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REPORT

Sustaining the U.S. Air Force Nuclear Mission

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Summary

The biggest challenge likely to confront the U.S. Air Force (USAF) nuclear enterprise in the near future is how to cope with declining total obligation authority and a smaller force structure. To meet this challenge, the USAF needs to have the best processes and tools available to allocate resources across sustainment of all systems in the nuclear enterprise in a way that most efficiently and effectively fulfills its portion of the national nuclear mission. The purpose of this report is to identify ways to strengthen future nuclear deterrence capabilities by better planning and programming for the sustainment of these missions in the present.

This cannot be done well by focusing alone on the sustainment of individual platforms. It requires a mission-based planning view that embraces how the various systems work together to perform a mission. For example, for a mission such as nuclear long-range standoff, this integrates the sustainment, modernization, and recapitalization plans for the W80 nuclear warhead; the air-launched cruise missile that carries it; the B-52H that carries the missile; and the relevant nuclear command, control, and communications (NC3) systems that support them. Sustainment in this context also extends to the full doctrine (and policy), organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) set of resources, processes, and activities needed to ensure the provision of a continuous, reliable capability to fully execute the missions specified by national guidance for some duration into the future.

To position itself most strongly to overcome budgetary pressures and possible reductions in force structure, the Air Force should further strengthen its integrated processes for nuclear mission-based planning with a framework that has two layers, the first consisting of a lower set of sustainment plans for each system, maintained by a system program office (for the weapon systems) or project officers group (for the nuclear weapons). These would follow a common format to facilitate integration and, in time, would present a schedule of activities that exploits the capabilities of information technology systems. The second layer would consist of an integrated master plan that pulls together the salient information from these individual, system-level plans, compiling the individual plans into a master schedule for all systems, taking into account the sustainment and modernization of the current platforms and any need for future recapitalization. We call this an Air Force Nuclear Architecture and Mission Sustainment Plan. It would be the master plan for the nuclear enterprise, detailing how the long-term mission will be sustained, would be guided by national-level guidance, and would serve as the Air Force's input into a Department of Defense nuclear architecture.

Most of the needed elements are in place, but some additions could potentially pay great dividends. Some kind of life-cycle sustainment plan exists for all of the nuclear systems with the exception of the NC3 systems. However, no master integration plan for the nuclear mission lays out the future, integrated calendar for all the systems in a way that monitors and trace-

ably documents the implications of resource allocations and schedule slips. We make a number of recommendations in this report, but in the hierarchy of actions to put in place a complete mission-based planning process for sustainment, the two most promising first steps are to (1) consolidate responsibility for the architecture, systems engineering, and sustaining engineering for Air Force NC3 into a single organization, and (2) create what we call an Air Force Nuclear Architecture and Mission Sustainment Plan. This plan would integrate the sustainment plans of all the nuclear systems, emphasizing a master integrated calendar of activities, and, in time, presenting and monitoring these plans using the capabilities of modern information technology systems.

The anticipated benefits are to strengthen the credibility of the future nuclear mission by improving oversight of the NC3 mission, better integrating these decisions with other related systems, and better monitoring and managing an integrated set of DOTMLPF-based plans for sustaining the most effective and efficient nuclear mission into the future.