical agendas, workforce needs, and required funding resources. Unless significant numbers of legacy aircraft are retired, however, the high costs associated with Air Force weapon system sustainment will continue to directly impact the procurement of replacement and new systems.

Other recommendations for improving the Air Force's system sustainment include appointing a senior Air Force commander to be in charge of the entire sustainment enterprise and improving the spare parts chain. Overall, the Air Force sustainment enterprise process is enormously complex, and there is a need for the Air Force to address this process (?) with a comprehensive and inclusive management approach.

Many of the recommendations made throughout the report address specific areas of the Air Force sustainment enterprise, and these recommendations can produce a positive improvement in operational effectiveness, cost efficiency, systems availability and overall responsiveness. A systems approach, however, that prioritizes and balances the implementation of each of these recommendations will be required for the Air Force to achieve these goals.

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