Research Brief

RAND PROJECT AIR FORCE

Spend Analyses Conducted for the Air Force F100 Engine Demonstration

The U.S. Air Force shares certain goals with the commercial world: to manage supplies, individual suppliers, and the supply base to attain the best quality, performance, and prices for the goods and services it purchases. In 2002, the Air Force selected the F100 engine, managed at the Oklahoma City Air Logistics Center (OC-ALC), for a test of commercial best practices in the Air Force. The F100 powers more Air Force jet aircraft than any other engine, so any improvements in purchasing and supply management (PSM) would lead to noticeable improvements in total cost and performance throughout the service.

RAND Project AIR FORCE (PAF) provided analytical support and analyzed purchasing patterns for the F100. "Spend analyses," which document what is purchased, how much is spent, and where goods and services are purchased, would allow the Air Force to identify specific goals related to managing its outside providers and suggest where to focus time and resources to achieve its cost and performance goals.

Concentrate Spending with a Few Suppliers for Improved PSM

At the time of the study, the Air Force did not have a single data source for F100 spending, so PAF analyzed data from both the Air Force and Defense Logistics Agency (DLA).[1] PAF found that F100 spending was concentrated among a few suppliers and that certain long-term strategic relationships played a larger role than anyone had imagined before viewing these purchases DoD-wide. PAF's analyses suggest that the Air Force could improve PSM processes by managing the supply base more strategically:

- **Consolidate the number of contracts with top suppliers** or otherwise leverage the relationships.
- **Reduce the total number of suppliers** when there is a redundant source of supply, thus freeing up contracting personnel to become more familiar with their industries (including industry best practices), develop strategic relationships with suppliers, and work on continuous supply chain improvements.
- **Consider collaboration** with other organizations, such as DLA and other military services that purchase goods from the same suppliers.

Apply PSM Innovations in New Contracts

Based on the F100 spend analyses, the Air Force worked to incorporate PSM innovations in contracts for bearings. It spends many millions of dollars annually on the jet engine bearings used in the F100 and several other aircraft, and past supply chain problems for this group of items had adversely affected readiness.

A Commodity Perspective May Bring Substantial Cost Savings

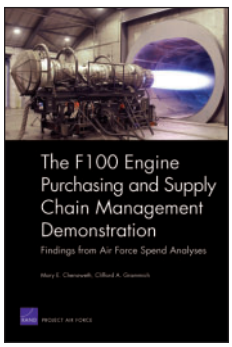
One important outcome of the PAF spend analyses was the Air Force's transition in the demonstration from a weapon system perspective (focusing on the F100) to a commodity perspective (finding savings by managing the purchase of bearings). Using commercial best practices in PSM, Air Force benchmarking of best-in-class companies, and the F100 demonstration, the Air Force Materiel Command (AFMC) has reorganized its purchasing around eight commodity teams.

Spend analyses are essential for applying PSM best practices. As Air Force teams gain more experience, they will undoubtedly uncover further opportunities for helping the service get the most from its resources. ■

[1] Following the F100 PSM demonstration, the Air Force developed a spend analysis tool to allow its commodity teams to conduct such analyses routinely.

RAND Research Areas

The Arts • Child Policy • Civil Justice • Education • Energy and Environment • Health and Health Care • International Affairs • National Security • Population and Aging • Public Safety • Science and Technology • Substance Abuse • Terrorism and Homeland Security • Transportation and Infrastructure • Workforce and Workplace



This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work. This research brief describes work done for RAND Project AIR FORCE and documented in *The F100 Engine Purchasing and Supply Chain Management Demonstration: Findings from Air Force Spend Analyses*, by Mary E. Chenoweth and Clifford A. Grammich, MG-424-AF (available at http://www.rand.org/pubs/monographs/MG424/), 2006, 88 pp., ISBN: 978-0-8330-3889-0.

RAND Offices

Santa Monica, CA • Washington, DC • Pittsburgh, PA • Jackson, MS • Doha, QA • Cambridge, UK

www.rand.org

RB-191-AF (2006)