

Implementing Alternative Sourcing Strategies: Four Case Studies



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IBM Center for
**The Business
of Government**

MARKET-BASED GOVERNMENT SERIES

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TABLE OF CONTENTS

Foreword	4
Overview	5
<i>By Jacques S. Gansler, William Lucyshyn, and John Barker</i>	
Introduction	5
Case Study Summaries	9
Recommendations	11
Endnotes	14
Case Study 1: Outsourcing—Outsourcing Desktop Initiative for NASA Results in Improved Service, Consistency, and Quality	15
<i>By William Lucyshyn and Robert Maly</i>	
Introduction	15
Background: Why Outsourcing?.....	15
Implementation Challenges.....	20
Results	23
Lessons Learned.....	26
Endnotes	29
Case Study 2: Competitive Sourcing—The IRS Improves Performance and Modernizes Operations	31
<i>By William Lucyshyn and Sandra Young</i>	
Introduction	31
Background	32
IRS Implementation.....	36
Competing Area Distribution Centers.....	40
Competing IRS Campus Center Operations Support and Services ...	41
Potential Implementation Challenges	43
Results	44
Lessons Learned.....	44
Endnotes	46
Case Study 3: Competitive Sourcing at Offutt Air Force Base—A Collaborative Public Sector Approach	48
<i>By John Barker and Russell Lundberg</i>	
Summary	48
Background	48
Description of the A-76 Competition Process	49
Timeline at Offutt: Who and When.....	51
Implementation Challenges.....	52
Results	54
Lessons Learned.....	57
Endnotes	58

Case Study 4: Public-Private Partnership—A Pilot “Virtual Prime Vendor” Contract to Supply C-130 Parts59
By William Lucyshyn and Jonathan Roberts

- Introduction59
- Background60
- The C-130 Propeller Assembly VPV Contract63
- Implementation Challenges.....65
- Results69
- Lessons Learned.....70
- Epilogue.....71
- Endnotes73

About the Editors75

About the Contributors.....77

Key Contact Information.....79

F O R E W O R D

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On behalf of the IBM Center for The Business of Government, we are pleased to present this report, "Implementing Alternative Sourcing Strategies: Four Case Studies," edited by Jacques S. Gansler and William Lucyshyn.

Over the next several years, the federal government will continue to face growing pressure to provide more and improved services while containing or reducing costs. In this report, Gansler and Lucyshyn present four case studies that highlight how different organizations have implemented outsourcing, competitive sourcing, and public-private partnerships to achieve savings and better performance. The case studies illustrate four different approaches used by federal agencies, the challenges they faced, and the results they achieved. Together with Gansler's previous reports for the IBM Center for The Business of Government, "Moving Toward Market-Based Government" (March 2004) and "Competitive Sourcing: What Happens to Federal Employees?" (October 2004, co-authored with Lucyshyn), these case studies offer valuable lessons to both public agencies and government contractors on various strategies and approaches that can be used to meet mission requirements and achieve improved government performance.

The first case study is the National Aeronautics and Space Administration's initiative to outsource its computer desktop maintenance to the private sector. The second one illustrates the use of competitive sourcing by the Internal Revenue Service as part of its overall effort to modernize the agency. The third case, Offutt Air Force Base's decision to compete more than 1,500 positions, is an example of the military's efforts to shift more active duty personnel into positions that are combat oriented rather than support oriented. The final case study, which describes a form of public-private partnership for maintenance of C-130 aircraft propeller assemblies at Robins Air Force Base, demonstrates the Air Force's commitment to reducing costs to make funds available for military modernization.

The four case studies reflect the increased sophistication of various alternative sourcing strategies used by federal agencies, as well as the growing awareness that an effective way to achieve savings and better performance in the business of government can be achieved through the use of competitive market forces in their various forms: competitive sourcing, outsourcing, and public-private partnerships.

We trust that this report will be informative and useful to all those involved in using market-based government to improve the effectiveness of government, reduce costs, and mitigate the effects of increasingly tight budgets.

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Overview

By Jacques S. Gansler, William Lucyshyn, and John Barker

Introduction

During the next few years, the federal government will face growing pressure to provide more and improved services while containing or reducing costs. What is being asked of the federal government today is what was demanded of U.S. private industry in the latter part of the 20th century in order to remain competitive—namely, to make changes that result in getting more while spending less. The goal of federal acquisition policy should be to create a government that looks a lot more like a dynamic, restructured, reengineered, world-class business. There are many good examples of successful American businesses that have come to rely on core competencies to do what they do best.¹ The federal government must learn from their success stories to focus on those functions that are inherently governmental—“public core competencies” such as *policy, fiscal management, oversight, and warfighting*. For all other current government activities, the public sector must consider alternative sourcing strategies that introduce competition—market-based government—to achieve higher performance at lower cost and to get the “best value” from either the private or the public sector. This is a proven way to improve the effectiveness of government, reduce costs, and mitigate the effects of extremely tight budgets.

This report presents four case studies that highlight how different organizations have implemented alternative sourcing approaches (outsourcing, competitive sourcing, and public-private partnerships), the challenges they faced, and the results they achieved.

Alternative Sourcing Strategies That Enhance Mission Goals

In the past, most government functions (including many that are common to those accomplished in the private sector) have been performed “in-house” by government workers in government facilities. However, in recent years, government at all levels has found that introducing some form of competition has significant benefits in both performance gains and cost reductions.² Many techniques are used. Agencies can competitively “outsource” the work, use “competitive sourcing” (public versus private competitions), or make use of various forms of “public-private partnerships”—such as “prime vendor” contracts, which avoid the expense and inefficiency of maintaining large, centralized government inventories and storage facilities. These techniques involve specific procedures established for private agency and public sector teams to bid competitively on the work involved. Privatization, in which government equipment, facilities, and workers are transferred to the private sector on a competitive or sole-source basis, also may be used.³

In the past decade, there has been more focus on *questioning* the desirability of government monopoly suppliers, rather than the historic practice of *encouraging* the public sector to provide services that could just as easily be provided competitively by the private sector. Poor performance, bloated budgets, huge deficits, inefficient supply chains, and costly inventories are some of the motivations for considering transferring many of these functions to the private sector, or at least subjecting them to market-based competitive forces. Many major

American corporations have dealt with these same problems over the past 20 years and have developed resources to overcome them and return to profitability. Trash removal, military housing, catering, public transportation, toll roads, aircraft maintenance, logistics, publishing, printing, and a host of other fields in which the public sector duplicates private sector activities are obvious candidates for privatization, outsourcing, or competitive bidding between public agencies and the private sector. While some functions must remain the sole responsibility of government employees—such as policy making and criminal justice—there are just as many that could be transferred to the private sector, as long as the government saves money by doing so and achieves better performance than could be provided by retaining them within the public sector.⁴

One good example of this is the Department of Defense (DoD), the largest federal department. In 2001, Business Executives for National Security (BENS) released a report based on a study conducted by its “Tail to Tooth Commission,” recommending that the Pentagon “bring world-class business practices to the Department of Defense and reinvest the billions saved in combat capabilities.” In making this recommendation, the commission stated that “adopting modern business practices is the most efficient way to harness cutting-edge technology. The Pentagon’s traditional methods of buying equipment are too slow and costly when technology is advancing so rapidly. Business leaders have come to the realization that buying a [needed] service, rather than hardware [buying the equipment and doing it themselves], allows them to capture and maintain [modern] technology developments; the Pentagon must act on this recognition as well.”⁵

Although the BENS Commission was correct in stating that DoD has a long way to go to meet the goal of operating like a world-class business, the Pentagon *has* been making substantial progress in adapting acquisition strategies from private sector models. It has now become almost a *mantra* within the department that savings resulting from competition frees up resources for modernization and combat, while higher performance creates greater effectiveness, keeping scarce equipment modernized and in good working order. Under

the Clinton administration, for example, the Office of Management and Budget estimated savings of roughly \$9.2 billion in DoD operating costs between 1997 and 2005, and \$2.8 billion in annual recurring savings after 2005, as the direct result of competitive sourcing.⁶ The Bush administration planned an even more aggressive competition schedule. Under the President’s Management Agenda, about 425,000 positions throughout the entire federal government (about half of those jobs categorized as not inherently governmental) were to be competitively sourced.

Competitive Sourcing

The competitive sourcing bidding process determines whether the public or the private sector can do the job faster, at lower cost, and with better performance. Competitive sourcing is a method of introducing competition into government services, replacing the government’s traditional monopoly with much greater incentive for improved operational efficiency at significantly lower costs. Jobs that are deemed “not inherently governmental” (i.e., “commercial”) are put into bid packages, with the private and public sectors competing for the contract. In cases where the government agency wins the competition, however, there is not a formal “contract award.” This occurs only when the private sector bidder wins.

These competitions are held under guidelines established by the federal Office of Management and Budget (OMB). The guidelines are referred to as “A-76 competitions” after the federal circular in which they are published. The private sector bids, along with the proposal from the government organization, are evaluated, and the lowest cost provider (in some cases A-76 allows best-value criteria to be used) is selected to provide the desired services. On average, the winning bid (either public or private) leads to sustained savings of more than 30 percent of the projected total costs with no decrease in performance.⁷ When examined historically, it appears that average savings have increased over time due to improvements in handling these competitions. Average savings before 1994 were around 31 percent; savings from competitions since then have averaged around 42 percent.⁸

Outsourcing

Outsourcing differs from competitive sourcing in several ways. Under outsourcing, the government agency concludes, in advance, that the best way to achieve greater efficiency, higher performance, and substantial cost savings is to contract out the work to a private vendor. There is no competition between the government agency and the private vendor for the work to be performed. The “competition” is among the private vendors bidding for the contract to perform the work or provide the service. Outsourcing has become an increasingly common practice in federal, state, and local agencies.

The private sector has made increasing use of outsourcing over the past decade. Recent press accounts indicate that some companies have moved non-core operations to (mostly) third-world countries, which offer substantially lower salaries to workers in repetitive or low-grade occupations such as order taking, service inquiries, software programming, and telemarketing.

However, outsourcing is also practiced extensively in domestic operations. McDonald’s, for example, has recently outsourced part of its takeout operations. In many McDonald’s, the customer drives up to the menu station and places his order for an Egg McMuffin over the intercom. The friendly voice on the other end takes the order, suggests the option of adding home fries, then adds up the total and asks the customer to drive to the takeout window. The order is handed over to the customer and the purchase completed. The customer’s order, however, travels all the way to Denver, Colorado, and back, in the time it takes to drive up to the takeout window. Many McDonald’s have outsourced their menu intake service to a Colorado call center. The call center takes the order, takes an electronic photo of the customer (which is destroyed as soon as the order is completed), and dispatches the information back to the McDonald’s where the order originated—all in seconds. The order is completed and the customer goes on his way, oblivious to the fact that his breakfast selection has been processed in Denver. According to Steven Bigari, the operator of the call center, the operation is a success for the same reason that so many similar businesses have been successful: “lower costs, greater speed, and fewer mistakes.”⁹

Privatization

Privatization shifts *both* the work and the assets (personnel and facilities) required to perform the work from public agencies to private vendors. There are various forms of privatization, though all vary only by the degree to which assets and workload are transferred to the private sector. Under full privatization, *all* assets and workers are transferred to the private sector. Under partial privatization, only the workers are privatized; all assets continue to be owned by the government. “Privatization-in-place” keeps both workforce and assets in place, but shifted to the private sector. A special form of privatization uses an “Employee Stock Ownership Plan” (ESOP). Here, the entire operation is transferred to a newly created private firm, which is owned by the former government employees. In this case, the competition occurs when the new firm enters the market for business.

Public-Private Partnerships

The final category of government acquisition is public-private partnerships; these allow the public and private sectors to share the costs, risks, benefits, and profits. Public-private partnerships can take many forms where production work, facilities management, and the investment of capital are functions that can be shared between public and private entities to obtain efficiency and cost savings. Public-private partnership must operate in a competitive environment to be truly effective; otherwise, there are no incentives for improving performance.¹⁰

One type of public-private partnership that the government has established is known as “prime vendor.” This concept originated in the private sector, with the creation and fostering of close working relationships between companies and their suppliers.¹¹ This strategy continues to evolve—even on a global scale—as companies seek to increase efficiency and product/service quality, as well as competition. Prime vendor contracts permit federal agencies throughout the country (and various parts of the world) to partner with a commercial supplier and procure multiple, readily available items directly from them at discounted prices for quick delivery. These contracts, according to a DoD announcement, “not only provide improved service, but avoid the cost of building warehouses and maintaining inventories.”¹²

Prime vendor contracts have become increasingly popular, and their use was expanded dramatically in the last days of the Clinton administration.¹³ Today, most DoD pharmaceutical supplies, as well as Navy dining hall and shipboard mess purchases, are made through prime vendor contracts. The Defense Medical Logistics Standard Support system (DMLSS), for example, replaces excessive medical supply inventories at facilities with “just-in-time” inventories. Excessive order-to-delivery times are a thing of the past—replaced by deliveries within hours of order. Money is saved, inventories are trimmed, drug obsolescence is avoided, and medical supplies are available when needed.

Prime vendor appears to be a sensible and realistic way to reduce some of the cost and risk of maintaining inventories with the private sector partner, with both sharing in the benefits. The case study used to illustrate what a prime vendor relationship looks like (Robins Air Force Base C-130 engine maintenance) describes the expansion of these contracts from supply of readily available commercial items to the first attempt to apply the prime vendor concept to components of a major weapon system.

The Defense Department’s “Revolution in Business Affairs”

For a number of years, DoD has taken the lead within the federal government in exploring various forms of outsourcing and competitive sourcing that promised substantial savings and increased performance. Most recent efforts are part of an overall “reinventing government” initiative that considered radical new ways of performing the public’s business and thereby brought renewed focus on making government more efficient and effective. The initial undertakings were successful, and the acquisition strategy quickly took hold. The DoD’s Revolution in Military Affairs—a major initiative, unveiled in the 1990s, aimed at changing the way the nation’s military engages in combat and acquires and supplies the equipment and services needed to sustain troops in combat—was to be paid for by an equally revolutionary initiative to transform the way DoD does business. The Revolution in Business Affairs was aimed at freeing up scarce funds that could be put to direct use to modernize and replace outdated and aging equipment. Using a combination of acquisition strategies, the Pentagon believed

it could operate at lower cost and with greatly enhanced performance. The Revolution in Business Affairs would, in essence, fund the Revolution in Military Affairs.

The rest of the federal government has now embraced, or at least accepted, the concept and goals of the new acquisition strategy. Federal agencies initially were reluctant to move in the direction of more outsourcing, privatization, and competitive sourcing due, in some cases, to simple bureaucratic inertia, but also to opposition from government employee groups that see competition as an attempt to reduce the federal workforce, and from elected representatives who have military bases, depots, or large government agencies in their districts. Much of the argument centers on the perceived fairness of the market-based approaches, their benefits, and the extent to which government workers will lose jobs when they are used.

A previous report found that there is still much confusion between competitive sourcing, outsourcing, privatization, and public-private partnerships. Competitive sourcing, for example, is often confused with outsourcing or privatization (as it is frequently misrepresented in the press and by those who oppose it). However, when the results of competitive sourcing are analyzed, the data show that the public sector has won 40 to 60 percent of the full competitions—and 98 percent of the smaller, “streamlined” ones—and that the government’s overall win percentage is increasing.

The results of these initiatives—based on over 2,000 cases in DoD alone, plus hundreds of others at the federal, state, and local levels—clearly show that when competitive sourcing or other market-based sourcing strategies are used, *performance improves significantly and costs go down by an average of over 30 percent*. This result holds true whether the winner is the government organization or the private sector. Even when the award stays within the government, performance improves and costs go down (for the three examples of public sector wins described in this report, the savings were 44 percent, 78 percent, and 60 percent). We can only conclude that this is a result of the shift from a monopoly environment to a competitive one—the incentives created by competition make the difference. Additionally, these results are

achieved by reducing government staffing by 20 to 40 percent or more; however, through a combination of various techniques, such as early retirement, transfers, and so on, the average percentage of government employees involuntarily separated has been in the single digits.¹⁴

Case Study Summaries

The four case studies have been selected to illustrate different approaches to market-based government acquisition of goods and services. As such, they offer valuable lessons to both public agencies and private companies on various strategies and approaches that can be used to meet mission requirements and achieve modernization goals. The first case study, the National Aeronautics and Space Administration’s (NASA) decision to outsource its computer desktop maintenance to private contractors, is a step by the agency to refocus its energies on “core” capabilities—freeing more technology staff to work on space exploration as opposed to support functions. The second case study illustrates the use of competitive sourcing by the Internal Revenue Service (IRS) as part of its overall effort to modernize the agency. The third case, Offutt Air Force Base’s decision to place more than 1,500 positions at play through competitive sourcing, is an example of the military’s efforts to put more active duty personnel into positions that are combat oriented, and thus reduce the number of service men and women assigned to essentially civilian tasks. The final case study, which adapts a form of public-private partnership for maintenance of C-130 aircraft propeller assemblies at Robins Air Force Base, describes one approach the Air Force uses to reduce costs.

Outsourcing: Outsourcing Desktop Initiative for NASA Results in Improved Service, Consistency, and Quality

Hoping to cut desktop computing costs by as much as 25 percent, NASA officials opted for an outsourcing strategy—an initiative to provide desktop computers, services, and maintenance for its employees—that would not only trim costs, but also promote interoperability¹⁵ across the NASA network as well as increase the quality of service.

The strategy appears to have worked. NASA estimates a 32 percent cost savings and substantial improvements in service delivery—a 99 percent service availability—and consistency across the agency. The services are also provided at a fixed price, so managers are able to see the actual cost of information technology and can accurately budget it. Security has also been enhanced. Furthermore, employees have not been displaced by outsourcing of computer services; they have been shifted to core mission work. The program has achieved a level of legitimacy that enables the agency to expand on its initial success.

Competitive Sourcing: The IRS Improves Performance and Modernizes Operations

The Internal Revenue Service has used the competitive sourcing process to rethink its functions and modernize its business processes, resulting in substantial improvements in its delivery of services to the American taxpayer. The IRS deals directly with more individual Americans than any other government or private agency. The agency processes 13 million tax returns annually. It has approximately

Table 1: Before and After Outsourcing Desktop Initiative for NASA (ODIN)

	Pre-ODIN	Post-ODIN
Provider	Combination of NASA and contractor employees managed by NASA managers.	Contractor employees managed by contractor management. Oversight of ODIN contracts provided by NASA managers.
Hardware and Software	Procured and owned by NASA organizations. Age range of equipment was up to 10 years. Issues with standardization, interoperability, and security.	Provided by ODIN contractor. Age range down to three years, with average age of 18 months. Hardware and software standardized across the center, improving interoperability and security.
Budget	Sourced from several organizational levels and sources within NASA, with no good way to allocate all costs.	Firm fixed price per seat.
Performance	Met required service levels.	Generally exceeds required service levels.

100,000 employees and an annual budget of \$10 billion. By many accounts, however, the agency was doing a terrible job in the mid-1990s. And the problems the agency faced in the late 1990s were widespread, deep, and complex, according to agency internal documents.¹⁶

In the late 1990s, as the IRS began to take a serious look at its deficiencies, it concluded that the key to providing improved services was modernization. And the prime incentive to modernize was the mandate contained in the 2001 President’s Management Agenda that required all federal agencies to apply competitive sourcing to their acquisition strategy.

Given its prior problems (and the need for change), the IRS was quick to adapt competitive sourcing to its overall modernization efforts—but with a twist. The focus of its modernization effort was to rethink “functions,” not just existing activities. The agency chose not to rely on metrics such as the number of full-time jobs competed or the number of studies conducted; rather, it focused its attention on creating business case analyses and reassessing the overall functions of the organization. The case study details the process by which the IRS undertook this dramatic re-assessment and the results to date.

Two recent competitions are summarized that demonstrate the dramatic results that are possible. The Area Distribution Center (responsible for written and telephone requests for documents) competition was won by the government employee unit. Their proposal identified the surplus capacity produced

by the shift to digital products, and will close two of three facilities and reduce the number of employees by 60 percent (see Table 2).

The Campus Operations and Support Competition, also won by the government employees, will re-engineer responsibilities and processes and reduce the support staff by a dramatic 78 percent (see Table 3).

Clearly, the presence of competition in these two IRS examples had a dramatic impact. Even though the public sector won (in both cases), the processes were changed and the resultant reductions in personnel were significant—60 percent and 78 percent respectively (the total savings should be even greater).

**Competitive Sourcing at Offutt AFB—
A Collaborative Public Sector Approach**

The 55th Wing at Offutt Air Force Base decided to save on manpower resources by placing 1,500 jobs and a variety of base activities on the block for “competitive sourcing.” After a 42-month competition, the government proposal was the winner, delivering a 58 percent decrease in manpower costs alone (see Table 4).

The Offutt proposal ensured personnel savings alone of at least \$46 million annually. The private contractor’s bid would have saved 42 percent. The number of jobs involved in the Offutt competition made it one of the largest and most successful of its kind.¹⁷

Although there is a common misperception that contractors always win, this case again highlights that government employees can successfully com-

Table 2: Before and After IRS Area Distribution Center Competition

	Pre-Competition	Post-Competition
Provider	Run and managed by public sector.	Run and managed by public sector.
Function	Designed to respond to paper and telephone requests for documents.	Will be updated to reflect changes in the ways information is disseminated.
Facilities	Used three government printing facilities.	Will use one existing government printing facility.
Employees	400 FTEs	Will eliminate the need for about 240 FTEs—a 60% reduction.
Performance	Met required service levels.	Office of Competitive Sourcing anticipates even better service.

Table 3: Before and After IRS Campus Operations and Support Competition

	Pre-Competition	Post-Competition
Provider	Run and managed by public sector.	Run and managed by public sector.
Facilities	Ten government-owned Campus Centers are distributed around the country.	Will use the same infrastructure.
Employees	Nineteen to 36 employees located at each site (278 total employees).	Five employees at each site, plus 10 at quality control center (60 total employees—a 78% reduction).
Performance	Relied on existing business models, even though technology was changing.	Reengineered existing processes, which will dramatically reduce workload.

pete with the private sector; the result is substantial savings in manpower while improving performance—all the result of introducing competition.

Public-Private Partnership: A Pilot “Virtual Prime Vendor” Contract to Supply C-130 Parts

The Defense Logistics Agency (DLA) selected a “Virtual Prime Vendor” to provide parts and consumables for C-130 aircraft propeller assemblies’ maintenance for Robins Air Force Base, Georgia. Improvements in maintaining inventories have dramatically increased the efficiency of many private firms in recent years, but the government has been slow to adapt them to its logistics supply chain. Although efforts by the Department of Defense to expand the use of prime vendor contracts have been successful, that use has been primarily restricted to commercial supplies, such as food and medical supplies. DLA’s contract with Hamilton Standard to supply components for the C-130 military cargo plane, under a virtual prime

vendor contract, was the first attempt to apply the concept to a major component of a strategic weapons system. The lessons learned indicate that both the private sector and government agencies can benefit and create efficiencies of operation for each. Integrating government supply chains is no easy task because of their size, complexity, and overall importance. However, the contract for C-130 maintenance at Robins demonstrates that the virtual prime vendor model can work, even for large, complex weapons systems.

Recommendations

These four case studies reflect the growing sophistication of various acquisition strategies used by federal agencies, as well as the growing awareness that an effective way to achieve savings and better performance in the business of government is through the use of competitive market forces—in whatever form: outsourcing, partnership, or competition with the private sector.

Table 4: Before and After 55th Wing Base Support Competition

	Pre-Competition	Post-Competition
Provider	All functions assigned to base personnel.	All functions assigned to base personnel.
Function	Support functions	Support functions
Facilities	Base facilities used.	Base facilities used.
Employees	1,459	511*

*Represents a savings of \$46 million annually; a 58 percent reduction in manpower costs.

Table 5: Traditional DLA Supply Compared to Virtual Prime Vendor

	Traditional Supply Chain	Virtual Prime Vendor Integrated Supply Chain
Manufacturers	<ul style="list-style-type: none"> • Deliver parts to DLA storage facilities. 	<ul style="list-style-type: none"> • Deliver parts directly to end users.
DLA	<ul style="list-style-type: none"> • Order parts from manufacturers. • Receive orders, store inventory. • Ship items from warehoused inventory based on requestors' orders. 	<ul style="list-style-type: none"> • Oversee contract and performance requirements.
End Users	<ul style="list-style-type: none"> • Maintain stockpiles at individual depots. • Place orders for parts with DLA. 	<ul style="list-style-type: none"> • Place orders with prime vendor. • Benefit from prime vendor's enhanced forecasting capabilities.

It must be emphasized, however, that the ultimate goal is not simply to cut back costs or to reduce jobs and activities. It is to encourage government to adapt those principles that have created highly efficient and effective world-class businesses to the needs of the public sector. Specifically, to use competition to drive innovation: for better performance at lower costs. Such was certainly the case in the decision of the IRS to undertake the bureaucratic equivalent of a major restructuring. This does not mean, of course, that government should *become* business, but rather that it should look more like successful business enterprises—mindful of the need to emphasize enhanced service quality as well as cost savings. Some effective business solutions provide the direction for the public sector. Most important among these, perhaps, is the role of competition—when properly applied—in creating higher performance at lower costs.

Recommendation 1: Leadership

Agency heads must provide strong, long-term executive leadership; it is especially critical to obtaining and maintaining organizational support for the alternative sourcing strategies, as well as to changing a deep-rooted organizational culture.

An essential element in implementing a market-based acquisition strategy is leadership. In two of the case studies, for example, we see evidence that strong leadership in the competition phase produced a successful transformation. In the NASA case study, turnover in leadership threatened to dismantle the program. In the Offutt case, the outsourcing competition was directed by an Air Force lieutenant colonel who vowed that the base would do everything it could to avoid the problems that

beset similar competitions at other Air Force installations. He was also committed to take the time to be “deliberate and thorough” in order to ensure that the whole process was completed without error. His leadership was essential to getting the job done—and done right. In order for alternative sourcing approaches to succeed, management support must exist at all levels of an organization and at every phase of the implementation.

Recommendation 2: Planning

Agency heads must ensure that there is adequate planning in order to reap the maximum benefits for alternative sourcing strategies.

When the agency involved decides that it wants to do a better job, more efficiently, at lower cost, it is well on the way to a successful acquisition strategy. For those who enter the fray simply to comply with regulations and are lackluster in their support, failure is much more likely. The planning phase is critical—from accurately and consistently categorizing positions when conducting the FAIR Act inventory, to identifying the functions to be competed, to developing a comprehensive business case analysis, and finally to identifying prospective contractors and approaches to solicit their participation. Thorough planning is the foundation that will support a successful agency program.

Recommendation 3: Change Management

Agency heads must recognize that alternative sourcing strategies will drive major changes (in many cases, changing the focus from being “doers” to becoming “managers of doers”), and they must develop approaches and incentives to manage the selected performance.

During the transition to outsourcing, senior managers should use incentives to overcome resistance from government users. In the ODIN case, such incentives for personnel could have been especially useful because the goals and perspectives of the CIOs and the end users were different. Similarly, in those cases where the in-house team is the winner, dramatic process and personnel changes will be required, which will necessitate strong change management for a successful transformation.

Recommendation 4: Communication

Managers of agency sourcing programs must develop and maintain comprehensive communication with all stakeholders.

All successful programs have stressed the need for open and frank communication with those affected by these alternative sourcing programs. The communication program should work to demystify the process by providing information on the decision-making process, personnel decision options, and program timelines.

Recommendation 5: Follow-Up

Alternative sourcing programs must include an ongoing control function to ensure contracts and agreements are executing as proposed.

A critical aspect of any agency program is the follow-up, after the award, to ensure performance requirements are met. In the case of competitive sourcing with a public sector win, agencies must develop procedures to ensure that the government's most efficient organization is executed as proposed.

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Opinions, conclusions, and recommendations expressed or implied do not represent the views of any federal agency.

Endnotes

1. Good examples are FEDEX, Caterpillar, and Dell Computers.
2. Jacques S. Gansler, "Moving Toward Market-Based Government: The Changing Role of Government as the Provider." IBM Center for The Business of Government, June 2003.
3. Ibid.
4. Congress mandated, under the Federal Acquisition Inventory Reform Act (FAIR), that all federal agencies must identify those positions that were "not inherently governmental." The legislation was enacted in 1998.
5. BENS, *Tail To Tooth Commission*, February 2001.
6. Frances Clark, et al., "Long Run Costs and Performance Effects of Competitive Sourcing," Center for Naval Analysis, February 2001.
7. Clark et al., op. cit.
8. Cheryl B. Resemble, Center for Naval Analysis Presentation, "A76: The View From DoD," October 2001.
9. *New York Times*, July 18, 2004, p. B3.
10. Gansler, op. cit., p. 32.
11. Wal-Mart and Amazon.com are good examples of this type of close relationship between company and suppliers.
12. Undated memorandum from Deputy Secretary of Defense John J. Hamre to senior DoD officials ordering expansion of prime vendor contracting. Although Hamre's memo bears no date, it can be reliably assigned to the 1998–1999 time frame.
13. Ibid.
14. For an extensive analysis of Department of Defense data on competitive sourcing, see Jacques S. Gansler and William Lucyshyn, "Competitive Sourcing: What Happens to Federal Employees?" IBM Center for The Business of Government, October 2004.
15. "Interoperability" is a term used to describe the ability to use common parts in a variety of systems.
16. IRS Progress Report from the Commissioner, December 2001, p. 2.
17. Competitions held at Lackland AFB, Texas, and Maxwell AFB, Alabama, both ran into serious difficulties due to failure to adhere to both the spirit and the letter of the A-76 requirements.

Case Study 1:

Outsourcing—Outsourcing Desktop Initiative for NASA Results in Improved Service, Consistency, and Quality

By William Lucyshyn and Robert Maly

Introduction

“Faster, better, cheaper” became the mantra of the National Aeronautics and Space Administration in 1992 when Dan Goldin was appointed its administrator. Goldin, whose tenure of nine years was longer than any other chief in the history of NASA, was an acknowledged leader in “re inventing” government.¹ When NASA’s budget was cut he never complained; rather, he believed the cuts would force much-needed change in an agency where cost and schedule overruns were routine. Based on this culture, it was only natural (during Goldin’s tenure) for NASA to examine internal support functions; the chief information officer focused on IT support. One result was the Outsourcing Desktop Initiative for NASA (ODIN) program—“a long-term outsourcing arrangement with the commercial sector which transfers to it the responsibility and risk for providing and managing the vast majority of NASA’s desktop, server, and intra-center communication assets and services as the agency downsizes and refocuses IT personnel to agency core missions.”²

Background: Why Outsourcing?

In 1996, NASA’s Chief Information Officer Ron West sponsored a study to investigate the viability and desirability of outsourcing the acquisition and support of NASA’s desktop computing and support services to the commercial sector.³ Along with the internal pressures, West was also responding to the Clinger-Cohen Act of 1996, which mandated that the federal government ensure that its agencies were making the most efficient use of IT resources and, in general, increasing competencies in IT performance. In addition, the Government

Performance and Results Act (1993) required each federal agency to develop, by the end of fiscal year 1997, strategic plans that cover a period of at least five years and include the agency’s mission statement; to identify the agency’s long-term strategic goals; and to describe how the agency intends to achieve those goals through its activities and through its human capital, information, and other resources.⁴

The resulting NASA study, *Business Case for Outsourcing of Desktop Computers*, was released on October 24, 1996. In it, the agency concluded that outsourcing desktop services would achieve significant cost savings, interoperability across NASA, increased service quality, and increased mission focus. NASA officials hoped to cut desktop computing costs by as much as 25 percent.⁵ In addition, with one set of contracts across the

Acronyms

CIO	Chief Information Officer
COTR	Contracting Officer’s Technical Representative
DOCOTR	Delivery Order Contracting Officer’s Technical Representative
GAO	Government Accountability Office
GSA	General Services Administration
GWAC	Government-Wide Acquisition Contract
IDIQ	Indefinite Delivery Indefinite Quantity
IT	Information Technology
NASA	National Aeronautics and Space Administration
ODIN	Outsourcing Desktop Initiative for NASA

Table 1: ODIN Customers and Benefits⁶

Customer	Benefit
Senior NASA management (agency, center, enterprise)	Opportunity to focus NASA civil service personnel on core R&D activities and reduce cost management and cost containment of IT assets.
IT providers (NASA CIO organizations)	Opportunity to promote IT systems and product interoperability and enable more cost-effective life cycle management of IT assets.
End user (NASA employees)	Opportunity to enhance and optimize service delivery by delivering state-of-the-art IT capabilities and ensuring routine, continuous technology refreshment.
Outside NASA	Availability of ODIN contracts to all federal agencies through GSA.

agency, NASA believed it could use full-cost accounting to accurately track spending on computer products and services, rather than the traditional cost-plus accounting system (based largely on only direct labor hours and material), which prevented visibility into costs related to specific tasks. There had been many “hidden” (“indirect”) costs associated with providing desktop service, and NASA simply didn’t know its true costs.⁷ One manager involved in the initiative at the time summarized the lack of cost accountability: “If you can show me a federal manager who really knows what his cost is per seat, I’ll buy you lunch and dinner for the next two years.”⁸

The potential for cost savings and accountability were not the only motivating factors for implementing ODIN—they were not even the primary factors. *Based on the results of the Business Case and successful models in the commercial sector, NASA management concluded that ODIN could also significantly increase service quality, achieve interoperability and standardization among NASA computer operations, and allow NASA employees to focus on their core responsibilities.*

Achieving improvements in service quality was a top priority. Prior to ODIN’s implementation, the technological range of computer equipment across the agency was great; operating systems were disparate. Some departments were using state-of-the-art computer equipment while others were using hardware and software 10 years old. Improving desktop service quality was also a priority. Variations in customer service were great—response times at different departments ranged from minutes to days. In fact, prior to ODIN, the

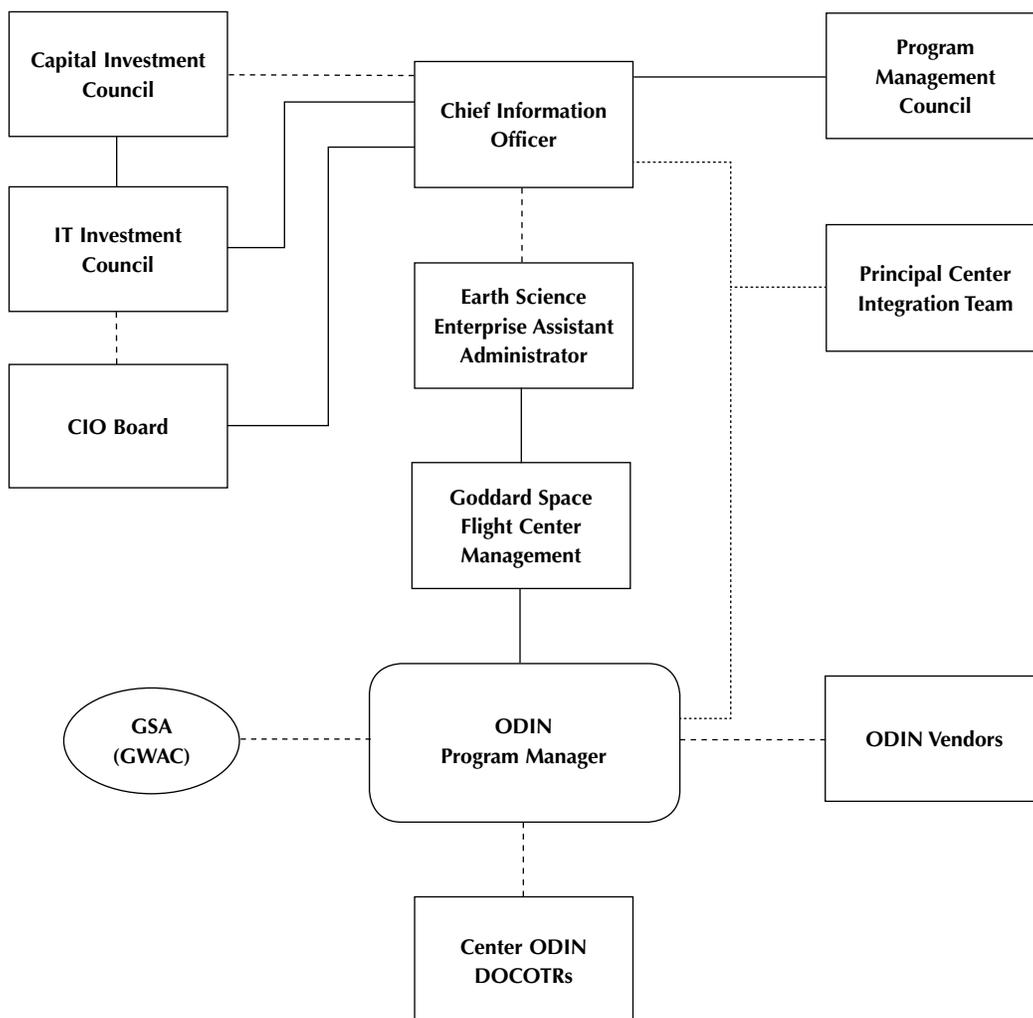
agency did not even have a measurement of customer satisfaction. Ultimately, the lowest cost bidder won only one of the 10 ODIN delivery orders, because NASA officials were primarily concerned about an improvement in service quality.⁹

Finally, before outsourcing a function, OMB Circular A-76 would normally require an agency to develop an in-house Most Efficient Organization (MEO) with an MEO bid to compete with the contractor proposals. However, it was NASA’s position that since no affected employees would be displaced solely due to the possible outsourcing, this initiative would be exempted from OMB Circular A-76. The NASA inspector general (IG) found that through attrition, reassignment, and retraining, this requirement was satisfied.¹⁰

NASA Administrator Goldin believed ODIN was consistent with NASA’s overall strategic plan goals to use IT in order to perform crosscutting processes that manage strategically, provide products and capabilities, and generate and communicate knowledge.¹¹ Goldin also believed ODIN would be consistent with his “faster, better, cheaper” management philosophy, and he hoped ODIN would achieve the following specific objectives:¹²

- Focus NASA civil service personnel on core research and development (R&D) activities.
- Promote information technology systems and product interoperability.
- Enhance and optimize service delivery.
- Reduce cost and improve cost management and cost containment.

Figure 1: ODIN Program Management Structure

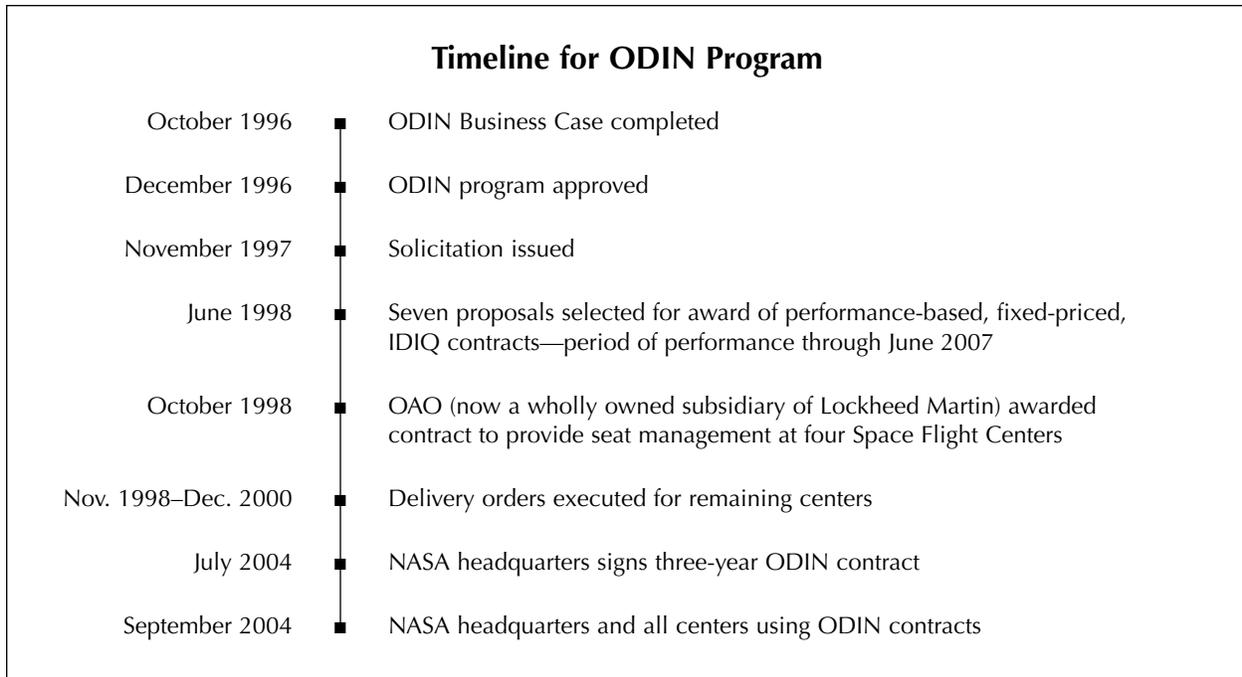


Source: Outsourcing Desktop Initiative for NASA Program Plan

On December 16, 1996, Goldin approved the ODIN program initiative.

At the time, each of the 10 NASA centers was responsible for selecting its own IT system and support that met agency standards. In contrast, ODIN was designed to give ODIN contractors joint responsibility for service- and product-level integration, interoperability, and functionality according to NASA’s IT requirements.¹³ Figure 1 illustrates this capacity. Under ODIN, NASA would award an indefinite-delivery indefinite-quantity (IDIQ) contract to a pool of contractors, whereupon each service center could choose its own contractor

and quantity of services from that predefined pool. Under the IDIQ arrangement, none of the contractors would be guaranteed sales, so each contractor would have to compete with all the other eligible vendors. Each NASA center would select one of the contractors as its exclusive desktop services provider for three years.¹⁴ At the same time, the General Services Administration (GSA) was developing a similar program to offer seat management to federal agencies (see “A Parallel Initiative: Agreement Between NASA and GSA” on page 19 for more information), but NASA determined that there was enough of a difference between the GSA program and ODIN and made the decision to continue with ODIN.



A New Breed of Contract

By June of 1998, NASA was reviewing the best and final offers from nine companies that had bid on the contract. Even though the individual contracts had not yet been awarded, the ODIN contract had already made an impact on the market. For example, one of the contractors, DynCorp, formed a subsidiary in order to specifically provide the federal government with seat management services.

Kari Garell, vice president of business development for DynCorp, preparing to bid on the ODIN RFP in 1998, said of ODIN: “It’s a new breed of contract. Instead of buying labor categories, you’re buying hardware and software services rolled into one. There are no federal government contractors that do this work. It’s still relatively new in the commercial world; it’s never been done in the federal government.”¹⁵

Lee Holcomb, NASA’s chief information officer, called ODIN “probably the boldest move any federal agency has made in any effort to outsource computers.” Most importantly, he added, ODIN “will deliver cost-effective services to meet NASA’s mission and program needs using commercial practices.”¹⁶

According to the contract, “each desktop, referred to as a ‘seat,’ is bundled with IT support services, includ-

ing hardware and software acquisition, installation, maintenance, technology refreshment, administration, customer support, e-mail, print and file services, relocation, and training.”¹⁷ NASA will define the computer and communications capabilities for each job within the agency and purchase a specific bundle of hardware, software, and communications equipment for each seat. The price of each seat will be fixed.¹⁸ Furthermore, “under the ODIN delivery-order process, each NASA center [will] place orders exclusively with one vendor. Each delivery order [can] cover a period of three years. The [maximum] period of performance for each fixed-price IDIQ contract with each ODIN vendor [was set at] nine years.”¹⁹ After three years, the NASA centers are able to develop new requirements for the contractor and re-compete the contracts, or extend for another three years—this maintains an environment of competition, but does not require competition after three years if the government is pleased with the contractor’s performance.

Selection of the Contractors

On June 17, 1998, NASA selected seven companies for the multiple-vendor IDIQ contract: ACS Government Solutions, Computer Sciences Corporation, DynCorp, Federal Data Corporation, Getronics Government Solutions, OAO Corporation, and SAIC. NASA officials used the following evaluation criteria, in ranking order, to select proposals:

A Parallel Initiative: Agreement Between NASA and GSA

In August of 1997, NASA released a draft request for proposals (RFP) for ODIN, a nine-year contract worth approximately \$750 million to \$1 billion. At the same time, the General Services Administration (GSA) had issued an RFP for a similar contract, its Seat Management program, a government-wide arrangement to offer desktop outsourcing services. Because of the strong similarities between the two contracts, officials from NASA and GSA engaged in extensive discussions and working group sessions in order to decide whether merging the two programs into one contract would be beneficial.²⁰

The GSA Seat Management program offered a wide range of equipment and services that agencies could lease. In contrast, NASA's ODIN had defined three classes of general-purpose computers, three classes of scientific computers, and two classes of maintenance.²¹ In addition, while GSA's program allowed vendors to specify more details such as defining the equipment and services that make up a "seat," ODIN permitted outsourcing only for specific pre-determined configurations.

The NASA and GSA working groups recommended the continuance of both programs as separate entities due to the differences, but to make both contracts available to all federal agencies. According to Wanda Smith, director of the Seat Management Division of GSA's Information Technology Integration (ITI) center, agencies that had desktop requirements similar to NASA would likely prefer the ODIN contract, while agencies with diverse needs could obtain more customized services through Seat Management. Logistically, GSA would manage all orders that originated outside NASA, whereas NASA personnel would handle its own outsourcing contracts.²²

In November, NASA and GSA announced their agreement to work closely to implement both programs. The acquisition teams of each agency were to share information, resources, and key personnel in hopes of sharing lessons learned and benefiting from each other's experiences.²³ According to a GSA press release, the two agencies would be working "in a way that should save taxpayers millions of dollars in the coming years."²⁴

In addition to the potential direct benefits to NASA, Lee Holcomb, NASA's chief information officer, said, "We're going to pool our talents, and the benefits will be government-wide."²⁵

Interestingly, many vendors disagreed that the NASA-GSA agreement was beneficial for any party involved. One Washington lawyer and columnist associated with the programs said, "How could it possibly be better to go through GSA and then NASA to get to the vendor? I can't conceive how this is helpful to anyone."²⁶ Critics of the agreement also claimed this was a duplicated effort that would result in unnecessary procurement costs. Still, in the face of such criticism, NASA and GSA officials reaffirmed their collaboration.

As of January 2002, two agencies (outside NASA) were using the NASA ODIN contract and eight agencies were using the GSA Seat Management contract.²⁷ In addition to managing all seat outsourcing contracts outside NASA, GSA outsourced its own seat management. Ultimately, however, "GSA's seat management implementation did not succeed because the agency's culture did not support the change, and seat management was not implemented in a consistent manner throughout the agency."²⁸ The failure of the agency's Seat Management program also occurred because it allowed each of its field locations and services to develop drastically different desktop requirements, and it did not maintain its agreed-upon service mix and implementation schedule with the contractor.²⁹ As a result, GSA abandoned its internal seat management contract in late 2001 (the other eight agencies continued to use the GSA contract vehicle).

1. Mission suitability factor
2. Relevant experience factor
3. Past performance factor
4. Price factor

Ultimately, NASA officials determined that seven of the nine offerors were "most advantageous to the government."

After some discussion, we [NASA senior management officials] agreed that selection should not be limited to one offeror... While some concern was expressed about the administrative burden of accommodating due diligence activities for a large number of offerors, I [A. V. Diaz, director, Goddard Space Flight Center, responsible for ODIN program] concluded in the final analysis that the benefits to the government

Seat Management

According to the contract, “each desktop, referred to as a ‘seat,’ is bundled with IT support services, including hardware and software acquisition, installation, maintenance, technology refreshment, administration, customer support, e-mail, print and file services, relocation, and training.”³⁰ NASA will define the computer and communications capabilities for each job within the agency and purchase a specific bundle of hardware, software, and communications equipment for each seat. The price of each seat will be fixed.³¹ The NASA ODIN Program Plan identified a minimum commitment of 26,800 seats. Furthermore, “under the ODIN delivery-order process, each NASA center [will] place orders exclusively with one vendor. Each delivery order [can] cover a period of three years. The [maximum] period of performance for each fixed-price IDIQ contract with each ODIN vendor [was set at] nine years.”³² After three years, the NASA centers are able to develop new requirements for the contractor and re compete the contracts, or extend for another three years. This maintains an environment of competition, but does not require competition after three years if the government is pleased with the contractor’s performance.

demonstrated in each of the proposals overrode such inconvenience and warranted the conclusion that all seven proposals were most advantageous to the government.³³

In other words, NASA managers decided that these seven contractors all offered individual centers the opportunity to achieve the ODIN objectives. Moreover, by maintaining a pool of contractors and limiting the center contracts to three-year terms, and thereby maintaining an environment of competition, NASA minimized its vendor performance risk.

Implementation Challenges

Early on, NASA managers believed ODIN’s generally flexible contract structure would help ease the difficulties in implementing the ODIN program. The contract had a nine-year life, with three-year perfor-

mance periods, and each NASA center could tailor its specific service needs by selecting from a pool of seven viable vendors. Nonetheless, the 1996 *Business Case* identified four main concerns (see Table 2) with the pending implementation of the ODIN program.³⁴

Once the implementation was fully under way, however, managers began to realize that there was a different set of obstacles for ODIN. According to Gary Cox, the current ODIN program manager, there was an overall institutional resistance to change, but ODIN caused minimal personnel and asset displacement.³⁵ *All of the government IT personnel were reassigned to support core NASA functions; many of the prior contractor’s IT support personnel were picked up by the ODIN contractors or other support contractors.* Eventually, most end users recognized that ODIN actually helped guarantee a better and newer level of computer hardware and software. Through the lens of hindsight, the major obstacles in implementing ODIN were:

Table 2: Major Concerns and Obstacles—Before and After Implementation

Major Concerns Identified in the 1996 ODIN Business Case	Major Obstacles Identified After Implementing the ODIN Program
A perceived lack of control for end users over desktop services	A perceived lack of control for end users over desktop services
A perceived loss of assets and department property	An inconsistent level of top-level management support
Perceived negative impacts on personnel resources	A poor change management strategy
A general cultural resistance to outsourcing	Significant cultural resistance to outsourcing

Once the decision was made to proceed with ODIN and the appropriate operational responsibilities were established, agency and center senior management involvement became noticeably absent.

—ODIN Program Post Implementation Business Case Assessment, 2001

- A perceived lack of control for end users over desktop services
- An inconsistent level of top-level management support
- A poor change management strategy
- Significant cultural resistance to outsourcing

Perceived Lack of Control

Outsourcing is very different from contracting for IT support, which had been the *modus operandi* of NASA prior to ODIN. With contracting, NASA departments bought their desktop goods and services directly from a vendor. In contrast, outsourcing gives the control of the purchasing processes to the ODIN contractor—NASA specified goods and services results, but the vendors are free to determine how to achieve those results. With contracting, many NASA employees had been accustomed to direct service support (i.e., organizations had IT support personnel assigned and could task them directly). However, under ODIN, contractors had performance goals, and NASA employees now had to make a service request with the contractor—who would then determine its response, which could take several hours (depending on the service-level priority determined in the contract). As a result, some end users did in fact have less control over the *schedule* of services, rather than the services themselves. Importantly, however, there is still a need—with outsourcing—for NASA management oversight of the selected contractor.

At many NASA centers, the transition to outsourcing revealed an interesting dichotomy between the “haves” and “have-nots.” The haves, those departments with larger desktop budgets and therefore better service prior to ODIN, in general fought ODIN’s implementation. The have-nots, on the other hand, were now guaranteed service under ODIN that had previously not been available. Currently, the haves can still have computer service with the same responsiveness they previously had under ODIN, but now

they must pay extra for the service. Furthermore, prior to ODIN, much of desktop support was paid from the agency-wide budget accounts, rather than from the individual department. As a result, department managers perceived that their costs were rising under ODIN only because now the true and accurate cost application could be seen and applied to specific tasks and budgets. However, even though the department costs under ODIN did increase—since now they were paying the full cost—the overall cost to NASA for desktop IT support was reduced.

From the perspective of some users, they lost a degree of control over their desktop service flexibility with the onset of ODIN. *However, from the perspective of the center CIOs, this loss of control was offset by the standardization and interoperability ODIN achieved, which allowed the center CIOs to enhance control over center management, cost savings, security, and institutional speed. This was especially important in order for the agency to develop and deploy agency-wide software applications for financial management and personnel management.*

Inconsistent Level of Top-Level Support

Because the NASA culture is one of decentralized control, successful execution of an agency-wide change such as ODIN requires consistent support from the top levels of management. Although Dan Goldin remained NASA administrator through October 2001, ODIN was not one of his top priorities, and its fate was left in the hands of the agency CIO and senior center managers. After promoting ODIN early on, many senior managers either lost focus or became uninterested in ODIN.

In fact, some senior managers and center CIOs went so far as to publicly oppose ODIN. Ron West, the agency CIO who first proposed ODIN, was a strong champion for the program and was responsible for garnering initial senior management support. However, West left NASA in the beginning stages of ODIN’s implementation, and West’s suc-

cessors were less passionate about the program. As a result, ODIN had relatively high top-level support in its early stages, but lacked a leading voice coordinating and galvanizing support of all center CIOs. Without clear direction and consistent support from above, center CIOs gradually drifted from their early, generally unified cooperation. The effects can still be seen today; the centers with the most supportive CIOs are the ones with the best vendor relations, the best customer satisfaction, and most overall support.

The departure of West, the program's primary advocate, clearly presented a significant obstacle for ODIN to overcome. Regardless, top management initially supported the agency-changing ODIN initiative. And as long as the goals and mission of ODIN were still valid, the administrator should have maintained emphasis on the program to maintain the momentum West developed in order to achieve a successful change. One current ODIN manager said, "If senior leadership was on board earlier, we would have spent a lot less time putting out fires and more time and resources on improving the ODIN model and service delivery—accelerating the program's maturity."³⁶

Change Management

Change is always difficult to effect in established bureaucracies, but the transition to ODIN was especially difficult for three reasons: (1) the contract was the first of its kind in the government, and contractors did not have direct experience to apply; (2) the contractor did not have adequate financial resources to provide flexible service up-front because the ODIN contract required the contractor to pay all initial costs; and (3) the NASA culture is decentralized, and centers exercise relative independence. All of these factors made good change management essential to the successful implementation of ODIN.

At the heart of a quality change management strategy is three-way communication between the management, end users, and the vendors. NASA's

ODIN program initially lacked communication between all three of these components. Lack of coordinated communication between top management was a major cause for the program's inconsistent support, but lack of communication to the users was most detrimental to the program. The NASA employees ultimately determine the success or failure of a sweeping change such as ODIN, but the ODIN change management team neglected to fully communicate the need for change to the users. In many centers, because users were unclear about how ODIN would help the organization or help them directly, dissatisfaction rates were high. A consistent message was needed that established ODIN as the only alternative and an important change, but this message was communicated well at some centers and poorly at others. Furthermore, the change management team utilized neither incentives nor measures of accountability for those who embraced the change. *This reflects the lack of an overarching strategy—change management was virtually left to the individual center CIOs, who, if they supported ODIN at all, focused on the effects of operational changes rather than cultural ones.*

Consequently, the burden of communicating with the users fell to the vendors. This negatively affected program implementation in two ways. First, vendors were forced to communicate the changes in service to users *ex post facto*, which led users to blame vendors for their problems, rather than discussing the changes with their management—who was, in fact, responsible for the changes. In ODIN's initial stages, it was critical for vendors to begin building relationships with the users, and this lack of communication undermined relationship building. Second, this lack of communication between NASA management and users affected the performance metrics used to assess the vendors. Users who understood the process were much more likely to be positive with the process and with the vendors, whereas managers who did not understand how or why the process had changed would complain that the vendors were unresponsive. Customer satisfaction—not necessarily associated with the service itself—was directly affected.

NASA defines change management as "the process of aligning the organization's people and culture with the changes in business strategy, organizational structure, and systems."³⁷

NASA has made significant strides in its efforts to overcome these challenges and is turning ODIN into a successful program.

Results

Current ODIN Program Manager Gary Cox says that while ODIN used to be a “four-letter word” with a negative connotation, seven years from its inception, ODIN is now widely seen as a positive program for NASA.³⁸ In fact, much of the energy now is spent focusing on finding more commonality across the centers—providing “core requirements” that all centers share and trying to minimize center-unique requirements. There are still pockets of resistance, but overall the NASA culture has embraced the program—from the end user to the CIOs and top-level management. Currently, nine of 10 NASA centers have contracts. Headquarters was temporarily using a non-ODIN cost-plus contract, but recompeted its desktop services, using ODIN, early in 2004. A three-year contract with Lockheed Martin Information Technology, valued at \$22 million, was signed in July 2004 and was scheduled to begin in September 2004.³⁹

Both the passage of time and management changes have matured the ODIN model, but the program was implemented without major disruptions, without loss of service, and without inflicting negative effects on any missions. The program was implemented in phases, with NASA’s human space flight centers (Code M) adopting it first. The Code M centers did an especially poor job of educating and communicating with the end users about

the changes in the desktop service process. Also, because the program model itself was new, the vendors had to make adjustments. Because vendors had to put in most of the up-front capital and endure the accompanying risk, they had to find ways to be profitable while at the same time improve their service to satisfy the NASA customers. The research and development centers (Code R), which implemented ODIN 18 to 24 months after Code M, learned from early mistakes and lessons learned. Also, in subsequent delivery orders at Code M, significant lessons learned were implemented. For instance, in delivery order 2, the Code M centers utilized manager conferences and user workshops and, as a result, were better able to communicate the ODIN goals. For example, at one Code M center, Kennedy Space Center, OAO (a wholly owned subsidiary of Lockheed Martin) was named “contractor of the year” for 2002—a major achievement that illustrates the success of the ODIN implementation at that center. Also important was the fact that employees’ jobs were not negatively affected—as mentioned, a major initial obstacle.

ODIN has overcome cultural barriers to become generally accepted, but it has also met the majority of its original objectives—objectives that most NASA employees still believe are sound. In fact, an independent consultant found that over 90 percent of users and managers believe the four ODIN objectives (focus personnel on core activities, promote IT systems and product interoperability, enhance and optimize service delivery, and reduce cost and improve cost management⁴⁰) continue to be relevant to the agency’s overall mission.⁴¹

Table 3: ODIN Competition Summary

	Pre-ODIN	Post-ODIN
Provider	Combination of NASA and contractor employees managed by NASA managers.	Contractor employees managed by contractor management. Oversight of ODIN contracts provided by NASA managers.
Hardware and Software	Procured and owned by NASA organizations. Age range of equipment was up to 10 years. Issues with standardization, interoperability, and security.	Provided by ODIN contractor. Age range down to three years, with average age of 18 months. Hardware and software standardized across the center, improving interoperability and security.
Budget	Sourced from several organizational levels and sources, with no good way to allocate all costs.	Firm fixed price per seat.
Performance	Met required service levels.	Generally exceeds required service levels.

Personnel Focused on Core R&D Activities

NASA IT personnel have been refocused on core research and development activities. NASA managers have seen an increase in mission support and productivity for two reasons. First, fewer NASA employees are required to provide IT services. According to a March 2002 Government Accountability Office (GAO) report, ODIN has “helped improve the agency’s asset management services by reducing the amount of work that agency staff have to perform to maintain annual inventories of government-owned property and auditing of contractor’s property control procedures.”⁴² Second, as of November 2003, ODIN vendors have provided users with 99 percent system availability.⁴³ As a result, users can rely on having access to their system to accomplish their core mission-related tasks. Generally, ODIN vendor staff perform services during off-duty hours when possible.

IT Systems and Products Have Greater Interoperability

NASA management, especially the center CIOs, have benefited greatly from ODIN. Now, anything the center CIOs agree on, such as minimum standards for software operating systems, can be implemented throughout the agency in a relatively short period of time. In 2001, the *Post Implementation Business Case* listed standardization and interoperability progress as a major achievement of the program. The case also claimed that “the minimum standards embedded in the ODIN model have had the effect of improving the computing environment for some users by increasing the level of available technology and service.”⁴⁴ According to Cox, as of November 2003, the age range (the range from the newest to oldest computers) of desktop equipment was approximately 10 years prior to ODIN. ODIN has reduced the age range of equipment across the agency to three years, with the average age of equipment around 18 months old. Furthermore, when CIOs mandate an upgrade, ODIN users have their systems upgraded automatically.

The March 2002 GAO report stated that “NASA organizations also reported a myriad of IT management improvements, such as improved consistency and currency of operating systems and applications; the automated distribution of software, including computer virus protection; a better understanding

of the entity’s IT inventory, which resulted in the removal of obsolete equipment; and improved software license management.”⁴⁵

Service Delivery Improved

In a 2001 survey, over 90 percent of respondents said that ODIN has resulted in improved service consistency and quality.⁴⁶ In a previous survey conducted in 2000, 83 percent of ODIN users said that their expectations had been met or exceeded.⁴⁷ In this same survey, however, over 90 percent of respondents said that their vendor was not proactive in improving service. Perhaps the biggest factor preventing vendors from proactively seeking to improve service was ineffective performance metrics (for metric categories, see Table 4). The 2001 *Post Implementation Case* found that the vast majority of users and vendors believed the metrics were ineffective. Among the most common complaints were:⁴⁸

- Metrics lost their effectiveness as a motivator since they are rarely met, and the contractor believes it would be a losing proposition to make the necessary changes to routinely meet the metrics.
- Metrics were not driving the performance users wanted—there needed to be a greater emphasis on customer satisfaction.
- Quality is not just response time, but effectiveness in fixing the problem.
- A better system for rewards and penalties for vendors is needed.

NASA recognized problems with the metrics they had been using and made changes in the second phase of contracts beginning in 2002. However, in every instance where the contractor satisfied the metrics, users rated the service positively. ODIN Program Manager Cox believes that this problem—ODIN contractors’ failure to improve service delivery—could be exacerbated by the individual contractor’s focus. For example, OAO, it seems, focused on providing service to NASA and managed to the level of requirements. Not coincidentally, OAO met its metrics at most centers. On the other hand, two other contractors (who together serviced roughly half of the centers) were not meeting their performance goals, perhaps, in Cox’s view,

Table 4: ODIN Metrics

Metric	Result	Requirement
Service Delivery	The frequency of action requests being responded to and successfully completed.	98%
Availability	A seat is considered available when the entire hardware and software configuration operated correctly.	98%
Customer Satisfaction	Derived from customer surveys and comment forums; primary measure is percent of respondents who choose a score of 4 or 5 on a 5-point scale.	90–95%

Source: *Outsourcing Desktop Initiative for NASA (ODIN) Program Plan*

because they determined they were financially better off if they reduced service costs, producing sub-par performance, but then did not receive the 1 to 2 percent performance bonus.⁴⁹ For example, one contractor decided it would rather not compete for the bonus than hire an extra technician that could help meet the performance goals. Cox says since the performance targets were viewed as being discretionary, he believes the contractors managed to cost rather than performance.

As the new ODIN program manager in 2002, one of the first actions Cox took was to communicate the need for better accountability to the vendors: The performance metrics were not discretionary—they were contract requirements.⁵⁰ NASA managers essentially said, “If vendors couldn’t meet their goals, then we would find another vendor who could.” Cox says contractor response and service improvement were almost immediate. The competitive three-year contract structure and the available pool of alternate vendors made the NASA managers’ warning credible. By the same token, the contract also rewards contractors who consistently satisfy their customers—the contract allows the NASA centers to non-competitively renew the vendor contract.

The overall ODIN contract is flexible enough to allow individual centers to make some changes to the performance metrics. At some centers, NASA managers increased the bonuses to give greater incentive to the vendor. This remains a difficult balance for NASA managers today. The reward needs to be high enough to provide incentives to vendors to improve service and lower prices, but also low enough to keep NASA costs under control. At other centers, NASA managers have amended the “all-or-nothing” performance goals. The original center contracts demanded that a vendor meet the metric

in each of the three metric categories in order to receive the performance bonus. Now some centers instead allow vendors to meet percentages of all three metrics, so there is a sliding bonus scale.

Most importantly, there is evidence that overall service has improved and continues to improve. In fact, the master contract originally set the customer service metric at 90 percent, but in follow-up delivery orders, centers have been increasing this metric to 92 to 95 percent.⁵¹ In fiscal year 2003, vendors have been meeting performance metrics at almost all centers in each of the three metric categories: service delivery, availability, and customer satisfaction. For instance, in 2002 there were no security compromises for users on the ODIN system at the Goddard Center, where the more vulnerable and disparate non-ODIN users were significantly impacted by viruses and other system failures.⁵² These results are comparable to those at other centers, where ODIN users are not only better protected against productivity disruption, but also security failures.

ODIN managers have also added an “enhanced system administration” option for those users that lost local system administrators and technicians and still wish to have a greater physical presence of desktop service. Managers must pay a premium for this option, but this alleviates the direct control of service personnel issue while maintaining the ODIN benefits.

Security Improved

Like other federal agencies, NASA’s use of computerized systems and electronic data is crucial to its missions, and therefore desktop and system security is becoming an increasingly important added

benefit that ODIN offers. Independent audits of federal agencies have found significant computer security weaknesses that place critical operations and assets at risk.⁵³ *Because vendors are responsible for all security upgrades and virus patches on the uniformly configured ODIN systems, protection can be immediate and comprehensive, resulting in improved security.*

Costs Reduced and Cost Management and Containment Improved

In 1996, the *Business Case* estimated ODIN could save NASA \$226 million, or approximately 25 percent, over five years.⁵⁴ However, GAO has claimed that actual savings cannot be determined because NASA analyses “did not include a thorough or reliable baseline of the costs associated with their pre-seat-management computing environments.”⁵⁵ The *Post Implementation Business Case* reached the same conclusion: “It is impossible at this point to develop a comprehensive pre-ODIN baseline, and therefore impossible to determine with any confidence whether NASA is saving money. Nonetheless, there is some evidence that the agency has achieved a savings...”⁵⁶ In fact, the pre-ODIN *Business Case* estimated their desktop costs per year per seat to be approximately \$2,900, and according to Cox, the agency average is now \$2,200 (plus or minus \$150)—a savings of 32 percent.⁵⁷

Indeed, while seat costs prior to ODIN were almost certainly not competitive, a private consultant, GAO, and the NASA IG all agree its seat costs are competitive now. It is equally important that NASA now understands its true seat costs. NASA managers can now determine the total cost of ownership because seat costs are visible, are predictable, and are contained in the respective user’s budget.

While the core costs of the seat are competitive, a NASA IG audit found that ODIN contracting officers were not adequately reviewing the catalog prices of desktop peripheral and accessory equipment and supplies to see if the prices were fair and competitive.⁵⁸ Once the IG pointed this out, some vendors issued refunds. Also, the IG found that NASA could achieve greater savings by using volume discounts when purchasing from ODIN product catalogs.

Zero Employees Displaced

One concern that existed among the employees and managers of both the government and contractors prior to ODIN’s launch was the likelihood of involuntary displacement of employees. This was consistent with one of the most prevalent myths connected with introducing competition into the government. However, in reality, *ODIN caused zero personnel displacement.* All of the government IT personnel who wanted to stay on at NASA were reassigned to support core NASA functions, while most of the prior contractor’s IT support personnel were hired by the ODIN contractors. Overall, the ODIN program minimized the negative impact on employees.

Summary

NASA met its overall objectives and benefited from other positive results of the ODIN program (see Table 3 on page 23). In addition to increasing employee focus on core tasks and increasing security, perhaps most importantly, NASA saw improvements in service delivery and service consistency. The ODIN model has allowed NASA managers to have visibility of the true IT support cost, and in doing so, ODIN has lowered NASA’s per seat costs. The competitive contract enabled NASA to sustain these savings over time. Contrary to initial fears, NASA employees did not experience any involuntary displacement. Finally, NASA managers used the ODIN program to expand their control through increases in cost management and interoperability.

Lessons Learned

NASA’s ODIN program is now at a point where it has established legitimacy and commands confidence from NASA personnel, and the program management can focus on improving the program model. New initiatives and new partnerships are being forged between centers. Most importantly, ODIN is no longer a constraint, but rather a tool to better achieve the program’s original objectives and the overall agency mission. Implementing and realizing the full potential of ODIN desktop outsourcing required not only a new acquisition strategy, but a change in management and user perspective. Based on this case, the following lessons were learned.

Table 5: ODIN Achieves Program Objectives

Objective	Result
Focus personnel on core R&D activities	Achieved.
Promote IT systems and product interoperability	Achieved, still progressing.
Enhance and optimize service delivery	Overall improved; metrics continually enhanced.
Reduce cost and improve cost management and containment	Savings achieved, although exact amount is unknown; costs are competitive; true costs are known and contained.

Identify and Support Strong Leadership

Lesson 1: Agency heads must identify and support strong leadership, as well as provide continued momentum through personnel changes.

In order for desktop outsourcing to succeed, management support must exist at all levels of an organization and at every phase of the implementation. Strong, long-term executive leadership at the CIO level is especially critical to obtaining and maintaining organizational support for the outsourcing program, as well as to changing a deeply rooted organizational culture. Strong leadership enabled the ODIN desktop outsourcing option to be considered and initiated. However, when the NASA leadership changed (leadership turnover is often a problem in government agencies), the commitment to the ODIN program wavered—and this major agency transformation effort was put at risk. When senior management re-emphasized the program, ODIN was able to complete its transition into its current, nearly full operational status.

Practice Quality Change Management

Lesson 2: Program leaders must develop and implement a well-planned change management strategy with incentives.

Lesson 3: Program leaders must establish a communications team to promote the outsourcing initiative through education and training.

Perhaps the most often cited problem with ODIN’s implementation has been the lack of a change management strategy. In order to change an organization, especially one as decentralized as NASA, management must develop and adhere to a well-planned change management strategy. The strategy must emphasize three-way communication between

the government managers, the government users, and the contractors. Government managers must communicate the need for change to their personnel by utilizing education and training programs. In fact, such programs are most effective in facilitating the communication process because education and training mitigate the unfamiliarity of and resistance to the change that employees are immediately obligated to implement. NASA centers that use education and training programs found much greater success in implementing ODIN than those centers that did not.

Additionally, in the ODIN model, government managers used incentives to drive vendor performance, but they did not give the NASA personnel any added incentive, other than directives, to override their resistance. During the transition to outsourcing, senior managers should use incentives to overcome resistance from government users. In the ODIN case, such incentives for the personnel could have been especially useful because the goals and perspectives of the CIOs and the end users were different.

Ensure a Competitive Environment

Lesson 4: Program leaders must maintain a competitive environment by maintaining the potential to re-compete the support contracts.

One of the best successes of the ODIN model was the contract structure itself, because it provided NASA managers with a competitive environment. By using a pool of contractors and a three-year contract cycle, managers were given a carrot and stick—they could threaten to terminate a vendor’s contract after three years if the service quality was unsatisfactory, or they could non-competitively renew the

vendor's contract if service met expectations. The key is that this competitive model ensures accountability based on results.

Manage the Contractor Relationship

Lesson 5: Program leaders must actively manage the contractor relationship and ensure contract performance requirements are met.

When an agency pursues IT outsourcing, service replaces IT equipment as the focus of management; therefore, management must shift their focus from procurement to relationship management. NASA found that the incentives were not always enough to motivate the contractors to meet and achieve the service goals. Some contractors were forgoing their award fees to cut costs. NASA, working with the contractor and emphasizing contract service requirements, was able to improve the performance and get all of the contractors to meet or exceed contract requirements.

Endnotes

1. W. Henry Lambright, "Transforming Government: Dan Goldin and the Remaking of NASA," IBM Center for The Business of Government, March 2001.
2. ODIN Homepage. Viewed at <http://www.odin.nasa.gov/html/about.html>, October 2003.
3. *Outsourcing Desktop Initiative for NASA (ODIN) Program Plan*, August 23, 1999, p. 1. Viewed at <http://outsources.gsf.nasa.gov/html/docs.html>, October 2003.
4. GAO, "Executive Guide: Effectively Implementing the Government Performance and Results Act," June 1996, p. 48.
5. Nancy Ferris, "NASA Signs Big IT Outsourcing Pacts," *Government Executive*, June 19, 1998. Viewed at <http://www.govexec.com>, October 2003.
6. Kelly, Anderson & Associates, *ODIN Program Post Implementation Business Case Assessment*, November 2001, p. 19.
7. Gary Cox, ODIN Program Manager, NASA. Interviewed by William Lucyshyn and Robert Maly. Greenbelt, Maryland, October 2003.
8. Brad Bass, "Survey: Feds Undecided About Seat Management," *Federal Computer Week*, July 20, 1998. Viewed at <http://www.fcw.com>, October 2003.
9. Bill Murray, "There's More Than One Way to Outsource," *Federal Computer Week*, March 19, 2001. Viewed at <http://www.fcw.com>, October 2003.
10. NASA Office of the Inspector General, Audit Report IG-98-029, Outsourcing of Desktop Computers, September 14, 1998.
11. *Outsourcing Desktop Initiative for NASA (ODIN) Program Plan*, p. 1.
12. Ibid.
13. "Fedwire," *Federal Computer Week*, September 1, 1997. Viewed at <http://www.fcw.com>, October 2003.
14. Nancy Ferris, "NASA Signs Big IT Outsourcing Pacts."
15. Heather Harreld, "Vendors Line Up for NASA ODIN Deal," *Federal Computer Weekly*, June 1, 1998. Viewed at <http://www.fcw.com>, October 2003.
16. "NASA News Release: NASA Selects Seven Companies to Provide Information Technology Services," June 17, 1998. Viewed at <http://www.gsa.gov>, October 2003.
17. Kelly, Anderson & Associates, p. 2.
18. Ibid.
19. Ibid.
20. "GSA News Release: NASA, GSA Join Forces on Outsourcing Desktop Computing," November 20, 1997. Viewed at <http://www.gsa.gov>, October 2003.
21. Christopher Dorobek, "NASA GSA Sign Pact for Seat Management," *Government Computer News*, December 15, 1997. Viewed at <http://www.gcn.com>, October 2003.
22. Brad Bass and Heather Harreld, "ODIN Opens to All Feds," *Federal Computer Weekly*, December 1, 1997. Viewed at <http://www.fcw.com>, October 2003.
23. Ibid.
24. "GSA News Release: NASA, GSA Join Forces on Outsourcing Desktop Computing."
25. Ibid.
26. Brad Bass and Heather Harreld, "ODIN Opens to All Feds."
27. GAO, "Desktop Outsourcing: Positive Results Reported, But Analyses Could Be Strengthened," March 2002, p.6.
28. Ibid, 23.
29. Ibid, 31.
30. Kelly, Anderson and Associates, p. 2.
31. Ibid.
32. Ibid.

33. A. V. Diaz, "Selection of a Contractor for the Outsourcing Desktop Initiative for NASA (ODIN)," June 8, 1998, pp. 6–7. Viewed at <http://outsource.gsfc.nasa.gov/html/docs.html>, October 2003.
34. *Business Case for Outsourcing of Desktop Computers*, October 24, 1996, pp. 9–10.
35. Gary Cox, ODIN Program Manager, NASA. Interviewed by William Lucyshyn and Robert Maly. Greenbelt, Maryland, October 2003.
36. Ibid.
37. Kelly, Anderson & Associates, p. 49.
38. Gary Cox interview.
39. "Lockheed Martin Wins \$22 Million NASA Headquarters ODIN Delivery Order," SpaceRef.com, July 14, 2004, viewed on August 16, 2004, at <http://www.spaceref.com/news/viewpr.html?pid=14570>.
40. *Outsourcing Desktop Initiative for NASA (ODIN) Program Plan*, p. 1.
41. Kelly, Anderson & Associates, p. 41.
42. GAO, "Desktop Outsourcing: Positive Results Reported, But Analyses Could Be Strengthened," March 2002, p.13.
43. Gary Cox interview.
44. Kelly, Anderson & Associates, p. 32.
45. Ibid, 12.
46. Ibid, 3.
47. Booz Allen & Hamilton, "Customer Satisfaction Near-Term Recommendations," December 22, 2000, p. II-3F.
48. Kelly, Anderson & Associates, pp. 53–54.
49. Gary Cox interview.
50. Ibid.
51. Ibid.
52. Ibid.
53. GAO, "Information Security: Serious and Widespread Weaknesses Persist at Federal Agencies," September 2000, p.1.
54. *Business Case for Outsourcing of Desktop Computers*, October 24, 1996, p. 5.
55. GAO, "Desktop Outsourcing: Positive Results Reported, But Analyses Could Be Strengthened," p.14.
56. Kelly, Anderson & Associates, p. 3.
57. Gary Cox interview.
58. NASA Inspector General, "Audit Report: Opportunities for Cost Savings in Purchasing Peripheral and Accessory Equipment and Supplies for Desktop Computing Services," July 18, 2003, p.1.

Case Study 2:

Competitive Sourcing— The IRS Improves Performance and Modernizes Operations

By William Lucyshyn and Sandra Young

Introduction

A branch of the Department of Treasury, the Internal Revenue Service (IRS), in its role as the nation's tax collector, deals directly with more Americans than any other institution, public or private; and it is one of the largest federal organizations outside of the Department of Defense and the Department of Homeland Security.¹ In 2003, the IRS managed the collection of almost \$2 trillion in revenue, processing an estimated 130 million tax returns.² For fiscal year 2004, the IRS had almost 100,000 full-time equivalents (FTEs) and a budget of over \$10 billion.³

Yet, even as the information revolution was well under way, the IRS was still processing tax returns using concepts and systems developed in the 1950s, including batch processing and magnetic tape storage on reels. Much of the information was moved around the country not digitally using available state-of-the-art telecommunications tools, but on trucks and airplanes. Justice Oliver Wendell Holmes, Jr., once wrote, "Taxes are what we pay for civilized society." But the IRS's seeming inability to modernize its information technology systems suggested that America was not getting a good return on its investment.

Taxpayers' frustrations grew as they frequently were greeted by busy signals when calling the IRS, and allegations of abuse by IRS employees were noted. Indeed, Charles Rossotti, then commissioner of the IRS, observed: "Before the passage of the IRS Restructuring and Reform Act of 1998, the Internal Revenue Service was in a deep hole and seemed to be digging deeper.... Basic taxpayer services

had plummeted.... Taxpayer rights were not always being respected. America's taxpayers gave the IRS its lowest rating on record."⁴

The IRS was aware that it needed to make both short- and long-term improvements in service and efficiency. But "the IRS's problems developed over a long period and [were] too widespread, deep, and complex to yield to simple, quick remedies"⁵—serious action had to be taken. In 1998, the IRS Restructuring and Reform Act prompted the most comprehensive reorganization and modernization of the IRS in nearly half a century. With the law came a new mission statement: "to provide America's taxpayers top-quality service by helping them understand and meet their tax responsibilities and by applying the tax law with integrity and fairness." The law also established a new set of guiding principles:

- Understand and solve problems from taxpayers' point of view;
- Enable IRS managers to be accountable to taxpayers;
- Use balanced measures of performance to measure taxpayer satisfaction, business results, and employees' satisfaction;
- Foster open, honest communications; and
- Insist on total integrity.

Then, in 2001, George W. Bush announced the five priorities of his Presidential Management Agenda: budget and performance integration, competitive sourcing, strategic management of human capital, improved financial performance, and expanded

electronic government. Competitive sourcing initiatives existed under the Reagan and Clinton administrations; however, competitive sourcing received renewed and increased attention as a tool for improving the management and performance of the federal government—despite government’s “chronic poor performance and [the] continuing disclosure of intolerable waste.”⁶ Competitive sourcing involves agencies opening their commercial activities to competition from both public and private sector sources, and the rules of competition are set forth in the Office of Management and Budget’s (OMB) newly revised Circular A-76. Although workload is competed, the government remains fully responsible for all management decisions, as well as the provision of all inherently governmental services. When used as a strategic management tool, competition under A-76 enables managers to streamline their organizations, implement best business practices, increase productivity, enhance quality, improve efficiency of operations, lower operational costs, and introduce technology more quickly than otherwise would be possible.⁷ Thus, the IRS used competitive sourcing as a fundamental tool in its modernization process.⁸

For the IRS, though, the focus of its modernization initiative was not just about competing existing activities—it was about rethinking functions.

Differently stated, it was not about “moving an imaginary pendulum one way or the other. [It was about] improving the entire way the IRS worked.”⁹ The agency chose not to focus on metrics, such as the number of FTEs competed or the number of A-76 studies conducted; rather, it focused its energy and resources on creating business case analyses and reassessing the overall functions of the organization. In fact, an IRS news release on the modernization effort notes that it is “working to put service first. Taxpayers deserve top-quality professional service from the IRS on each and every transaction, and we are changing to achieve this higher level of performance.”¹⁰

Background

The Competitive Sourcing Process

The IRS embraced competitive sourcing not only because it was an integral part of the President’s Management Agenda, but also because it viewed the competitive sourcing model as an opportunity to systematically bring about change in a very large, at times cumbersome organization that had a cultural resistance to change. Competitive sourcing was a process by which IRS management believed it could gain efficiency, improve performance and integration, and streamline processes while simultaneously encouraging innovation and reducing costs.¹¹

Guided by the newly revised Circular A-76, the IRS customized its competitive sourcing process into five distinct phases.¹²

Phase I: Categorization under the Federal Activities Inventory Reform (FAIR) Act

Based on guidelines created by OMB, every agency evaluates its activities and characterizes each function as either inherently governmental or as a commercial activity based on one of the reason codes identified in OMB Circular A-76.

Taken together, this inventory should accurately and completely represent all of the activities that an agency performs. Accordingly, these activities should encompass the work of all full-time equivalents in that agency.¹³ When completed, the inventory is submitted to OMB for review and approval. Once approved, the IRS then uses this list to choose which of the commercial functions it will subject to a Business Case Analysis.

Acronyms

ADC	Area Distribution Center
BCA	Business Case Analysis
BPR	Business Process Reengineering
FAIR Act	Federal Activities Inventory Reform Act
FTE	Full-Time Equivalent
GAO	Government Accountability Office
IRS	Internal Revenue Service
MEO	Most Efficient Organization
MPD	Media and Publications Division
NTEU	National Treasury Employees Union
OCS	Office of Competitive Sourcing
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PWS	Performance Work Statement
RFP	Request for Proposal
RIF	Reduction in Force
SRC	Strategic Resource Committee
VERA	Voluntary Early Retirement Authority
VSIP	Voluntary Separation Incentive Payment

Phase II: Business Case Analysis (BCA)—Deciding Which Functions to Compete

Once the IRS identifies a function as a candidate for competitive sourcing, the agency develops a detailed Business Case Analysis (BCA) to determine if the functions will be formally placed in the Competitive Sourcing Program. First, the current operation is baselined to define its “as-is” state—that is, the functions and processes as they currently are performed. Second, a high-level definition of the potential Most Efficient Organization (MEO) is developed—this identifies the “to-be” state. Once the beginning and end states are described, the benefits, costs, and risks of potential service providers (to include the MEO) can be analyzed. Based on this analysis, decision-making criteria and recommendations are developed and submitted to the IRS’s Strategy and Resources Committee, the body that decides whether to compete the particular function.

Phase III: Preliminary Planning

During the Preliminary Planning process, a Performance Work Statement (PWS) team is established, and the PWS is written. The PWS details the performance requirements and standards, along with the workload and activities involved in the competition; it describes the exact tasks on which both public and private competitors will bid. PWSs

are forward-looking and outcome-driven—but, even though they establish measurable performance standards, they function best when they are open and flexible because they maximize creative solutions.¹⁴ In addition to the PWS, the Quality Assurance Surveillance Plan, which defines the desired performance standards to measure accomplishment by the service provider, is developed. Once these are complete, a formal announcement that the competition will take place is made through the Federal Business Opportunities (FedBizOpps) Internet website.

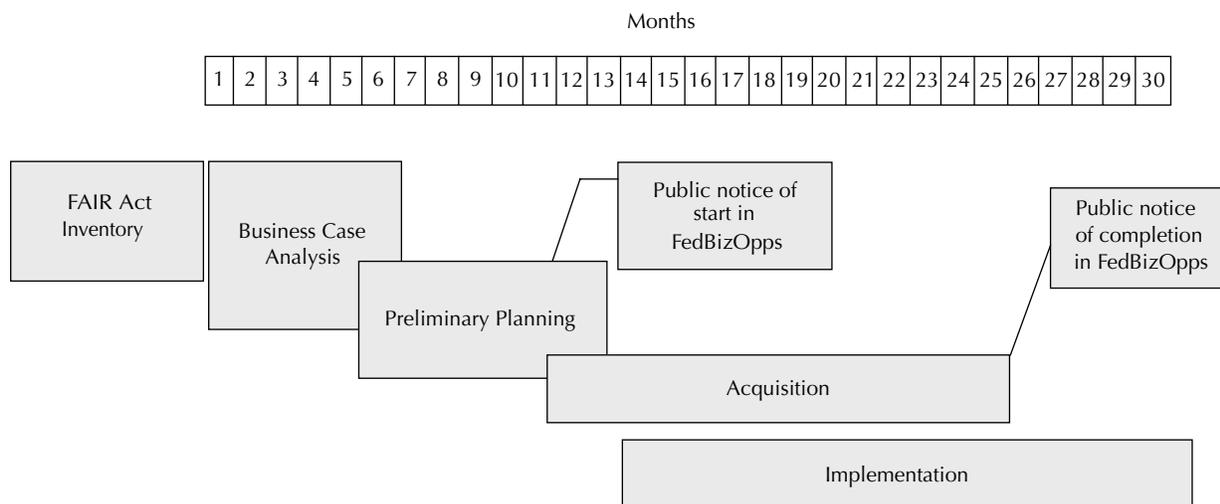
Phase IV: Acquisition

The release of the Request for Proposals (RFP) is the official public announcement and start of the mandatory 12-month cycle identified by OMB Circular A-76 (a one-time six-month extension may be requested to increase the cycle to 18 months prior to the public announcement).

Most Efficient Organization (MEO)

The agency tender is the MEO’s proposal and is prepared with the assistance of the bargaining unit employees. It details how insiders would reengineer the function and quantifies the savings that could be anticipated from an internal restructuring. MEOs conduct market research to identify best practices in government and private industry. Market research also gives the MEO a better under-

Figure 1: IRS Competitive Sourcing Phased Approach



Commercial Activity Reason Codes¹⁵

As directed by the OMB A-76 circular, agencies use reason codes, identified below, to indicate the rationale for government performance of a commercial activity.

- Code A: The commercial activity is not appropriate for private sector performance pursuant to a written determination by the competitive sourcing official (CSO).
- Code B: The commercial activity is suitable for a streamlined or standard competition.
- Code C: The commercial activity is the subject of an in-progress streamlined or standard competition.
- Code D: The commercial activity is performed by government personnel as the result of a standard or streamlined competition (or a cost comparison, streamlined cost comparison, or direct conversion) within the past five years.
- Code E: The commercial activity is pending an agency-approved restructuring decision (e.g., closure, realignment).
- Code F: The commercial activity is performed by government personnel due to a statutory prohibition against private sector performance.

standing of the potential external competitors. It is the element of competition that heightens the MEO team’s awareness and need for innovative solutions. To meet the agency’s requirements, the MEO frequently will propose a new organizational structure with redefined position descriptions, centralized oversight, redesigned management techniques, and updated technology solutions.

Solicitation for Outside Bids

For standard competitions, organizations outside of the agency develop proposals for how best to accomplish the work outlined in the PWS. The private sector bids, which are based on these pro-

posals, essentially are the external equivalents to the MEO. The IRS also recognizes that for competitive sourcing to be truly effective, it must attract highly qualified contractors to submit proposals. To that end, the IRS PWS team conducts an active outreach program, using a variety of techniques—including contacting industry groups and leading academic institutions, and consulting lists of “Industry Best”—to identify potential bidders.

Selection of a Winning Bid

The proposals are evaluated by a Source Selection Evaluation Board, reviewed by the Source Selection Advisory Council, and the final decision is made by the Source Selection Authority. The overall conduct of the procurement is the responsibility of the contracting officer. The bids are assessed on the requirements as outlined in the PWS, as well as expected cost savings and the opportunity for greater integration and efficiency gains. Unlike the previous version of Circular A-76 and outsourcing programs, the revised circular’s (dated May 29, 2003) focus expands beyond mere cost savings. It allows multiple factors to be evaluated, and although price is important, it is only one factor.

Contract or Letter of Obligation is Awarded to the Winner

Depending on whether the MEO or a contractor wins, either a letter of obligation or a contract is awarded to the winning offeror.

OMB Metrics

OMB has developed metrics that grade agencies using a stoplight (red, yellow, green) system—one score measures progress and another score describes status. The OMB evaluation of an agency’s competitive sourcing effort initially was based on the number of competitions and the percentage of FTEs classified by the agency under the FAIR Act inventory competed. Accordingly, there was an early bias built into the system that encouraged agencies to move forward with competitions. With the release of the revised A-76 Circular, OMB moved to a measurement system based on progress and status versus FTEs. OMB encouraged agencies to develop an individualized “green” plan, and each agency developed its projected “Proud to be Goal for July 2004.”

Phase V: Implementation

The Implementation planning phase begins once the solicitation has been published. Once the implementation team is formed, it begins by developing plans for possible outcome scenarios. These plans include employee outplacement services, Voluntary Early Retirement Authorization (VERA) and Voluntary Separation Incentives Payments (VSIP) provisions, work plan changes, required changes to current contracts, and the overall project schedule. Once an award is made, the plan for the selected scenario is implemented.

Principles of Competitive Sourcing:

The IRS View

In addition to the other initiatives in the President's Management Agenda,¹⁶ the IRS perceived competitive sourcing as a real opportunity to bring transformational change to the ways in which it does business. As such, the agency embraced competitive sourcing, taking the litany of benefits and leveraging them for its specific business practices. The following five points illustrate how the IRS perceives those advantages and uses them to transform itself.

1. Planning for competitive sourcing creates opportunities to analyze, reengineer, and improve business processes,

Before the formal competitive sourcing initiatives began, the IRS already had made a commitment to a thorough modernization overhaul. Two previous commissioners had begun business system evaluations across the organization. There was a sense that competitive sourcing could both complement and envelop the reassessment that the IRS knew was necessary. It also could move the organization closer toward implementing its planned improvements ahead of schedule by adopting more technical changes on a quicker schedule. In many cases, reengineering studies consume a large amount of resources only to be relegated to a shelf and never implemented. The IRS viewed competitive sourcing as a tool for gaining momentum and following through with the restructuring process already underway at the agency.

2. A disciplined evaluation of functions naturally leads to restructuring activities.

The IRS viewed the classification requirements of the FAIR Act inventory as an opportunity to develop an understanding of the functions the agency per-

forms at a very detailed level. Thus, it gave the IRS a chance to define its core functions very precisely. There was a sense that if the inventory assessment was done well, it could provide a solid foundation for integrating workloads, streamlining processes, and consolidating functions throughout the enterprise through competitive sourcing.

3. The process of planning and conducting competitive sourcing is beneficial.

Regardless of the results of the competition, the act of reevaluating functions at all levels and competing an entire function would allow the overall organization and each department therein to have a more complete understanding of what they did, why they did it, and how much it all cost. Before heading the Office of Competitive Sourcing, Raymona Stickell was the leader of the Multimedia Publishing Division—which had oversight of the Area Distribution Centers (ADC)—and she “didn’t know the true cost to the organization (including rent, etc.) of running the centers.” Most managers only know what the cost is as it relates to their internal budget. The IRS recognized that writing an MEO would require departments to become fully aware of the corporate or total cost of their activities and not just those costs that came out of their budget. The IRS could better manage its resources in the near future by moving to an activity-based costing system—that is, under the new, more commercial-style system, it could trace both direct and indirect costs to activities, and trace activities to resources, in order to determine the “true costs” of a particular activity.

4. The competitive environment produces a tension that works to foster innovation and to counter resistance to change.

Competitive sourcing is frequently confused with “outsourcing,” which often has negative connotations for the government workforce. The key ingredient, however, is the presence of *competition*, and the IRS felt that competition was the key to speeding up innovation. Unlike outsourcing, where the government makes a decision *a priori*, competitive sourcing allows government employees to compete for their jobs. The system of competition encourages a well-structured, lean reengineering by government employees who know the business and are motivated by the desire to improve performance and save jobs. It may not be

possible to save all jobs through competitive sourcing—indeed, typical results show an involuntary separation rate of between 3 and 8 percent, no matter who wins.¹⁷ Still, from the current employee perspective, even losing a smaller number of employees is preferable to completely eliminating entire divisions.

Competition may provide an opportunity to make major strides toward enhanced efficiency, especially when the competition is tied to modernization. The team responsible for the Performance Work Statement is not limited to describing the existing functions; rather, they have the opportunity to describe what the functions ought to be. A well-crafted PWS can encourage immediate access to better technological capabilities. It also can serve as a vehicle for driving a department or function toward its three-to-five-year vision in one step, rather than relying on incremental, often ad hoc reforms.

5. The competitive sourcing process will yield better service at a lower cost to the taxpayer.

Competing functions would mean that the IRS and the taxpayer would realize the advantages of researched best practices and motivated innovation. The system builds in incentives for lean and efficient, productive, service-oriented bids from both the public and the private sectors. The IRS believed that service would improve whether the contract was won by the public or the private sector.

IRS Implementation

For competitive sourcing to be successful as a modernization tool required a high level of commitment from the leadership of the IRS. It also needed a centralized coordinating office that fully embraced the need for reform and that would not shy away from dramatic change. The office had to be elevated to a suitable level within the organization in order to:

- See the big-picture impact of competitive sourcing.
- Communicate the big-picture results to the stakeholders.
- Keep the organization focused.
- Have the authority to partner with external stakeholders, such as the National Treasury Employees Union (NTEU).

- Recognize the impact and strategic interactions within the context of broader IRS initiatives.

The result was that the Office of Competitive Sourcing (OCS) within the IRS was tasked with implementing and coordinating the competitive sourcing program, while also cultivating buy-in across the agency. In addition to Stickell, the head of the office, the staff includes two program officers and a support staff. OCS manages competitions from the start through award and oversight/monitoring of post-award activities—managing the conduct of the FAIR Act inventory, undertaking a process of coordinating the functions to be competed, managing the competitions, and, ultimately, tracking the performance of the winner. The following sections outline the IRS’s approach to each of these phases.

Conducting the FAIR Act Inventory

The two greatest challenges to conducting the FAIR Act inventory are engaging the right people in the process and developing detailed and consistent definitions for the categorization of functions.

Initially, the OCS staff asked key IRS staff to attend FAIR Act classification meetings on a voluntary basis. At the meetings, the OCS staff attempted to familiarize IRS managers with the OMB guidelines for categorization of activities as inherently governmental or commercial Codes A through F. Then the managers went back to categorize the various functions under their authority. The results were extremely inconsistent: The A-76 guidelines were sufficiently broad to allow offices within the IRS to classify seemingly identical functions differently.

OMB assigned classification responsibilities to agencies, subject to OMB’s approval. However, within the IRS, OCS made the final decisions regarding whether a function was inherently governmental or commercial. Some managers within the IRS have suggested that OCS should delegate that authority; however, according to Stickell, holding on to final approval authority was a way of ensuring that the managers would take a hard look at the nature of their business functions. She had to explain to the managers that the easy answer was not always the right one: “We are not doing this for the complexity; we just want the best outcome.”

After the first two years of developing the IRS FAIR Act inventory, IRS instituted a formal committee

called the FAIR Act Inventory Coordinators Group (FAICG). This group, with over 24 personnel representing all the business divisions and separate offices, is chartered to work on FAIR Act inventory issues at both the corporate and business-unit level. The group's primary focus is to ensure that the completed inventory reflects the actual work performed at IRS (proper function codes, status codes, and reason codes as applicable) and is accurate, complete, consistent, and defensible. OCS made participation in FAIR Act inventory meetings mandatory. The office emphasized the importance of every person's input in the assessment of functions and in the defining of categories. OCS justified mandatory attendance because all business divisions should have a voice and ultimately would have to take ownership of the results. The newly trained employees composed the coordination group, which worked on defining and evaluating functions during their monthly meetings. Coordination group members represent their business division commissioner or their function chief.

In the 2002 and previous inventories, all sorts of activities placed under the Administrative Support Services function code (D000) were classified as inherently governmental. The FAICG developed an authoritative service-wide policy for what constituted administrative support services and what approach to take for status coding. For the current year inventory, all FAICG members were intimately acquainted with two guidelines vis-à-vis administrative support. First, administrative support services should be considered commercial; if they were going to be designated inherently governmental, then there would have to be a compelling reason why the function was under the Administrative Support Services code. Second, administrative support services functions were to be considered, by default, Commercial Code B; therefore, there was the possibility that they could be competed.

It was important to require a compelling reason before allowing a function to be classified "commercial but inappropriate for competition" (Code A) because the tendency was for this category to be the default basket. OCS consistently challenged these types of categorizations because it wanted to have a very high degree of confidence that the final inventory was complete, accurate, consistent, and defensible. At the same time, it was imperative that OCS be

open to opposing points of view and allow for equal voice within the FAICG. The aim was to ensure that all of the individuals involved in the process had a clear understanding of the guidance and why things were, or were not, coded a certain way.

The IRS took the time to train staff, to challenge them to make difficult decisions, and to establish as much consistency in the FAIR Act inventory as possible. These processes consumed a lot of time and resources, but, in the end, it was a huge advantage when they moved on to competing functions.

... Having that connection down to the working level [helps because] when we come in to queue something up for a study, the employees understand why. It is not a lot of new information. They were part of the process—yes, they know it is commercial, so it becomes a "Let's rally and put together the best PWS and MEO." (Interview with Joe Lynem, Office of Competitive Sourcing, IRS)

Deciding What to Compete

As of summer 2004, approximately 33 percent of IRS functions were categorized as commercial in nature.¹⁸ But just because a function is commercial does not mean that it will be competed. As Stickell explains, "We may never get around to running a competition on [every commercial activity] because we have so many change initiatives already under way." Because there are not sufficient resources to compete all functions eligible for competition, OCS must prioritize which ones should be competed. Early on, these decisions were based on special institutional knowledge and several meetings with the senior leadership about where the most gains were possible. Now, before competing any function, the IRS has preliminary discussions with the units involved to determine whether the IRS should conduct a business case analysis. According to Joe Lynem of the Office of Competitive Sourcing, "these early discussions with senior leadership helped [OCS] select functional areas that best support the IRS's strategic business plan." In the case of Martinsburg Computing Center, for example, the unit was undergoing its own reengineering project when it was approached by OCS. The discussions between OCS and the Martinsburg Computing Center revealed that little could be gained by con-

ducting a competitive sourcing study on a commercial group that needed time to finish its own internal Business Process Reengineering (BPR) effort.

After extensive preliminary discussions, OCS conducts an industry-based business case analysis to establish the potential gains as well as costs and risks associated with competing a specific function. The decision-making process adopted by the IRS involves a significant amount of market research, and it is more extensive in the preliminary phases than that of many other agencies; Joe Lynem, himself, questioned the necessity of such extensive pre-competition evaluation when he first arrived. He has since changed his mind:

I didn't think we needed to do a business case analysis of such magnitude. I thought we could do it more from a feasibility perspective looking at risk, posture, culture. But now I recognize how important it is. If you are going to launch a transformational change, you really need to have a strong and compelling case as to why we should make this change. Because of all the competing entities (critics) to the process, the stronger your case is up front, the weaker their case is for opposing you. So it was a very smart thing to do even though it is costly. You don't just look at that cost; you must look at the value it is going to bring you in the long term.

The goal, according to OCS, is to compete those functions that will provide the greatest benefit for the cost of running the competition. Historically, at the IRS, that requires larger studies, which take longer and are more costly to run, but can provide greater benefits. The cost of running a competition is approximately \$3,500 per FTE under study (the IRS experience has been that the fixed costs per study are the drivers; the variable costs related to the number of FTEs are minor).¹⁹ That cost includes the business case analysis, PWS and MEO teams, and contracts for expert support, but excludes training and travel. Stickell explains:

Although the IRS has not been funded for competitive sourcing, savings are typically achieved within 12 months. Those savings are reinvested to fund future competitive sourcing studies. Surpluses beyond competitive sourcing needs are used for corporate needs—we've become self-funding.

Thus, after a transitional phase, the IRS is achieving cost savings.

Once OCS completes a business case analysis, it presents its findings to an IRS leadership committee—the Strategic Resource Committee (SRC)—staffed by senior executives from the business divisions and headed by the deputy commissioner for Support Operations.²⁰ If the business case analysis itself supports a good return on investment²¹ for

Table 1: IRS Competitive Sourcing Program Target Projects

FY02	FTE	FY03	FTE	FY04	FTE
Area Distribution Centers	500	Warehouse & Transportation	140	Filing Systems (MITS)	240
Campus Print Operations	350	Seat Management	350	Internal Management Systems (MITS)	344
Building Maintenance	100	Files Activities	1,458	Product Assurance (MITS)	300
Mailrooms	70	Transactional Processing Centers	560	Learning & Education (Service-wide)	617
Architects & Engineers	10	IT Administrative Support	140	Real Estate Field Operations	70
		Equipment Repair	40		
		Tax Law Telephone*	50		
TOTAL FTE:	1,030		2,638		2,201

*Number pending preliminary feasibility results.

either an MEO or a vendor win, OCS addresses the leadership's concerns and leaves the meeting with the SRC with a decision whether to compete the function being studied.

Setting Up the Competition

Selecting the PWS and MEO Teams

In order to run a good competition, the PWS and MEO teams must be well staffed, and the employees must be able to provide value. More than that, "the PWS and MEO can't be products of the competitive sourcing office, but rather have to be owned by the business divisions."²² In terms of choosing specific individuals, OCS works with the business units, helping them to build their PWS and MEO teams so that they include the best and brightest employees. The key is a balance between functional knowledge, flexibility, and vision—"it is not just about looking for the people that know how to run the business today; you want the visionaries in there" to help dictate how the function should run in the future.²³

In addition to finding greater efficiencies, larger studies translate into a larger pool of employees from whom leaders for both the PWS and MEO teams can be selected. This is especially important, as many other agencies have suggested that they have not been able to find employees qualified to lead their smaller competitions.²⁴

When a business unit believes that it cannot provide the right type of leadership, the IRS hires an external individual—usually a former IRS leader, who may be rehired as an annuitant—to take on leadership responsibilities and assist in the development of key deliverables (the MEO, PWS, and eventually the bid). If one of the teams must be constructed from outside the business unit, it is preferable that it be the PWS team. This is because a Performance Work Statement can be written by outsiders who have experience and background in the area. In fact, an outside team may be more open-minded and feel less constrained by current practices, ultimately bringing about ideal changes for the future. However, the MEO should not be developed by an outside team, because, "in the end, it is the current employees that are going to have to own that solution, and they are going to be [the

ones] living with the results." It is more reassuring, and employees have more faith in the bid, when the individuals on the MEO team are going to be part of the group that has to live with the results.

Writing the PWS

Three fundamental questions must be addressed when constructing a PWS: (1) What is it that should be competed? (2) Which business processes does it make sense to abandon? and (3) How should the function be performed in three to five years? Beyond that, the IRS has found two attributes that help when writing PWSs—being flexible and having benchmarks to support their standards.

Flexibility

A PWS must be open and flexible so that it maximizes the options available to competitors; the goal is to rethink and improve upon functions, rather than to force competitors to do things the same way that the government has been doing them. "You can put in constraints requiring a vendor to use existing automation, but you limit the potential for improvement—the solution may be 90 percent new automation, or [it] may be to relocate the function to another city." The IRS found that it is important to clearly specify to the bidders the exact outcomes for which the IRS is looking in the PWS. But, in doing so, the PWS need not detail a specific process through which the outcomes should be achieved. In fact, such detail should be avoided. Rather, to spur innovative reform and to allow for the maximum efficiency gains, the PWS must be flexible, with future-oriented outcomes.

Benchmarks

One of the hardest parts of writing a PWS is developing the technical standards and performance metrics that the bidders must deliver. To avoid codifying technical metrics that merely institutionalize existing processes, it is important to challenge existing output standards. The IRS accomplishes this by referring to industry standards that support their technical requirements. As Joe Lynem states, "when someone says the PWS should require this thing to be 98 percent accurate—well, where did you get that number from?" Having common benchmarks answers questions of these sorts. In some situations, the IRS found that the government performance level was the best industry standard, in which case they

cited the government. Regardless, the aim is to keep the competition as open and as fair as possible.

The IRS recognizes that emphasizing flexibility and adherence to benchmarks generally makes the evaluation and comparison against the criteria more difficult in the final stage. However, the gains achieved as a result make the extra complexity worthwhile.

Competing Area Distribution Centers

Background²⁵

The IRS Media and Publications Division (MPD) is the third largest government publisher, and it is one of the top 10, high-volume mailers in the government and commercial worlds. It maintains an inventory of over 21,000 published products. As the IRS’s publisher, the MPD is responsible for the design, creation, production, and delivery of informational products for both internal and external customers. The MPD delivers products using traditional paper printing, as well as through alternative formats—including fax, CD-ROM, Braille, Internet, and intranet—to meet customers’ needs. The MPD maintains three Area Distribution Centers (ADCs)—the Central Area Distribution Center in Bloomington, Illinois; the Eastern Area Distribution Center in Richmond, Virginia; and the Western Area Distribution Center in Rancho Cordova, California—to handle public and internal requests for published products. The IRS chose to package and compete the work performed at the ADCs in a single study.

Deciding to Compete or Not to Compete²⁶

The ADC function was classified as a commercial activity during the first IRS FAIR Act inventory process. Beyond that, some of the key factors for deciding to conduct a full competition for the ADC functions included:

- Indications from discussions and analyses that the competition would complement efficiency objectives and act as a catalyst for innovative change in this area—that is, it would support the IRS’s modernization objectives.
- Even though all of the operations fall under one business unit, each ADC hires separately

and has its own authority—thus, if a reduction in workforce or workload was necessary, it was possible to define the competitive area to limit the impact on other business units.

- The increase in e-filing and the decrease in taxpayer orders for paper products.

Deciding to package all of the centers into one study was a strategic decision consistent with IRS’s commitment to long-term and big-picture reform. Stickell stated that “OCS could have done six different case studies—one in each location and then in three call centers.” If OCS had conducted six studies, the IRS would have received a higher President’s Management Agenda scorecard rating, according to OMB metrics. However, OCS believed that separating the cases would lead only to incremental savings. As Stickell explained, “You could have taken some management layers out, but you would only get incremental improvement and it would not have been worth the effort.” On the other hand, packaging all of the ADCs together allowed OCS to solicit bids for all aspects of the ADC functions. Thus, there was a greater scope for creating a streamlined business while improving efficiency and the potential for a large return on investment.

Timeline for Area Distribution Center Competition



Table 2: ADC Competition Summary

	Pre-Competition	Post-Competition
Provider	Run and managed by public sector.	Run and managed by public sector.
Function	Designed to respond to paper and telephone requests for documents.	Will be updated to reflect changes in the ways information is disseminated.
Facilities	Used three government printing facilities.	Will use one existing government printing facility.
Employees	400 FTEs	Will eliminate the need for about 240 FTEs—a 60% reduction.
Performance	Met required service levels.	OCS anticipates even better service.

Challenges to Writing a PWS²⁷

Often, it is challenging to craft a PWS so that it ensures a specific outcome is achieved, but leaves room for innovation. In this case, of particular concern was the debate over whether to require bidding entities to use current government facilities. It would have been easier to conduct the competition if all parties were bidding on the same facilities; however, the ADC PWS chose not to limit the solicitation in this way. Instead of mandating the use of government facilities, the ADC PWS allowed proposals to include locations anywhere, so long as they met the standards outlined in the PWS. The cost of the government facilities was calculated, and if a private bidder or the MEO team chose to use the existing facilities, it would have to incorporate these costs in the proposal in the same way that it would for any other facility. Thus, there was no specific advantage or disadvantage for using the facilities. The ADC PWS focused as much as possible on issuing performance requirements and outcome objectives only. Focusing on the “what” of the operations whenever feasible from a commercial point of view, OCS avoided process limitations and restrictions on “how” something ought to be accomplished—and, in this case, location was considered part of the “how.”

Choosing the Winning Bid and Anticipating Results²⁸

Trend data showed a 6 percent annual decline in workload at the Area Distribution Centers. The IRS attributed this drop-off to tax preparation software and digitized forms available over the Internet that reduce individuals’ and corporations’ dependence

on paper copies that must be requested from the Area Distribution Centers. Accordingly, even though the IRS employee team won the competition, the MEO proposed closing the Richmond, Virginia, and Rancho Cordova, California, warehouse facilities. As such, 191 permanent and seasonal²⁹ employees will lose their jobs. Although the Bloomington, Illinois, site will remain open, approximately 82 seasonal employees will lose their jobs. A total of 400 FTEs were competed.

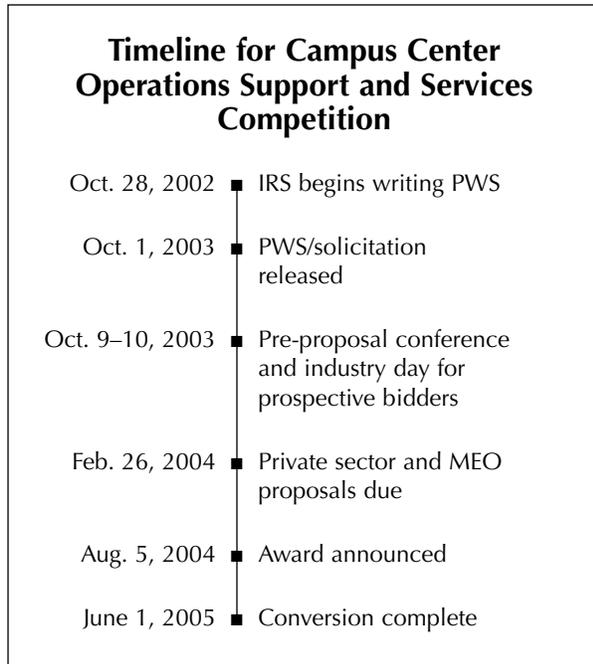
The average salaries of the employees that will be laid off are in the General Schedule 3 range (\$19,000 to \$25,000 per year, excluding locality adjustments). Stickell argues that the employees “were meeting the quality levels, they were meeting the service levels ... [the reduction] really is [because of] a dramatic change in the workload.”

The IRS is trying to reduce the number of layoffs by about 50 by offering early retirement packages and buyouts of up to \$25,000. As of September 1, 2004, 187 IRS employees took advantage of a previous round of similar offers. The time frame for implementing the changes is very short. A public comment period ended on September 16, 2004, and the IRS expects to complete its restructuring by March 2005.

Competing IRS Campus Center Operations Support and Services

Background³⁰

This competition sought a service provider capable of supplying all services, materials, supplies, facili-



ties, supervision, labor, and equipment to perform Campus Center Operations at the 10 centers around the country. The Service Centers are located in Andover, Massachusetts; Chamblee, Georgia; Austin, Texas; Covington, Kentucky; Fresno, California; Holtsville, New York; Kansas City, Missouri; Memphis, Tennessee; Ogden, Utah; and Philadelphia, Pennsylvania. The operations are further broken down into five functional areas: work control, file transmission, print operations, data processing support, and magnetic media management. These functional areas support the broader mission of the Campus Center Operations of providing “top quality information systems products and services which enable the delivery of submission processing and customer service programs.”

Deciding to Compete/Challenges

Once the Campus Center Operations support and services functions were identified as commercial activities, the following factors helped to increase the productivity, reduce the workloads, and thereby made them a good choice for a full competition:

- Advances in information technology, which spawned increased online interaction and reduced the requirements for paper products and print operations
- The consolidation of mainframe operations
- The consolidation of taxpayer notifications at two locations

Assessing the Bids³¹

Because the supplies and services required for the operations of the Service Centers are so inter-related, the IRS intended to make a single award for all of the Service Centers. The bids were evaluated on three areas; in decreasing importance, the IRS was interested in technical evaluation factors, management factors, and past/present performance factors.

The technical proposal—encompassing the technical approach, phase-in plan, continuity of operations plan, quality control plan, and safety plan—evaluates the proposed approaches and processes for performing the services needed to achieve the required outcomes, as described in the performance requirements document. The management plan—encompassing the staffing plan, subcontracting plans, and disaster recovery plan, and may also require a strike contingency plan—assesses the proposed approach for structuring and

Table 3: Campus Center Operations Support Competition Summary

	Pre-Competition	Post-Competition
Provider	Run and managed by public sector.	Run and managed by public sector; OCS will provide oversight.
Facilities	Ten government-owned Campus Centers are distributed around the country.	Will use the same infrastructure.
Employees	Nineteen to 36 employees located at each site (278 total employees).	Five employees at each site, plus 10 at quality control center (60 total employees—a 78% reduction).
Performance	Relied on existing business models, even though technology was changing.	Reengineered existing processes will dramatically reduce workload.

staffing key personnel and for effectively planning, controlling, directing, and accomplishing the services under this contract.

A risk assessment ties these elements together, addressing the potential for disruptions in the schedule, increases in cost, degradations of performance, the need for increased government oversight, as well as the likelihood of unsuccessful performance. The risk assessment plan also evaluates proposals for mitigating identified risks. Lastly, bids are evaluated on the basis of cost realism (validity, realism, and adequacy of the proposed price in relation to the Request for Proposal and the rest of the proposal) and price reasonableness (an assessment of the overall reasonableness of the proposed price).

Choosing the Winning Bid and Anticipating Results³²

Like the Area Distribution Center case described earlier, the public sector proposal won the competition. According to the MEO, of the 278 technology-related positions that were competed across the 10 Campus Centers, 218 cuts will be made. Specifically, the information technology force at each of the 10 locations will be reduced from their current levels (which range from 19 to 36 employees) to five employees, with an additional 10 employees located at a quality control center. The changes will be implemented during a transition period, projected to last until June 1, 2005.

Terry Lutes, associate CIO for IRS Information Technology Services, called the proposal “very creative.” He went on to note that, similar to the other modernization efforts being undertaken at the IRS, the MEO “actually redesigned the work” to enable such a dramatic change. Lutes added that the innovative proposal was especially important because the IRS was unlikely to commit additional resources even though “we’ve got a modernization [effort] that we’re rolling out that we’ve got to support.”

Potential Implementation Challenges

Transformational change is never easy, especially in an organization as large as the IRS, where there is not always a willingness to accept a cultural shift. Some of the major challenges to implementing changes that the IRS is still addressing include

employee morale problems and enforcement of MEOs when the public sector wins.

Employee Morale

Employee morale is always a major concern when conducting competitive sourcing competitions and is also true at the IRS. For one, the IRS did not receive additional funding to implement the competitive sourcing initiatives. As such, resources were taken from existing programs to fund OCS and the phases associated with competitive sourcing. Managers felt that their departments were going to be gutted; employees feared that their jobs were threatened, and the IRS had set up the system such that savings achieved as a result of competitive sourcing would go to the IRS at-large rather than to the departments or functions that competed. Savings were to be considered “a corporate asset, not an individual business unit asset.”³³ As a result, the morale of employees and their opinions vis-à-vis competitive sourcing were extremely low. As Joe Lynem observed, “Few outside of OCS were in support of competitive sourcing.” OCS emphasizes the need to develop a robust communications plan to convey key messages to employees, bidders, the National Treasury Employees Union (NTEU), OMB, and the media on a strategic level.³⁴ At the tactical level, communications plans announce the decision, outline transition information, and make the required legal and administrative notifications. Communications plans also detail the post-project results.³⁵

Aware of the impact that competitive sourcing might have on employees, OCS put a team together to gather lessons learned and to try to address employees’ concerns when separation was necessary. The objective of the team was to determine how the IRS could continue to be the employer of choice, even for separated employees. Even before a decision is made whether to award a contract to the public or a private bidder, the IRS is required to negotiate with the NTEU to address the impact and implementation of the potential Reduction in Force (RIF).³⁶ The aim is to “treat someone so well that they would still consider coming back to work for [the IRS] even though they had to separate.” OCS sought and received approval from the Office of Personnel Management (OPM) to grant voluntary early retirement and Voluntary Separation

Incentives Payments that pay people to leave voluntarily.³⁷ In situations where there are more than 50 employees affected, the Department of Labor sometimes forms government-funded rapid response teams to assist impacted employees with their career transitions. These teams hold workshops on résumé writing, help develop interviewing skills, and bring in local employers from the community. Again, the focus is on long-term ramifications. The IRS realized that “those may be our future employees, or their children may want to work for us,” so they launched these efforts, in effect as a public relations campaign, designed specifically for separated and soon-to-be-separated employees.

Enforcement of MEOs when the Public Sector Wins

At a conference on competitive sourcing at the Brookings Institution in Washington, D.C., in April of 2004, a number of individuals from the private and public sectors raised the issue of enforcing MEO contracts when the government wins the bid. Other federal departments and agencies have had difficulty enforcing MEOs. One of the main challenges is that from a budgeting perspective, funds for successful MEO bids are not isolated from the larger agency-wide budget. If the budget office is directed to pursue an organization-wide cut, it makes no exception for MEO functions. In short, the problem frequently lies in convincing the budget personnel that if an MEO wins, a binding contract is in place. Budget offices must realize that when across-the-board cuts are required, MEOs must remain intact because their units are protected by a letter of obligation. Although the unit still houses IRS employees, for example, “it is as if the MEO is IRS Understudy, Inc.” once the contract has been accepted. If MEOs have their budgets cut, their workload requirements must be reduced accordingly—just as an independent contractor’s workload would be reduced. If the MEO is going to be held accountable to the contract that was bid, then it needs to be distinct from the “regular” operations from both budget and function perspectives—again, just as an independent contractor would be considered separate. Moreover, if the IRS modifies any part of the work to be performed or any part of the budget, then the contract would need to be renegotiated, whether or not the indi-

viduals impacted are government employees. According to the OCS, this concept is new to the IRS and other federal departments and agencies.³⁸ However, the OCS has gained support from the IRS chief financial officer to draft guidance for both tracking competition costs and implementing project tracking codes to virtually “fence off” the operational expenses for an MEO.³⁹

Results

Of the IRS’s nearly 100,000 FTEs, some 22,000 were considered commercial activities in 2002. Of those, OCS studied approximately 3,700 FTEs during the 2002 and 2003 Fiscal Years and an additional 2,200 in FY 2004.⁴⁰ As of March 2003, business case analyses, or BCAs, were completed for seven areas, comprising 2,738 FTEs; and ongoing efforts were being taken in another four areas, comprising 790 more FTEs. BCAs encompassing an additional 140 FTEs were scheduled to begin during the second quarter of 2003.⁴¹

Even though the Executive Branch Management Scorecard indicated that the Treasury Department has had mixed results (“yellow”) as of June 30, 2004, relative to the September 30, 2001, baseline, it was making successful (“green”) progress in implementing the competitive sourcing component of the President’s Management Agenda.⁴²

Lessons Learned

According to OMB, the fundamental concept behind Circular A-76 is that competition enhances productivity in the government and provides services to the public in the most cost-efficient manner possible. The IRS has embraced this concept and has developed a very comprehensive program for bringing about greater business efficiency; the agency is developing a corporate culture that constantly strives for best practices. When describing the ultimate endpoint, Lynem suggested that IRS’s leaders must think each day how they are going to be better and more competitive. The view from OCS is that competitive sourcing provides an incentive for leaders and individual employees to support efficiency gains within the organization because “you realize that it is either ‘sharpen the pencil’ or lose it all.”

Stickell often repeats to employees that even if OCS is not yet involved with their part of the IRS, the best thing for them to do is to look at their performance standards, set metrics, monitor them on a regular basis, identify best practices, and put them into place, so that when the OCS completes a business case analysis, it will be clear that there would be no return on investment if the IRS pursued a competition, because the department is already functioning in the most efficient way. For her, success is ongoing efficiency—that is, she will recognize success when OCS can walk into any IRS department with the intent of running a competition, but it turns around and leaves because there is no business case for competing an already high-performing organization.

Based on the competitive sourcing program at the IRS, the following lessons learned stand out:

Lesson 1: The FAIR Act inventory is the foundation upon which the competitive sourcing program is built. Spend the necessary time and resources, and ensure that discipline is maintained so that the categorization is accurate, consistent, and defensible throughout the agency.

Lesson 2: Nothing replaces good, up-front planning. Do not underestimate the importance of a detailed business case analysis in making an economically based “compete/no compete” decision. The objective should not be narrowed to focus exclusively on the number of FTEs to be competed; rather, it should be aligned with the agency’s transformation strategy.

Lesson 3: Open communication and collaboration with all stakeholders, especially the employees and their unions, is critical for a successful program. For accountability and consistency of product and message, it is important to maintain one leader throughout the process. And, although a certain amount of anxiety is unavoidable, the communications plan should work to demystify the competitive sourcing process and provide information on the decision-making process, personnel transition options, and timelines.

Lesson 4: When building the Performance Work Statement and MEO teams, look for people who know the business but also are flexible and embrace change. Provide training and support very

early in the process. When they develop the PWS, it is critical that it be structured to allow for innovative change and new solutions rather than merely generating solicitations for current and ongoing methods. The teams should focus on the agency vision of where it needs to be three, five, and 10 years down the road. Use the MEO process as an opportunity to transform the organization ahead of schedule.

Lesson 5: The agency must be proactive when identifying and soliciting prospective contractors, using all available resources. Attracting the right bidders is critical to producing the most efficient and effective outcomes.

Lesson 6: Follow up after the award to ensure compliance with the contract/letter of obligation. For example, if an MEO wins, it should be treated as a binding contract in which the MEO would be protected from across-the-board cuts.

Endnotes

1. Interview with IRS Office of Competitive Sourcing, March 29, 2004.
2. Table 18 Treasury Department Gross Tax Collections: Amounts collected by quarter and fiscal year, 1987–2003. <http://www.irs.gov/pub/irs-soi/03tc18fy.xls>, viewed 05/20/04.
3. <http://www.irs.gov/irs/article/0,,id=98142,00.html> viewed 05/20/04.
4. Internal Revenue Service Progress Report from the Commissioner of the IRS, December 2001, p. 2. http://www.irs.gov/pub/irs-utl/pub3970_2-2002.pdf, viewed 05/20/04.
5. Ibid.
6. Office of Management and Budget, The President's Management Agenda, Fiscal Year 2002.
7. Raymona Stickell, Competitive Sourcing—Internal Revenue Service. Presentation to AFCEA Bethesda Chapter. December 18, 2003.
8. The other major component used in the restructuring and modernization of the IRS included a series of human resources management innovations (HRM). For a detailed discussion of the IRS's HRM initiatives, see James R. Thompson and Hal G. Rainey, "Modernizing Human Resource Management in the Federal Government: The IRS Model," *Human Capital Series*, published by the IBM Center for The Business of Government, April 2003. The IRS also has developed a draft Human Capital Strategy.
9. Internal Revenue Service Progress Report from the Commissioner of the IRS, December 2001, p. 2. http://www.irs.gov/pub/irs-utl/pub3970_2-2002.pdf, viewed 05/20/04.
10. <http://www.irs.gov/newsroom/article/0,,id=98159,00.html>, viewed 05/20/04.
11. IRS Office of Competitive Sourcing, interviews with Raymona Stickell, Joseph Lynem, and Joseph Markowski, of the Office of Competitive Sourcing, IRS, March 29, 2004.
12. Although the phases are distinct notionally, they usually overlap chronologically.
13. OMB Circular No. A-76 (Revised), May 29, 2003, Attachment A—Inventory Process.
14. Federal Acquisition Council Manager's Guide to Competitive Sourcing, second edition: February 20, 2004.
15. Stickell presentation, op. cit.
16. The other initiatives are budget and performance integration, strategic management of human capital, improved financial performance, and expanded electronic government.
17. See Jacques S. Gansler, "Moving Toward Market-Based Government: The Changing Role of Government as the Provider," *New Ways to Manage Series*, published by the IBM Center for The Business of Government, June 2003; and Jacques S. Gansler and William Lucyshyn, "Competitive Sourcing: What Happens to Federal Employees?" IBM Center for The Business of Government, October 2004.
18. Interview, March 29, 2004, supra.
19. Ibid.
20. Bert Conklin, IRS Competitive Sourcing Office, Joint Financial Management Improvement Program Presentation, March 11, 2003.
21. The BCA determines return on investment by assessing the current baseline costs, the costs of the reengineered function, and the market viability. Return on investment does not consider the costs associated with conducting the study, nor does it account for the transition costs, such as severance pay, contract administration, etc.
22. Interview, March 29, 2004, supra.
23. Ibid.

24. Conference regarding “Status and Issues of Competitive Sourcing,” Brookings Institution, Washington D.C., April 29–30, 2004.

25. All background data: Performance Work Statement (PWS) for Internal Revenue Service (IRS) Area Distribution Centers (ADCs); Solicitation number TIRNO-03-R-00016; version 4/14/03.

26. Interview, March 29, 2004, *supra*.

27. *Ibid*.

28. Drawn from Stephen Barr, “IRS to Close Two Publication Warehouses, Causing Layoffs,” *Washington Post*, August 5, 2004, B02; and Amelia Gruber, “IRS to close distribution centers in Virginia, California,” *GovExec.com Daily Briefing*, August 4, 2004.

29. Seasonal employees typically work during the tax filing season (November through March) in order to meet increased demand for forms.

30. All background data: Solicitation number TIRNO-03-R-00032.

31. *Ibid*.

32. Drawn from Amelia Gruber, “IRS announces new round of layoffs,” *GovExec.com Daily Briefing*, August 6, 2004; and Mary Mosquera, “IRS cuts jobs as competitive sourcing, Internet make inroads,” *Government Computer News*, August 6, 2004.

33. *Ibid*.

34. Interview with IRS Office of Competitive Sourcing, August 11, 2004.

35. For example, see Office of Competitive Sourcing, Communication Plan for ADC Competitive Sourcing Implementation, July 30, 2004.

36. MITS Employees Face Reduction in Force, *Force Online*, November 2003. <http://nteu73.org/force/1103/page6.html>.

37. See the OPM’s “Agency Guide to Implementing Early Retirement Programs” (<http://www.opm.gov/employ/vera/veradg001.pdf>); and the “Guide to Implementing Voluntary Separation Incentive Programs under Public Law 104-208” (<http://www.opm.gov/employ/vsiguide.pdf>).

38. Interview, March 29, 2004, *supra*.

39. Interview, August 11, 2004, *supra*.

40. Conklin presentation, *op. cit*.

41. *Ibid*.

42. Executive Branch Management Scorecard as of June 30, 2004.

Case Study 3:

Competitive Sourcing at Offutt Air Force Base—A Collaborative Public Sector Approach

By John Barker and Russell Lundberg

“The notion is widespread that the private sector can do the job cheaper and better than government. But the Air Force’s selection of a government civilian team to provide support services at Offutt AFB challenges that notion.... It vindicates our position, what we’ve said all along,” [said] Wiley Pearson, a defense policy analyst for the American Federation of Government Employees. “We can compete against the best in the private sector.”¹

Omaha World-Herald, March 23, 2002

Summary

In March 2002, the Air Force approved a “contract,”² based on an A-76 public versus private competition, submitted by civilian employees at Offutt Air Force Base (AFB), Nebraska, to provide support services at the facility. The arrangement covered 1,459 existing jobs and a wide variety of base activities, including aircraft maintenance, hazardous waste management, cargo transportation, real estate management, and base communications.

When the Air Force announced the Offutt competition in 1998, a group of in-house employees developed a workforce restructuring plan that would cut 58 percent in annual manpower costs alone—ensuring personnel savings of \$46 million annually. The private contractor’s bid came in with a savings of 42 percent. The number of jobs involved in the Offutt competition made it one of the largest of its kind. Similar competitive sourcing efforts at other Air Force installations had been either contentious or had failed altogether. In 2002, the 55th Wing at Offutt was one of three recipients of the President’s Quality Award for Management Excellence.

Why this project succeeded—and, more important, why the *government* team prevailed when they were predicted to lose³ provides important lessons in the competitive sourcing process. Personnel consolidation and cost reductions are already well documented (using the mandated MEO process). Performance is also likely to improve (although not necessarily guaranteed) as a result of the competitive sourcing process, but since the transition will take two years to complete, it is still too early to make definitive statements in this area. However, such improvement can be expected. This much is clear: Government can compete with the private sector and exact substantial savings in manpower while retaining high performance—as long as competition (stressing both performance and cost) is present to create incentives for the government to make these desired changes.

Background

In 2002–2003, government-held public-private competitions, involving 17,000 positions, resulted in public sector wins 76 percent of the time.⁴ As a consequence of the competitive process, the presence of competition appears to drive the government workforce to higher performance, and at much lower costs, using the Most Efficient Organization (MEO) process.

Offutt AFB, located in Bellevue, Nebraska, serves as the headquarters of the U.S. Strategic Command and the home of the 55th Air Wing. The 55th is the second largest wing in the Air Force, serving a primarily strategic mission, with five reconnaissance squadrons, and one squadron each with command and control, intelligence, combat training, and

Timeline for Offutt A-76 Competition

Sept. 1, 1998	■ Offutt officials announce that more than 1,600 positions at the base will be put up for competition.
Nov. 24, 1998	■ Request for Information posted.
June 28, 2001	■ Competition closes and bids submitted. DynCorp is only outside bidder.
March 21, 2002	■ Results of competition announced. Offutt's submission tentatively approved, pending appeal.
April 24, 2002	■ No appeal filed by DynCorp. Award to Offutt confirmed.

operations support missions. Offutt has approximately 57,000 active-duty, civilians, retirees, and family members, of which 8,000 are assigned military and 3,500 are civilian personnel.

Air Force officials notified Offutt AFB in 1997 that they would soon begin competing a significant number of their non-inherently governmental personnel in an A-76 competition. Employees were immediately brought into the loop, uniting labor and management in a single effort to find the most efficient operation possible. A competitive spirit instilled by open communication was the only way they could save their jobs. This positive, competitive response is in sharp contrast to the response of many operations that, when told of an A-76 competition, immediately began to complain to the Congress and, when that didn't work, were already far behind in getting organized to compete.

Only a single private corporation was ultimately interested in competing against the public sector employees for the Offutt contract. DynCorp, now a subsidiary of Computer Sciences Corporation, was no stranger to sourcing competitions, being involved in several other large-scale Air Force contracts.

After a process lasting 42 months—approximately three and a half years—the public sector employees retained their jobs by producing a bid that reduced labor costs by 58 percent, besting the private bid by \$118 million over the initial five years of the contract. At the same time that other large Air Force competitions were floundering, the Offutt AFB competition was recognized as a model program and, as a result, awarded the President's Quality Award.

Description of the A-76 Competition Process

Sourcing competitions apply Federal Acquisitions Regulations under guidelines promulgated by the Office of Management and Budget in OMB circular A-76. Although revised in May 2003,⁵ current regulations are largely similar to A-76 regulations in place for the Offutt competition.

The A-76 document outlines agency reporting requirements for job functions described as non-inherently governmental activities. This establishes a jobs inventory for an agency official, at the assistant secretary level, to schedule for competition. The designation of non-inherently governmental activities allows for competitive efficiency gains without sacrificing agency core competencies or control.

After an agency determines whether to follow a "standard" or streamlined competition process (streamlined processes are allowed only for competitions for job functions consisting of 65 full-time employees or fewer), A-76 lays out guidelines for the framework and the criteria for administering the competition.

The framework for competitions under the A-76 establishes separate administrative groups under a single competitive sourcing official (CSO). One group, the contracting office run by the contracting officer (CO), is responsible for overseeing the creation of the Performance Work Statement (PWS), which details bid requirements. The contracting office often includes a Source Selection Authority (SSA), responsible for evaluating bids and determining the contract placement. The second group, the agency tender office, develops the MEO, agency

cost estimate, quality control, and phase-in plans, and submits the tender developed in accordance with the PWS to the SSA. The agency tender office works in conjunction with the human resource advisor, responsible for creating a transition plan for the current workforce to either the MEO or elsewhere in the public sector. The CSO is responsible for maintaining the integrity of the process, establishing a firewall to keep these two functions inherently separate, and instilling the spirit of competition in the process.

The first step in the process is to create the PWS. This outlines the specifications required for the job, including the determination of the job functions and their applicable performance period. An inherent requirement of competitive efficiency is the freedom to reorganize job titles and responsibilities. *It is important that the specifications of the PWS be based on the necessary outcomes rather than the existing processes.* However, it must be recognized that the PWS should be considered a living document, continually refined through dialogue with both private and public bidders.

The PWS must be specific in order to reduce ambiguity in the preparation and comparison of bids. It should identify the Government-Furnished Property (GFP) and common costs that may be available or mandatory in submissions. Criteria for evaluating the competition must be determined—for example, “lowest price, technically acceptable,” or “phased multi-step evaluation,” or specifically delineated guidelines for a “cost/benefit,” “best value” estimate. Also, any minimum cost differen-

tials or predicted savings-level threshold that would justify a transition to the private sector should be clarified at this point.

After the development of the PWS is under way, the agency tender (the public sector bid) is begun, through the development of the MEO. This includes restructuring the work process to incorporate efficiencies, as well as restructuring the personnel plan for those performing that work. Developing a more efficient workforce may occasionally include reducing salaries. And it may include incentives, training, and the search for more capable employees (often at higher pay, but fewer of them), all aimed at improved performance. However, in general, it is simply the prior employees, just with new processes and incentives for higher performance at lower costs.

Both private and public bids are submitted to the SSA to confirm that all bids meet minimum requirements. The best of the private bids is then determined by an independent review officer using specific comparative criteria established in the PWS. This review process may involve considerations other than cost.

The best of these private bids is then compared with the agency tender reflecting the MEO. Both bids are examined to insure comparability through a detailed checklist of concerns, including gain from disposal/transfer of assets, base-level employee packages, taxes, insurance, and transition costs specific to each entity. Transition costs may involve a minimum cost differential of the lesser of 10 percent of the personnel costs or \$10 million over the performance period.⁶ After confirming comparability or existing prices for performance differences, the determination of a winner is often based solely on price—although there are many who are urging that the selection be based on “best value,” where both cost and performance are considered.

After a decision is made, there is a period of tentative acceptance pending possible appeals. Either the private or agency bidders (or their representatives) may appeal within a period of 30 days for complex cost comparisons. Employee unions are not considered representatives of agency bidders for the purposes of appeals. The initial appeal is

Acronyms

AFCESA	Air Force Civil Engineer Support Agency
CO	Contracting Officer
CSO	Competitive Sourcing Official
DoD	Department of Defense
FAR	Federal Acquisitions Regulations
GAO	Government Accountability Office
GFP	Government-Furnished Property
LOO	Letter of Obligation
MEO	Most Efficient Organization
OMB	Office of Management and Budget
PRD	Performance Requirements Document
PWS	Performance Work Statement
SSA	Source Selection Authority

examined by an Administrative Appeal Authority at least two levels above the individual who made the determination.

Following the determination of the award, the transition to either the private bidder or the MEO begins, based on a timeline that may last up to several years depending on the complexity of the operation. Incentives are usually included to induce the private bidders to hire displaced public sector employees. Whether the private or public sector wins, the human resource advisor is given responsibility for reducing the negative impact on employees.

The transition is reexamined periodically to ensure that performance requirements are being met. If

requirements are not being met, the contract can be cancelled, forcing a new competition earlier than the end of the contractual period. This review is explicit and obvious for the private sector competitors, but was only recently required for the MEO. Tracking of performance is essential to fair and honest bidding in both the public and private sectors.

Timeline at Offutt: Who and When

The Air Force announced in 1997 that the 55th Wing/Offutt AFB would be holding an A-76 competitive sourcing competition for disposition of its non-inherently governmental work. Lt. Col. Glenn Charczuk was selected as the CSO, heading the sourcing competition. While the details of positions competed were still being debated, an immediate

The New A-76⁷

The A-76 bulletin has undergone revisions since the Offutt competition. Concerns as to the complexity of the document as compared to the better known Federal Acquisitions Regulations (FAR), and refinements realized through its use, led to the revision of the A-76 bulletin in 2003. Some of the material impacts of this revision are listed below.

- The time frame for competitions has been shortened to 12 months from announcement to award. While this may be extended under certain circumstances, and does not include preparation time prior to the announcement, shortening the process should attract more private interest in competitions.
- Inherently governmental positions must now be justified in writing and are subject to challenge.
- A heightened emphasis on front-end planning explicitly requires planning that includes the definition of scope and the appointment of key officials.
- The two-phase requirement (wherein the winner of the private-private competition then competes against the MEO) is eliminated, and all bidders compete at all stages of the process.
- The least-cost rule for the public-private determination has been eliminated. Sealed bid, lowest price technically acceptable, phased evaluation, and best value methods are all acceptable.
- Firewalls between the PWS team and the MEO team are explicitly required.
- The 10 percent conversion differential was eliminated for streamlined competitions, but this provision was recently reinstated in the FY 2004 Defense Appropriations bill.
- Collaboration between the agency and a private bidder through subcontracting is forbidden.
- Post-award accountability is strengthened with annual reviews to determine if the MEO is fulfilling its Letter of Obligation (LOO). Best practices are also shared on the SHARE A-76 section of the DoD website.
- Follow-on competitions were not required for contracts awarded to the MEO; now new competitions are required at the end of the performance period for all contracts, unless the CSO grants a waiver.
- Appeals previously limited to costing or procedural errors have been expanded to include solicitation, cancellation, exclusion, and decision errors, and are governed by the process under FAR 33.103. However, LOO cancellations cannot be appealed.

Leadership Counts

A major ingredient in a successful competitive sourcing program is the quality of leadership. The Offutt AFB competition was fortunate in securing the services of a man who was determined to avoid the mistakes and missteps that had plagued earlier competitions at other Air Force bases. Lieutenant Colonel Glenn Charczuk was selected as the leader of the competition and immediately involved everyone in the process. One of his first steps was to enlist the support of the American Federation of Government Employees and its local president. He also held frequent and informative meetings with employees involved in the competition, letting them know exactly what to expect. That eliminated rumor and misinformation. Lt. Col. Charczuk stayed with the competition throughout its 42-month gestation. He has retired from the Air Force, but is still on board to handle the transition phase of the program. Consistency, leadership, and an open door are the hallmarks of Lt. Col. Charczuk's philosophy. It worked well for Offutt in this competition.

step was taken to reach out to the employees. The American Federation of Government Employees Local 1468 and its president (and sign-making and repair shop employee), Kay Balaban, and employees at large were brought into the process early on, letting them know what they could expect.

In September 1998, 55th Air Wing commanders announced that more than 1,600 jobs would be put up for competition. Eventually this number would come down to 1,459 as contract requirements were refined. Two civilian personnel were selected to lead the competition—Cindy Beyer as the contracting officer developing the requirements, and Randy Livingston, the chief of performance management, as the agency tender officer in charge of developing the MEO.

When the initial Request for Information was posted on November 24, 1998, there was significant interest in the contract. However, by the time the competition was closed and bids submitted on June 28, 2001, only one contractor remained: DynCorp. With over 23,000 technical employees in more than 550 locations worldwide, DynCorp, led by CEO and President Paul Lombardi, is and was a regular contractor to the government and military. DynCorp was acquired by Computer Sciences Corporation in 2003.

The results of the competition were announced in March 2002. The 55th Wing submission had been tentatively approved, with savings over the initial five-year contract projected at \$188 million. An appeals period ended April 24, 2002, with no appeals filed by DynCorp, confirming the award for the MEO. The transition period is slated for two years, followed by

an initial five-year contract, with possible extensions of up to three additional years.

Implementation Challenges

Time

The Offutt competition lasted 42 months, much longer than average, but not, in the Air Force's view, problematically so. Lt. Col. Charczuk originally estimated that the process would take 30 to 36 months.⁸ This corresponds with the Air Force Civil Engineer Support Agency (AFCESA) timeline of 36 months for multi-function A-76 competitions. (See Figure 1.) But as the Offutt competition was of exceptional size and scope, the length of time was not considered unreasonable.

The additional time primarily arose in the area of research and preparation. Once research was completed and the solicitation was issued, the process actually moved faster than the AFCESA timeline. The result of this additional time was a greater understanding of the intricacies of the job processes, allowing greater efficiencies to be developed.

The extended time period also allowed the process to proceed deliberately, taking care that no mistakes were made. Several other large competitions undertaken at the same time as the Offutt competition were mired in difficulty (see "Unsuccessful Competitions" on page 54 for details on these competitions). It was essential that Offutt not become another competitive sourcing disaster for the Air Force. Lt. Col. Charczuk commented that they had "done just about everything they could to avoid the

kind of problems they've had in the past."⁹ The extended process allowed the CSO to be "purposely deliberate and very thorough to ensure that everything was done correctly."¹⁰ As a result, the competition ended without protest.

While the 42-month time period had its advantages in this situation, it will not be repeated in future competitions. A provision in the FY 2004 Defense budget bill has shortened the 48-month deadline for multi-function competitions to only 30 months. This provision took DoD officials off guard, and its effects are uncertain. It may encourage private bidders by reducing the time-related costs of preparing a workable bid. However, it may also cut down on the research needed to identify performance requirements and efficient operations, which may contribute to contentious conditions such as occurred at Maxwell AFB and Lackland AFB (see "Unsuccessful Competitions"). Additionally, it may serve to discourage sourcing competitions in order to avoid such complications. But if the collaborative approach taken by Offutt can be adopted by future competitions, then the timeline may be accelerated without additional complication.

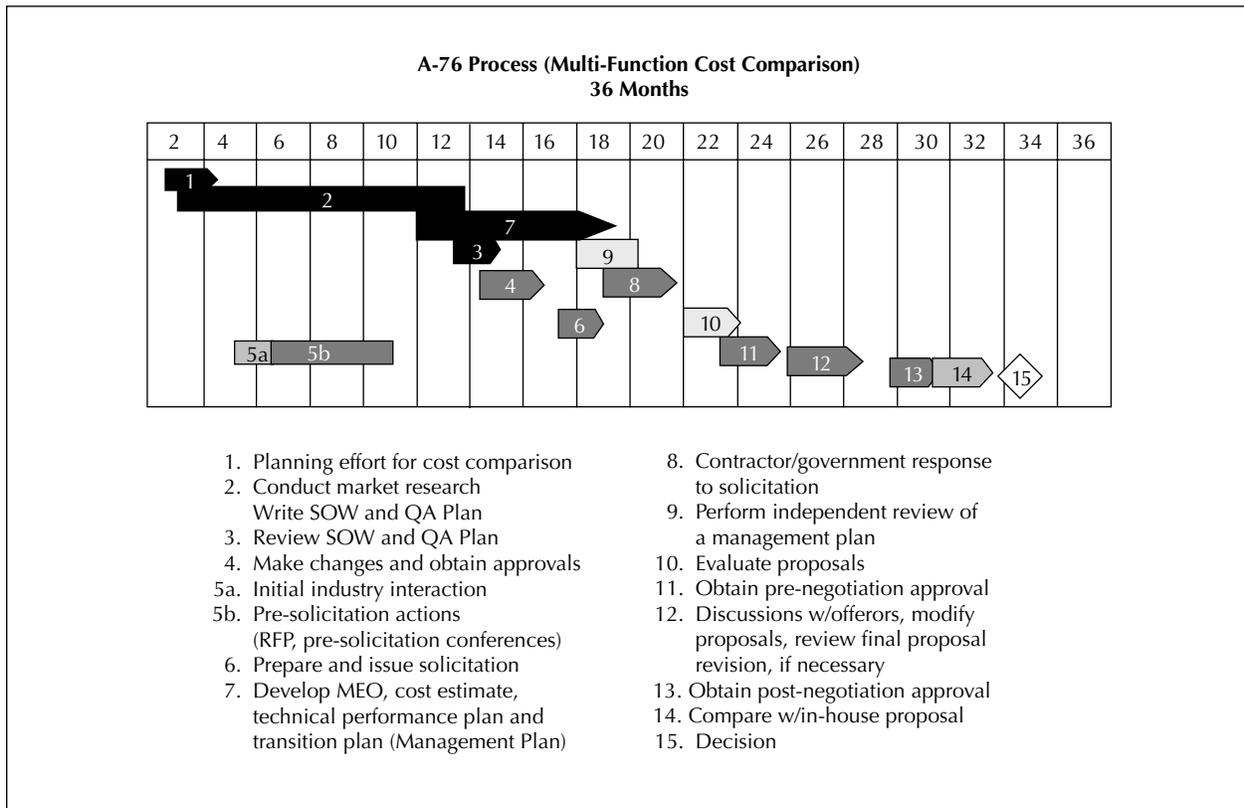
Why Only One Contractor Bid

When the competition was initially announced, the contracting officer received more than 1,200 inquiries from prospective private competitors. As one of the largest contracts ever proposed, it attracted a great deal of interest. But by the closing date, only one private firm was interested in competing. What was it about the contract that attracted so few actual bids, and did that lack of competition damage the process?

Two key requirements were responsible for deterring the private bidders. The first regarded the bundling of services under the contract, with the inclusion of highly technical aircraft maintenance functions along with more generalized overall base operations. The large variety of bids under the contract made it more difficult for a single entity to provide all the services.

The second complication revolved around the small-business subcontracting requirement. The PWS required that 40 percent of the work be subcontracted to small businesses. This requirement was based on analysis of small-business participation at Offutt. The industry average for

Figure 1: Air Force Civil Engineer Support Agency Suggested Competition Timeline¹¹



Unsuccessful Competitions

While the Offutt AFB ran a model competition, not all sourcing competitions have been successful. Lackland AFB and Maxwell AFB, two significant comparisons, both ran into substantial difficulties and illustrate some potential challenges in A-76 competitions.

Lackland AFB announced a competition in January 1999, covering nearly 1,500 jobs in 19 base operating support functions. Lackland 21st Century Consolidated, a joint venture of Computer Sciences Corp., Del-Jen, and Tecom, was initially awarded the \$352 million contract, but the contract was then awarded to the federal workers on appeal. The contractors appealed this reversal to the Government Accountability Office (GAO), which reversed the decision back to the industry bidder. There were concerns on both sides as to comparing the two sides' bids, certifying that the services and the common costs were substantially identical. Additionally, there was concern over the independence of the review officials, which may not have maintained strict separation from the MEO. The Department of Defense began investigations, drawing the attention of a Texas congressional delegation concerned for the well-being of workers in their districts as well as the integrity of the process. By the end of 2000, the competition was cancelled and under investigation, with the jobs temporarily retained by the federal workers until a new competition can be held.

Previously, the Air Force began a competition in 1998 at Maxwell AFB in Alabama. It was another large competition, covering a mixed basket of 814 jobs for five years at a price of \$200 million. DynCorp was selected as the private bidder against the government entity.¹² After a long competition, the contract was awarded to the MEO. DynCorp protested, arguing that the MEO costs were underestimated and that the comparison did not take into account that the public sector could not start its transition as fast. A GAO review found that the criteria used by the contracting office to evaluate the proposals did indeed favor the government in-house bid. In light of that finding, the Air Force reversed its decision, awarding the contract to DynCorp in 2001.

From these cases and others, we can learn several important lessons. First, it is essential that the process itself remains fair, and that review officials remain independent and qualified. A strict firewall should be established between the MEO personnel and the CO personnel, and the personnel selected for the evaluations should be capable and trained to evaluate the bids. Second, the performance requirement should be clear and detailed to eliminate confusion. Questions about conflicting or vague requirements should be resolved quickly through communication to all available parties. Third, the proposals should be roughly equal in their scope—or corrected for differences, if not—and criteria for non-monetary benefits should be considered before evaluating bids, rather than after. Sourcing competitions can be successful, as the Offutt case illustrates, but care must be taken to learn appropriate best practices.

small-business subcontracts is 20 to 30 percent, according to John Delane, the president of Del-Jen, Inc., a base operations contractor that passed on this competition. Given the size of the requirements, aircraft maintenance would be the natural portion to subcontract in its entirety, but the sophistication of the task made it difficult to find small businesses that could fit their needs.

These concerns made it more difficult for private contractors to develop bids on their own, requiring increased management to handle disparate functions or any partnerships to fit their needs. But whether having fewer competitors affected the competition is uncertain. The DynCorp bid proposed a decrease in personnel costs by 42 percent. It corresponded with a similar savings of 42 percent projected by

DynCorp at the Maxwell AFB competition. The lack of competition in the private sector bids did not appear to affect their bid.

Results

Lower Costs

The private sector presented a very respectable bid at 42 percent. With a similar bid at Maxwell successful, it may have also been expected that this bid would be competitive. The Offutt bid came in with savings of 58 percent on personnel costs, thus securing the contract.

The savings of the MEO came from several factors. One significant one was the degree to which a spirit of competition was engendered throughout

the base. The only way to save employees' jobs was to focus the employees' efforts on savings. The determination of the top leadership to instill a competitive spirit in the employees allowed greater flexibility to realize efficiencies. Leadership and a "serious mind-set" made a difference.

To develop the savings, representatives of the MEO examined a wide array of job functions—more than 60 in all. Efficiencies were generated through streamlining (such as cutting travel time, idle time between jobs, and redundant procedural delays for routine decisions) and consolidation (such as combining transportation and supply dispatch centers). These functional examinations also uncovered workflow improvements that could lead to improved performance.

Another source of savings was in reductions to the MEO management structure by sharing elements of the existing base command structure. As a separate entity, DynCorp would not have that option. The extent of the savings due to this innovation are uncertain, since they were kept proprietary so as not to disadvantage the MEO when the contract is competed again, but they are likely significant.

The use of leadership from the existing command structure also brings benefits to morale. There is the belief that under the MEO the existing leadership has greater control. In actuality, when specific accountability requirements are made, leadership gets greater control over performance and costs, whether the private or agency bidder wins; but the perception of a single team as compared to an us-versus-them situation was cited by Livingston as a welcome benefit. Whether such an asymmetry is fair in competitions is not currently a concern, as DynCorp did not appeal the decision in this case.

Better Performance

The search for a "most efficient operation" brings a concern that performance will be sacrificed for lower costs. If the comparison is based solely on the least cost, the focus on costs will draw focus away from efficient performance. However, clearly defined job requirements in the PWS can assure that acceptable performance can be maintained. Introducing competition to sourcing decisions is a search for effectiveness and efficiency, doing the same job for less—or even a better one—instead

of just doing less. In those cases where it has been possible to quantify performance improvement, the improvement has averaged 109 percent.¹³

Previous studies of sourcing competitions have found that when requirements are adequately defined, quality is not sacrificed in the drive for lowest prices.¹⁴ With the contract up for competition again in five to eight years, any reduction in performance will be ultimately disadvantageous, so it is in the interest of bidding parties to prepare bids based on reasonable cost estimates at required performance levels. This necessitates that the performance levels be known to the bidders.

At this point, it is difficult to determine whether or not the MEO operation will maintain its performance at those expected levels. The transition to the MEO is slated to be complete in 2005, at which time a post-MEO Performance Review will examine no fewer than 20 percent of the functions transitioned. At that point, the performance of the MEO will be better understood.

The little information that is currently known indicates that performance is at least being maintained or significantly improved. One example is jet engine maintenance. Under the old system, jet engine repairs were handled by 10 people, with an average turnaround time of 68 days. While the staff for repairs has been cut in half, those five mechanics have cut turnaround time to only 28 days.

Without further data, it cannot be known whether these results are representative of the entire transition. They may be "low-hanging fruit," selected for early transitioning because of their ease in implementation or other inherently successful characteristics. One would expect that the more difficult transitions might also take a longer period of time to implement. While it appears that performance levels were improved, future research will be needed to confirm this result.

Personnel Assignment

The assignment of personnel is always a tricky issue in sourcing competitions, but can be managed. There are both the political and real concerns of employees losing their jobs. Although this is less of an issue when the agency bid is accepted, it merits consideration.

Sourcing competitions necessarily bring upheaval to a static workforce. This is part of their intent, and the reorganization of jobs and workers cannot be eliminated from the process. The substantial reduction in labor costs suggests a significant change both for those employees whose jobs are eliminated and for those whose jobs are altered to take on that work.

Had the private sector won, personnel transitions were prepared for in the competition rules. As part of the requirements laid out by the contracting office, incentives were put in place for a private sector bidder to hire dislocated employees if the employees were qualified for the available positions. This allows the flexibility to fit the personnel to the job, while at the same time bringing experience in the position to the new operations. Instituting rules to minimize the disruption on dislocated employees can be arranged to benefit the employers as well.

According to a GAO study,¹⁵ job loss associated with a private sector competition is very small. In fact, a number of studies have shown that the effect of competitive sourcing is minimal. Even when the private sector is the winner, the involuntary separations are in single-digit percentages. The vast majority of the government workers have either found other government work or gone on to work for the contractor.¹⁶ This was the case at Offutt. None of the 313 civilian personnel at Offutt was involuntarily laid off due to the restructuring. Instead, the 848 jobs cut will come entirely from reassigning military personnel.

Military personnel are more likely to be affected in sourcing competitions within DoD. With the

ability to assign individuals to duties within the military, they are likely to be shifted to other positions, including combat roles. This serves a dual purpose of reducing the ranks of laid-off employees and focusing the agency on its core competency—in this case, warfighting. However, follow-on tracking of military employees is scant. It may be that the new assignments are less attractive than the eliminated positions, which could lead to lower levels of enlistment or re-enlistment. Tracking of personnel should be used to clarify these long-range effects.

Reassignment and retraining, while less disruptive than unemployment, is, of course, a significant concern for the civilian workforce. In some areas, job functions and job tempos are increasing. In others, individuals are being shifted to completely different assignments. Balaban notes as a concern the example of an employee shifted from the paint shop to the electrical shop without receiving training. However, the transition team is prepared for these concerns and is acting to implement training as smoothly as possible. “[P]art of the process is educating you on how to do the job more effectively,” according to Livingston. “It is going to be a challenge to break down some barriers.”

Handling dislocated and relocated employees is an important part of any competition, whether the private sector wins or not. In the Offutt competition, the public sector win minimized these concerns. But even when the private sector wins, appropriate management of the labor requirements can make the transition as painless as possible.

Table 1: Offutt AFB Competition Summary

	Pre-Competition	Post-Competition
Provider	All functions assigned to base personnel.	All functions assigned to base personnel.
Function	Support functions	Support functions
Facilities	Base facilities used.	Base facilities used.
Employees	1,459	511*

*Represents a savings of \$46 million annually; a 58 percent reduction in manpower costs.

Lessons Learned

From a review of this case, a number of lessons stand out:

Lesson 1: Strong leadership must instill the importance of a competitive spirit in a dedicated in-house team. The presence of competition is not, in itself, sufficient to instill a commitment to efficiency in the agency bid. An open and collaborative approach among public sector employees often enhances the quality of the public sector bid.

Lesson 2: A fair and open competition, with firewalls separating the agency bid from the selection team, is essential to the integrity of the process.

Lesson 3: Competition drives down costs, and keeps them down, if the threat of competition is maintained. However, the focus on decreased costs does not adversely affect performance—as long as there is an equal focus on cost and performance.

Lesson 4: Personnel dislocation can be minimized with appropriate management.

Endnotes

1. *Omaha World-Herald* (Nebraska), March 23, 2002.
2. The term used to describe the process is “contract,” although it is actually only an official contract if the agreement is between the government and a private sector contractor; but when the public sector bidder wins, the arrangement is similar.
3. See *Omaha World-Herald*, March 20, 2002 (the day before the contract award was announced). “If recent history is a guide,” wrote staff writer Joe Dejka, “DynCorp is likely to win a major contract to provide support services at Offutt AFB.”
4. GAO, “Competitive Sourcing: Greater Emphasis Needed on Increasing Efficiency and Improving Performance,” GAO-04-367, February 2004.
5. See Office of Management and Budget, OMB Circular A-76 (May 29, 2003, including technical correction made by OMB Memorandum M-03-20) (August 15, 2003).
6. This 10 percent reflects transition and workforce protections concerns, and is an ongoing item of contention. This condition was removed from the updated A-76, but was reinstated in the FY 2004 Defense Appropriations bill.
7. OMB Circular A-76, Performance of Commercial Activities (5/29/03): Matrix of Major Changes Center for Public-Private Enterprise, June 2003 viewed at: http://216.239.37.104/search?q=cache:oQkt8bcHyn4J:www.public-private.org/images/A-76_changes_cppe.generic.doc+omb+a-76+new+old&hl=en&ie=UTF-8.
8. Air Force Starts Civilian Conversion Study at Offutt, ACC News Service.
9. Joe Dejka, “Bids at Air Force bases spur protests, lawsuits” (March 20, 2002) *Omaha World Herald*, Business, p. 2D.
10. Joe Dejka, “Civilian team gets nod to run Offutt services” (March 21, 2002) *Omaha World Herald*, Business, p. 1D.
11. Viewed at <http://www.afcesa.af.mil/ceo/knowledge/compsourcing/templates/a76costcomp/36monthtimeline.pdf>
12. This overlapped with the Offutt competition, and may have impacted the decision not to appeal the Offutt disposition.
13. See Jacques S. Gansler, “Moving Toward Market-Based Government: The Changing Role of Government as the Provider,” IBM Center for The Business of Government, June 2003.
14. Robert J. Dilger, R. Moffett, and L. Struyk, “Privatization of Municipal Services in America’s Largest Cities,” *Public Administration Review*, January/February 1997, Vol. 57(1), pp. 21–26.
15. “Competitive Sourcing: Results of A-76 Studies Over the Past 5 Years,” GAO-01-20, December 2000.
16. See Gansler, op cit., p. 23.

Case Study 4:

Public-Private Partnership—A Pilot “Virtual Prime Vendor” Contract to Supply C-130 Parts

By William Lucyshyn and Jonathan Roberts

Introduction

Improvements in supply chain management over the past 15 years have significantly increased efficiency in the business community. For example, private sector companies have successfully partnered with third-party logistics providers to meet their complex and demanding needs. However, government—and the Department of Defense, especially—has hesitated using third-party providers to meet its logistics needs, even though such public-private partnerships promote improved supply chain performance by introducing competitive pressures. Making the right sourcing decisions can help apply proven, high-performance commercial supply chain management techniques to military needs, thereby improving combat support processes while simultaneously reducing costs.

On a limited basis, the Defense Logistics Agency (DLA) has adapted and employed a third-party logistics concept known as “prime vendor contracting” to meet its logistics needs. The prime vendor (PV) concept is a mechanism through which DLA partners with the private sector, taking advantage of commercial vendors’ superior information technology and distribution capabilities. DLA also benefits because commercial vendors’ profit-driven business practices demand lean inventories and rapid deliveries. Prime vendor contracts typically are implemented through indefinite-delivery indefinite-quantity (IDIQ) contracts.

DLA’s first venture with PVs was through its pharmaceutical prime vendor contracts. In that program, customers comparison shop using an electronic cat-

alog, choose the item of their choice, receive confirmation for that order within minutes, and routinely receive the product in 24 hours. DLA subsequently has expanded the PV concept to food, medical/surgical supplies, facilities maintenance consumables, and fleet automotive repair parts.

In 1996, DLA decided to test whether it could extend the PV model to the support of a major weapons system. After examining several concepts, DLA contracted with Hamilton Standard to supply parts for the repair of C-130 propellers. The C-130 is a military cargo plane used for intra-theater airlift of equipment, people, and supplies. It was DLA’s hope that by building an integrated PV-run supply chain, the parts would be shipped faster and cheaper, while DLA itself would manage the PV contract rather than the actual inventory.

The transition from dependence on DLA-managed stockpiles of non-commercial parts to flexible delivery via a PV has been complicated. However, even during extended and continually evolving transition phases, PVs can be advantageous. PVs increase public-private interaction by shifting the role of the public sector away from providing inventory to contract management, which, in turn, leverages the strengths of the public and private sectors, producing the efficiencies associated with integrated supply chain management. This report covers the initial decision to implement the PV concept for the C-130 propeller assembly at Robins Air Force Base in Georgia—home of Warner Robins Air Logistics Center—as well as the transition and ramp-up period from 1996 to 1999, when inventory responsibility shifted away from DLA to flexible PV delivery.

Background

The Defense Logistics Agency

The Defense Logistics Agency is a Department of Defense (DoD) combat support agency that provides material support to the military services. DLA is largely a civilian organization—over 22,000 civilian and 488 active military employees are stationed in some 48 states and 28 countries.¹ DLA's mission is to provide the materials needed to sustain and support troops; DLA provides consumable supplies, including food, clothing, medicine, and replacement parts. Accordingly, it operates a worldwide supply system to buy, store, and distribute inventory items. Through this system, DLA manages about 4 million unique consumable items.² Of these, about 3.8 million items are considered hardware items, such as spare parts, bolts, and fuses; many of these hardware items are needed to support weapons systems and equipment. The remaining 200,000 items include a combination of medical, pharmaceutical, food, clothing, and fuel items. DLA's goal is to deliver the highest quality supplies, in the quickest manner, at the lowest price. To this end, DLA traditionally has procured supplies, warehoused them at large depots, and delivered them to the appropriate organizations.

Each year, DLA spends billions of dollars to provide these services. According to Fiscal Year 1998 financial statements, DLA reported that its supply management costs—which include inventory purchases, distribution, and material management—totaled \$12.7 billion, and inventory on hand, including fuels, totaled \$9.8 billion. DLA's primary customers are the military services.³

Changes to the Federal Government's Acquisition Processes

Beginning in the mid-1990s, the Department of Defense tried to realize some of the efficiencies achieved by the private sector by moving to a more commercial model, adopting private sector business best practices in order to leverage resources more efficiently. These initiatives became known as the "Revolution in Business Affairs." DoD also introduced a parallel effort, known as the "Revolution in Military Affairs," rooted in the idea that the U.S. military must revolutionize itself in order to adapt to future needs of speed and flexibility in combat, which, in turn, would require a more responsive supply chain.

In 1994, President Clinton signed the Federal Acquisition Streamlining Act, and in 1996, he signed the Federal Acquisition Reform Act. These laws made it easier for the government to buy goods and services from the private sector by simplifying contracting procedures and generally eliminating barriers between the public and private sectors, which allowed for the implementation of improved procurement practices.⁴

As a result of these two acts, there has been a big push to shift DLA away from its traditional role as a "doer," to a new role as a "manager of the doers." Therefore, instead of focusing on delivering parts, DLA shifted its focus to managing contractors; these contractors, in turn, would deliver the parts directly to the users, thus eliminating DLA as the intermediary. Differently stated, DLA no longer would be a middleman who warehoused and shipped parts as needed; instead, it would manage a contract and oversee the performance of the contractors.

VPV (Virtual Prime Vendor) is a more comprehensive approach that addresses a wider spectrum of customer support needs. One vendor under a DLA long-term contract anticipates the customer's needs and has supplies immediately available on demand. The VPV is responsible for providing total logistical support across traditional commodity/product lines by using state-of-the-art commercial business solutions. VPV functions can include forecasting requirements, purchasing, inventory control, engineering support, technical services, storage, and distribution functions. The VPV draws on a virtual inventory of its own stock, other vendors' inventories, DLA corporate level contracts, DLA prime vendors and depot stock. The VPV integrates this supply chain providing tailored logistics support to a specific major customer and/or weapons system. The VPV also provides for national defense readiness and emergencies. Some of the benefits of using a VPV include reduced inventory, both wholesale and retail, faster delivery, direct visibility and access to commercial assets, reduced customer downtime for items awaiting out-of-stock parts, and value-added services, such as no hassle warranty on returns, and technical support.

Brigadier General Timothy P. Malishenko, USAF
Senate Testimony, March 1998⁵

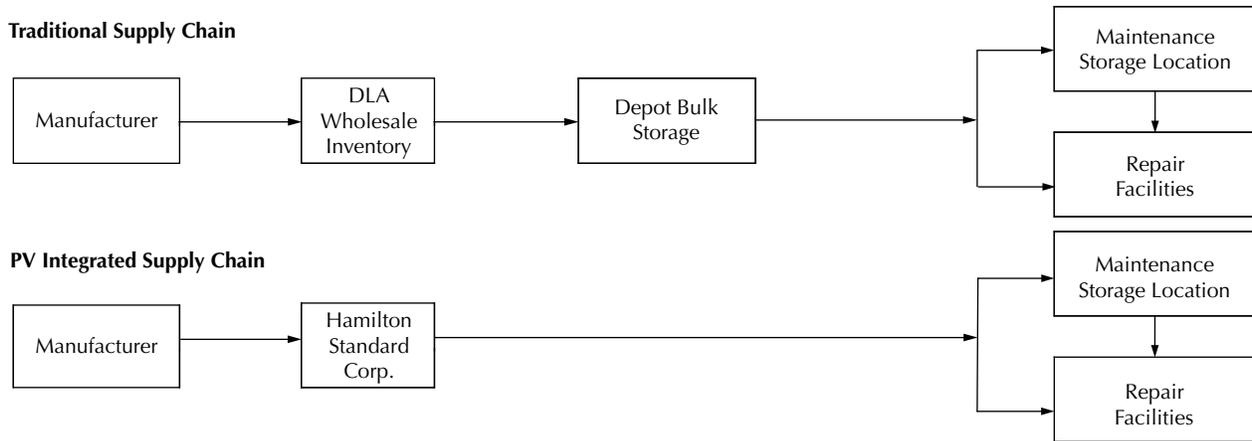
This approach could accelerate DoD’s attempts to integrate supply chain management, as DLA could seek out a world-class contractor rather than trying to build its own world-class operation. DoD’s efforts were influenced by the trends occurring simultaneously in the private sector—advances in information technology, increasingly demanding customers, globalization, and emphases on cutting costs, industry consolidation, and shorter product life cycles.

The Virtual Prime Vendor Concept

In an effort to more fully integrate its supply chain, DLA expanded the PV concept, calling this next generation of PV the “virtual prime vendor” (VPV). VPVs can meet a wider range of customer needs by managing their own stocks and other vendors’ inventories across traditional product lines. In the VPV model, the vendor generally manufactures some products and purchases and stores other manufacturers’ products as needed. VPV contracts

typically are awarded to commercial distributors through long-term indefinite-delivery indefinite-quantity (IDIQ) contracts; the contracts typically stipulate certain performance metrics. The customer then orders from the virtual prime vendor using an e-procurement system, and the vendor ships the items directly to the customer as needed (see Figure 1). The goal is to improve logistics support by taking advantage of private sector information technology and distribution capabilities. Thus, costs for inventory, inventory management, transportation, and personnel are shifted from the government to the VPV, who, in turn, has incentives to minimize those costs. These long-term partnerships eventually may build wider strategic supplier alliances (SSAs), as suppliers form a closer relationship with their government clients. The C-130 propeller assembly VPV contract, awarded in October 1996, was unique because it was the first attempt to apply the PV concept to a major element of a military weapons system.

Figure 1: Inventory and Management Responsibilities under Traditional and Virtual Prime Vendor Integrated Supply Chain Arrangements⁶



	Traditional Supply Chain	Virtual Prime Vendor Integrated Supply Chain
Manufacturers	<ul style="list-style-type: none"> Deliver parts to DLA storage facilities. 	<ul style="list-style-type: none"> Deliver parts directly to end users.
DLA	<ul style="list-style-type: none"> Order parts from manufacturers. Receive orders, store inventory. Ship items from warehoused inventory based on requestors’ orders. 	<ul style="list-style-type: none"> Oversee contract and performance requirements.
End Users	<ul style="list-style-type: none"> Maintain stockpiles at individual depots. Place orders for parts with DLA. 	<ul style="list-style-type: none"> Place orders with prime vendor. Benefit from prime vendor’s enhanced forecasting capabilities.

The Typical VPV Contract Structure

A VPV contract could arrange the support for a class of subsystems or even the provision of an entire system. The integration of supplier and customer in a supply chain has five primary elements: forecasting and management, information sharing, supplier relations, product delivery, and oversight. Customers manage only the contract performance, allowing them to focus on their core competencies.

The VPV readies itself for changes in demand by understanding, assessing, and responding to customer needs by using enterprise-wide integration software to link applications with databases to form a cohesive system. In reality, a proxy corporation often is formed to manage the materials of other companies in order to secure proprietary information. Once the manufactured goods are located—either in the VPV’s own supply or in other suppliers’ inventories—the VPV is responsible for determining the appropriate means of delivering the supplies in a timely fashion, again either from its inventories or directly from other suppliers’ inventories. The customer oversees contract compliance by monitoring selected metrics and generally provides incentives for successful performance.

VPVs save money through the elimination of redundant services. Under traditional arrangements, forecasting, warehousing, delivery, and returns must be managed separately by the suppliers, DLA, and the depots. The VPV arrangement is designed to eliminate this duplication by DLA, while handing forecasting responsibilities over to the manufacturers. DLA’s role is not eliminated completely, as it still must oversee the contract. However, it can now retarget its resources and use them more efficiently.

The vendor is better suited to take on these supply chain management functions because it is more sensitive to market demand. Typically, the demands of multiple buyers fluctuate, creating waste through the bullwhip effect (see Figure 2). As a result, the wholesaler must maintain a sufficiently large inventory capable of meeting unexpected demand, which involves maintaining a stock in excess of the usual demand. Replenishing this buffer stock, in turn, amplifies the demands of the client. The manufacturer must maintain its own buffer stock in addition to the amplified demand of the wholesaler. Increasing these buffers at each level further distances the manufacturer from the client and amplifies the amounts of inventory stored at each level. With shared information and the elimination of redundant services, these inflated stocks can be reduced or eliminated.

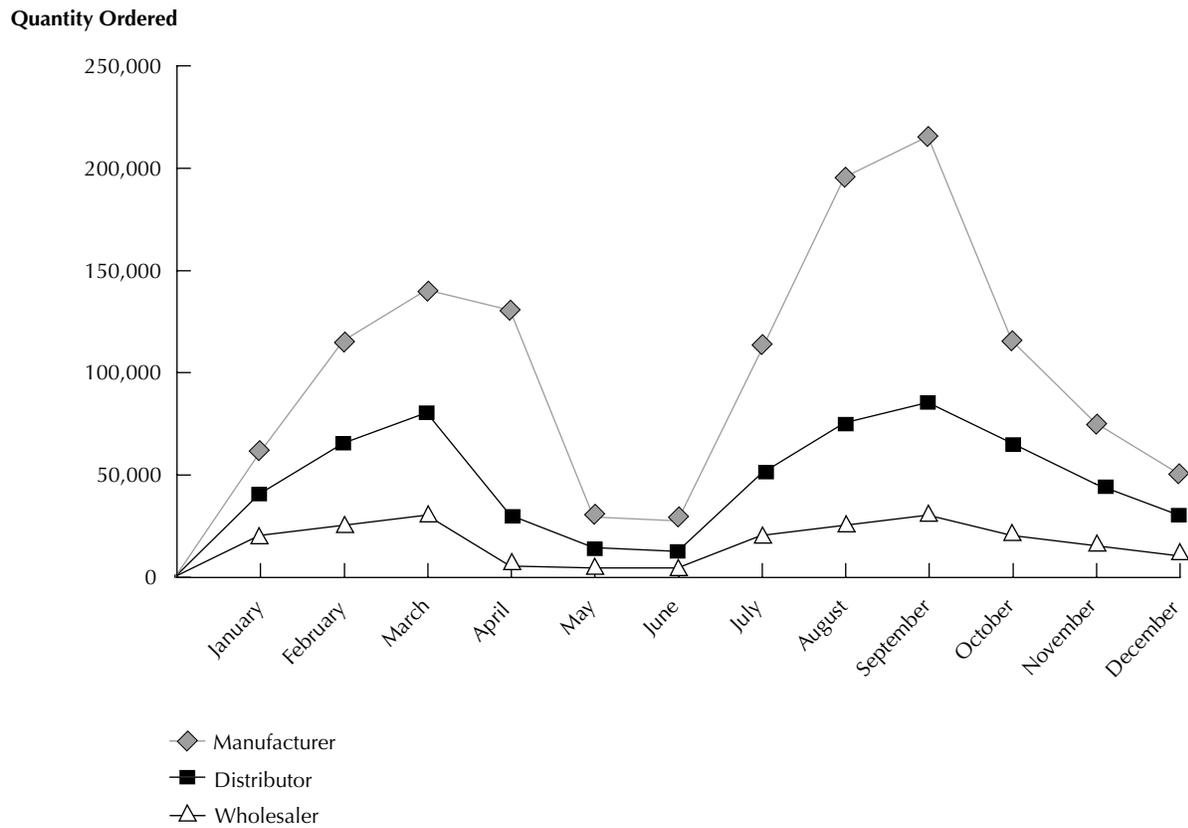
Acronyms	
BAA	Broad Agency Announcement
BCA	Business Case Analysis
CPT	Contractor Performance Time
DCMC	Defense Contract Management Command
DLA	Defense Logistics Agency
DoD	Department of Defense
DORO	DLA Operations Research Office
DSCR	Defense Supply Center Richmond
DSS	Distribution Standard System
ICP	Inventory Control Point
IDIQ	Indefinite-Delivery Indefinite-Quantity
IG	Inspector General
NADEP-CP	Naval Air Depot, Cherry Point
PV	Prime Vendor
QPM	Quality Performance Measurement
SSA	Strategic Supplier Alliances
SSC	Shop Service Center
TAT	Turn-Around-Time
TOB	Time on Backorder
VPV	Virtual Prime Vendor
WR-ALC	Warner Robins Air Logistics Center

Shifting the responsibility for the forecasting and management of supply to the VPV allows all elements of the supply chain to focus on their core competencies. DLA is responsible for overseeing a wide range of parts and services, while the vendor is naturally more focused on specific parts or systems. Manufacturers have natural incentives to monitor forecasting, because effectively delivering parts and services while trimming excesses increases profitability. Manufacturers, therefore, are more likely to invest in tools and expertise for specific systems. Indeed, the Hamilton Standard forecasting software—which allowed approximately 20 variables to be manipulated and optimized—was more sophisticated than DLA’s.⁷

Meeting the Needs of the Military

DoD has two main objectives in meeting its logistics requirements: day-to-day efficiency and possible surge capacity. VPVs and integrated supply chain management can help DoD ensure these

Figure 2: The Bullwhip Effect⁸



goals are met. To meet these objectives, DoD could resort to several strategies. It can introduce competition through public-private competitions, or it can focus on its core competencies and divest itself of the non-inherently governmental functions it performs. Farming these tasks out or partnering with the private sector through competitive procurements introduces the benefits of competition—that is, better performance at lower costs.

But in addition to providing for everyday needs, military suppliers must be prepared to increase capacity—or “surge”—in times of war. When military operational tempo is high, the demand for repair and replacement parts can increase significantly. This poses logistics challenges that must be resolved in order to maintain a well-functioning military. In order to meet the heightened demand, DoD traditionally maintained large stockpiles of inventory. However, the new contracts also had to address how to assure access to commercial inventories and production capabilities during periods of increased demand without carrying bloated inventories.

The C-130 Propeller Assembly VPV Contract

Once the decision was made to expand the PV from commercial goods to a major component of a weapons system, the Defense Supply Center Richmond (DSCR)—DLA’s lead center for aviation support—began examining specific proposals to determine an appropriate test case to prove the VPV concept. In 1996, the DSCR team, led by Mikal Brown, issued a Broad Agency Announcement (BAA)—a general announcement of an agency’s research interests, including criteria for selecting proposals—requesting conceptual approaches to establishing government-industry VPV relationships (public-private partnerships) in support of weapons system maintenance, initially at Warner Robins Air Logistics Center (WR-ALC), in Warner Robins, Georgia. The goal was to demonstrate the ability to reduce peacetime costs while ensuring national defense surge and sustainment capabilities.⁹ The team received 14 abstracts; seven of the contractors were asked to follow up with specific submissions

for consideration, and four submitted full proposals. After an informal examination led by eight subject-matter experts¹⁰ based on the basic source selection framework, only the C-130 propeller assembly proposal met all the established criteria—including, for example, third-party logistics for all components, access to the customers with no proprietary limitations, and meeting stock milestones.¹¹ For these reasons, the DSCR team decided to move forward, using the provision of C-130 propeller assembly parts as its VPV test case.

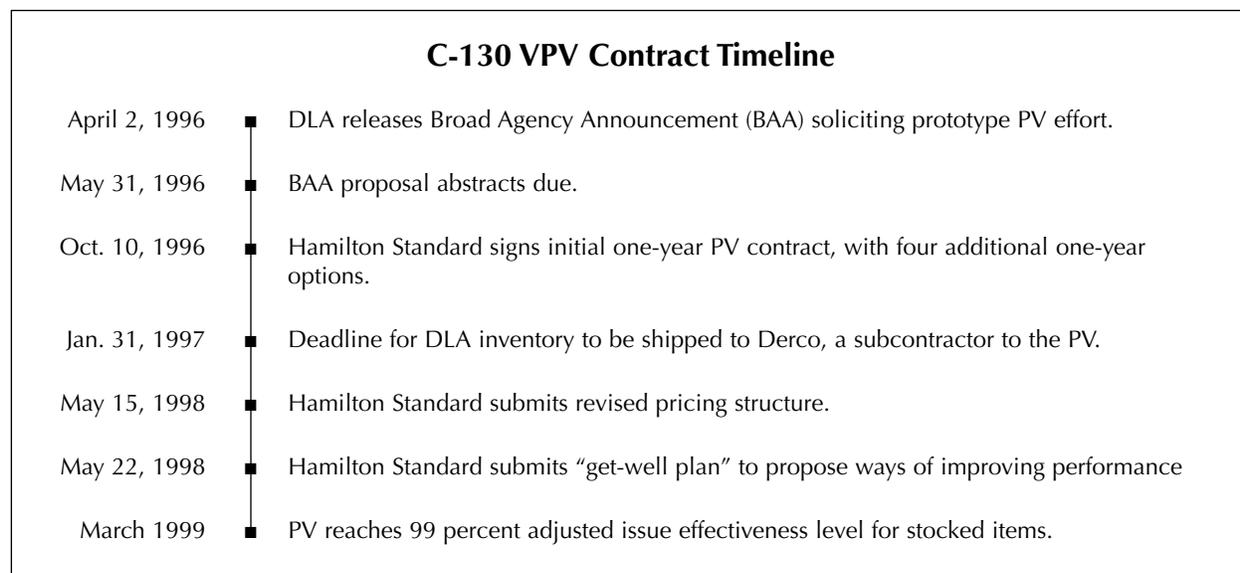
The C-130, first deployed in December 1956, is a versatile four-engine turboprop cargo aircraft used for airlift of equipment, people, and supplies. Basic and specialized versions of the aircraft fill a diverse number of tactical roles, including airlift support, Antarctic re-supply, aeromedical missions, weather reconnaissance, aerial spray missions, firefighting, and other natural disaster relief duties.¹² WR-ALC provides the depot-level maintenance support for Air Force C-130s. The VPV support eventually was extended to provide parts for Naval Air Depot, Cherry Point (NADEP-CP), which controlled parts for other Navy aircraft (E-2, C-2, and P-3) propeller assemblies.¹³

Under prior standard procurement arrangements, parts produced by contractors were delivered either to DLA if they were consumable or to depots themselves if the parts were repairable. The vast majority of C-130 propeller assembly parts are consumable; DLA is responsible for all but 11 of the 1,615 parts.¹⁴ DLA would procure and store these parts, deliver-

ing them to the depots as needed. The repairs for the C-130 engines are conducted in two locations, depending on their complexity. Complicated repairs are undertaken at the Hub and Blade Shop Service Center (SSC) at Warner Robins (or a comparable facility at the Naval Air Depot, Cherry Point). These assemblies then would be shipped to repair shops at airbases around the globe. The globally distributed shops are responsible for installing high-level components and making other repairs as necessary. Both the SSCs and global bases are essential recipients in the supply chain.

The Hamilton Standard¹⁵ C-130 engine proposal was a perfect candidate for a prototype VPV effort. Not only did Hamilton Standard already produce approximately half of the consumable parts (by value) for the C-130 propeller assembly, but it also had significant ties with the contractors who provided the other parts. The company also provided the single proprietary component on the C-130 propeller assembly, and it effectively controlled other proprietary subcomponents.¹⁶ Indeed, Hamilton Standard contracted with Derco Aerospace to manage, store when necessary, and deliver those parts not manufactured by Hamilton Standard. Together, then, Hamilton Standard and Derco managed the parts provided under the VPV contract.

Primary negotiations for the C-130 VPV contract took place in 1996. Only 190 days after the BAA was released, on Oct. 10, 1996, under the auspices of the DLA Virtual Prime Vendor program, Hamilton Standard signed an initial one-year



indefinite-quantity contract for DLA consumables with four one-year options; the estimated yearly value of the contract was \$22 million.¹⁷ Once the sole source justification was approved, the contract was awarded to Hamilton Standard.¹⁸ The physical transition of inventory to Derco from DLA warehouses was to be completed by Jan. 31, 1997—the first two years were to be spent developing the VPV warehousing and delivery concepts, building toward full implementation in the final three years. The VPV contract proved to be a learning experience for Hamilton Standard, as well as for DSCR and Warner Robins. Based on the lessons it learned during the first two years of the contract, Hamilton Standard submitted a revised pricing structure on May 15, 1998. Only one week later, on May 22, 1998, Hamilton Standard also submitted a “get-well plan” to address how it would improve the VPV’s performance in order to better satisfy the requirements set by DSCR.

Implementation Challenges

The transition to an integrated VPV arrangement at Warner Robins was more complicated than expected. The vendor needed to develop an integrated information system, incorporate the existing physical stock from DLA depots, and begin providing the services under the contract. Meeting performance requirements later than anticipated reduced the level of savings below the expected levels because inventories could not be drawn down promptly.

Creating Shared Information Services

Hamilton Standard’s bid was selected, in part, because it promised a total electronic order-to-receipt process. The VPV developed integrated computer software capabilities in order to maintain transparent information at multiple levels. Specifically, the software system would allow the

VPV suppliers, repair shops located at Warner Robins and abroad, and DLA management to see the flow of parts at all phases—from requisition, through active contract and inventory records, to procurement and delivery.¹⁹

The integrated connection required both a primary interface between the Warner Robins SSC and the VPV system for depot parts, as well as an interface with DLA for the coordination of worldwide parts. This type of information sharing would allow the VPV to gauge demand at multiple levels under an accelerated timeline. DLA could access contract-specific performance data online, and the SSCs and DLA could track regular reports related to other contract components submitted by the VPV.

The implementation of system integration was a significant concern. The legacy systems the government used to keep track of inventory, D035 and Pacer Lean, were difficult to coordinate in a modern, integrated system—“even today, additional programming by the vendor is being done and constant surveillance of the electronic process is necessary.”²⁰ Delays in setting up barcode capability, supplemental address locations for global distribution, and multiple diverse database formats, all complicated the computer integration efforts. Thus, the late arrival of the comprehensive Distribution Standard System (DSS)^{21,22} initially made it difficult to project demand levels because the vendors did not have enough time to learn from and adjust to the business. In turn, the vendor’s late arrival to the already steep learning curve made it difficult to boost performance; the ramp-up period needed to be longer and more methodical.²³

Transitioning Depot Supplies

While the VPV was designated as a replacement for DLA inventories, DLA still had an existing stock of warehoused parts. There were three basic options

Our culture is not focused on the same things we’re asking these vendors to focus on.... I believe that they bring the strengths of the commercial world to the table once they get past the learning curve—of the demand patterns, how fast things come, and what frequencies things come at—they become very good at [providing logistics support].

—Mikal Brown, DSCR VPV Team Leader

for dealing with the existing inventory: transfer of ownership of the parts to the VPV; transfer of management responsibility, but not ownership rights, to the VPV; or attrition in place, where the DLA depot would continue to deliver parts until its supply was exhausted. The second option, transferring management responsibility to the VPV, ultimately was adopted—as per the customer’s input.²⁴

Under the contract, DLA shipped the parts it had warehoused to the VPV, even though it retained ownership over them. Unfortunately, the tracking system was not capable of recognizing the intricacies of this transfer, and DLA occasionally lost visibility of parts because of system incompatibilities, though the parts eventually would reappear.

The relocation of parts helped lock in the VPV arrangement. Once the transfer of the inventory was made, withdrawing from the contract became more expensive because DoD would have to pay for another physical relocation of inventory. Ultimately, DLA learned that it was important to plan for such contingencies, especially when working with new approaches.²⁵

Ensuring Surge Capacity

For the military, the ability to increase operational tempo quite literally may be a matter of life and death. For this reason, DoD contracts require suppliers to be prepared to meet surge requirements—that is, they must be able to respond to sudden and unexpected increases in demand. Responding to surge requirements can be complicated for VPVs if they are required to provide parts that require long lead times. A VPV might not have direct control over a given part, and it could have difficulty exerting leverage over one of its suppliers.

The initial C-130 VPV contract identified levels of demand for full capacity at the Shop Service Centers, where complicated repairs are made to the main engines, and it required that the vendor be able to meet these levels on 45 days’ notice. For many parts, this merely reflected an increase in capacity as needed—one of the VPV’s conceptual strengths. But many essential parts have production lead times that exceed 45 days. To handle the demand for these parts, the initial contract required the vendor to maintain an inflated inventory of

parts with long lead times. The VPV ultimately addressed this problem by placing certain raw materials, castings, and forgings in a special surge stock reserve. As such, these parts could be used to fill any order or rotated to other PV-managed depots, as long as the surge requirement could be met at any time.

DLA was aware of the problems associated with maintaining inflated inventories during peacetime, and it modified the contract with Hamilton Standard, providing them with \$5.35 million to support the surge capability.²⁶ DSCR also altered the list of items that it considered vital for meeting surge requirements. The VPV was required to determine its capacity to meet any surge requirements, providing in writing a list of materials, castings, and forgings that would be required to meet any surge requirement that could not be met through existing inventories. DLA would support such needs, but any investment in finished parts under these conditions would be held to the highest scrutiny by the DLA contracting officer. DLA developed new guidelines on surge capabilities to reflect and clarify this narrow focus of surge funding—that is, ensuring appropriate industrial capacity rather than building up or augmenting stockpiled parts. However, the DoD inspector general (IG) found that even this new approach had problems; the IG’s report claimed:

DLA has established dangerous precedent by providing surge funding to a contractor to hold government inventory, particularly for end items the contractor considers commercial. Providing this type of funding to contractors raises many questions about how DoD accounts for government inventory maintained by the contractor and its appropriate use of the items.²⁷

Moreover, the DoD IG asserted that DLA could “put the ... surge funding provided to Hamilton Standard to a better use.”²⁸

Problems with Pricing

The contract with Hamilton Standard was designed to lower the costs for the provision of hub and blade parts in two ways—through one-time savings coming from the removal of redundant inventory,

and through recurring savings from both eliminating the overhead costs of maintaining inventory and reducing the price per part. While some savings have been realized, they have not been as large as expected. However, it appears that such savings have been deferred.

DSCR and Hamilton Standard had difficulty establishing the costs per item because of the size of the contract. DSCR's normal procedure was to contract for one item at a time. However, this contract needed to specify the pricing on over 1,000 items. For help in setting prices, DSCR and Hamilton Standard consulted with the DLA Operations Research Office (DORO), and the three worked together to develop per-item prices.²⁹

In the initial contract, prices were set based on the market prices for those parts manufactured by Hamilton Standard. On the whole, those parts accounted for approximately one-half the value of the contract. Derco-managed parts were priced based on the purchase price from the manufacturer, plus a standard 60 percent storage and management charge. DSCR decided that apart from the large number of C-130 aircraft owned by the military, the many commercial and international purchases enabled price levels to reach functional market equilibriums. Indeed, a report indicated that a cursory investigation found more than 820 military and 200 commercial C-130 aircraft in use worldwide outside of DoD, accounting for \$4.9 million in sales and \$2.5 million in pending sales in 1999 for Hamilton Standard.³⁰ The perceived presence of a commercial market for the parts streamlined the contracting process.

However, whether the size of the DoD fleet was large enough to significantly alter market prices was an issue of contention. The inspector general's audit report of the VPV contract came to the conclusion that the military dominated the market and that, therefore, the part prices did not reflect market equilibriums (components of systems that lack commercial-market analogs are considerably more difficult to price). DLA continued to refine the pricing through numerous iterations of the contract. Having existing price levels in catalogs, whether they were at equilibriums or not, significantly aided DLA by providing a starting point early in the process.

Refining the pricing of the program became a continuous effort, especially as it became clear that the catalog prices of parts did not reflect the economies of scale that DLA was expecting from buying in bulk.³¹ It appeared that Derco was not basing prices on "economic order quantities." There also was a perverse incentive for Derco to purchase more expensive parts, as the proportional management fee would increase accordingly.³² Although the lack of savings could be easily observed and felt, proper contract oversight identified and addressed the existence of these perverse incentives. As such, DSCR became aware of the pricing problems and sought to correct them, even before the IG became involved.

During the first year of the contract, prices of a small number of parts identified as significant cost drivers were used to indicate the value of the entire contract. The prices were set using historical values and cost-type data from the Defense Contract Management Command (DCMC). However, during the first year of the Hamilton Standard contract, prices increased by 4.5 percent over the previous year. Consequently, the DCMC pricing analysis was expanded to all items for the second year of the contract. Additionally, a "price outlier clause" was implemented to allow the government to negotiate lower prices with Hamilton Standard on items determined excessively expensive.

DSCR had trouble completing cost comparisons between the old standard arrangement and the new VPV contract. DSCR VPV Team Leader Brown recalls that "it didn't take us too long to figure out that we had some real eyesores" when attempting to base VPV prices on the pre-VPV catalog prices—DSCR only could derive the "price of a *package*, within a range."³³ In general, VPV costs include not only the purchase price of individual items, but also the storage and delivery costs, management costs, and the value of decreased inventory levels. As such, even when historical item prices were available, comparing them before and after the VPV contract was like comparing apples to oranges—or, in this case, like comparing the cost of screws themselves to the cost of the screws plus the cost of their shelf space, the lights in the warehouse, the rent on the warehouse, shipping costs, and so on (prior to the VPV contract, not all of DLA costs were allocated to the cost of parts). A report by the DoD IG that compared the

values of the items plus the associated services before and after the VPV contract was put into place did find that contract prices were “in line with fair and reasonable prices when costs associated with logistics support” were considered.³⁴

The IG’s report found the contract prices acceptable; however, it noted that DLA and WR-ALC incurred redundant management fees. This is because WR-ALC continued to maintain its own inventory and use its own ordering processes, separate from the inventories of and the processes established for the VPV, adding a 20 percent management fee.³⁵ With the VPV responsible for an increasing amount of the supply chain management duties, DLA and Warner Robins should have realized a comparable decrease in management costs. However, it did not appear that Warner Robins had full faith in the concept, as evidenced by their partaking in redundant management exercises. In defense of Warner Robins’ procurement practices for consumable goods, though, some redundant management efforts might have been both necessary and beneficial, as the VPV needed time to get up to speed.

It is interesting to note that even though Warner Robins was reluctant to give up control over these consumable parts, WR-ALC often purchased repairable parts through the VPV—even though under standard arrangements the depots themselves manage the repairable items because the vendor adds no forecasting or management value. While there are fewer repairable parts, they tend to be more expensive, and the associated redundant management fees were significant. (Warner Robins procured repairable parts under the VPV contract, incurring redundant management fees of over \$2 million per year.) This problem was recognized, and a separate contract was created for Warner Robins–managed repairable parts.

Problems Reducing Inventory and Overhead

With SSCs confident that ordered parts would be delivered promptly, they could realize one-time savings through the reduction of standing inventory while also decreasing persistent maintenance and warehousing costs. However, these savings developed slower than projected. The contract goal was to reduce DLA inventory from \$12 million

to \$6 million, and to reduce Air Force inventory from \$3.6 million to \$1.2 million. The actual initial reductions in inventory were far less—DLA’s inventory remained at \$10 million, and Warner Robins retained \$2.3 million in inventory as of mid-April 1999, even after additional emphasis was placed on drawing down inventories by June 1998.³⁶

One reason for the delay in reducing inventories relates to the Inventory Control Point (ICP) planning cycle. Specifically, ICPs are responsible for retaining inventory levels up to six years. DLA, in turn, was not willing to draw down inventories until a Business Case Analysis (BCA) could verify the effectiveness of the program.

A 1999 BCA conducted by KPMG found that savings were possible, giving the cautiously optimistic recommendation that “if DLA follows its current course of action, and stays the course, the ‘Current Program’ is a good business decision when compared to past operations.”³⁷ Warner Robins was already happy with the program efforts, and because the BCA provided no clear reason to reverse course, DLA finally began drawing down its inventory.³⁸

Institutional inertia and legitimate concerns about the VPV contract discouraged Air Force officials from altering their ordering practices, and, as a result, the Warner Robins depot practices were sustained. DLA’s role was to “work with” the Air Force rather than to mandate their procurement actions. As such, they could only create an environment in which Air Force officials *could* decrease their inventories—the actual operating procedures were still under the control of the Air Force. Moreover, the VPV needed a transitional period to meet their goals. This inability to provide instant effectiveness also discouraged Warner Robins officials from drawing down their inventory. With the goal of implementing a draw-down plan, DLA currently is working with the Air Force to instill confidence in the VPV contract at all levels, to prepare for changing order requirements, and to clarify the purpose and necessity of the transition period.^{39,40}

By reducing stored inventory, DLA can save money on paperwork and depot maintenance. DLA estimates potential savings on the C-130 propeller assembly of up to \$1.4 million annually. However, these savings have not yet been fully realized for

two reasons. First, as described above, the DLA's depot inventory did not fall off as expected during the transition period. Therefore, the overhead for managing and warehousing this inventory could not decrease accordingly. However, as the inventories decrease, cost savings will burgeon. Second, decreasing the inventory constraints of the C-130 program resulted in resources being redeployed to support other logistics needs. The VPV contract successfully reduced the C-130's drain on DLA resources. However, these resources were applied to increase capacity in other areas—and since DLA costs are not separated into specific items, the C-130 savings are harder to identify. Historically, according to DLA, the greatest efficiency gains have not come as a result of doing the same work at lower costs—rather, the greatest efficiency gains have been the result of doing more at the same cost. In this case, Warner Robins “moved some operating people off the floor” of service shops, and used them in other positions in order to take on more work.⁴¹

Results

Specifying performance metrics can drive improvement. In this case, metrics were chosen to reflect quality rather than quantity—that is, metrics were based on system availability, customer service, and order-to-receipt time rather than number of orders placed, number of repairs, and so on. In fact, the acquisition plan specified that the VPV's management should have a “significant impact on key logistics metrics such as customer wait time, back orders, customer complaints, cost of quality, inventory reduction, administrative lead time, and combat readiness” while also developing “reliable/consistent delivery on a required delivery date, expedite[d] processing services, and surge capability.”⁴² Quality Performance Measurements (QPMs) for the C-130 VPV were developed in consultation with the DLA Operations Research Office, measuring performance at both the centralized and distributed repair shops. At contractually specified intervals, the VPV was required to submit these metrics for review and evaluation.

Metrics for Parts Availability

The primary QPM for the centralized depot component is issue effectiveness—that is, the measurement of whether a part is in inventory when needed

by the service center. The VPV was responsible for maintaining full inventories of stocked items for the SSCs. There was a small ramp-up period, with issue-effectiveness requirements starting at 85 percent, building to 100 percent issue effectiveness over a year and a half. The metric was tied to incentives—DLA and Hamilton Standard negotiated an increase or decrease in the price markup based on Hamilton Standard's ability to meet or exceed QPM requirements. The QPM also specified performance levels for a potential increased C-130 operational tempo—however, such surge performance levels have not been tested to date.

The VPV has not been able to meet the 100 percent issue-effectiveness requirement for items stocked in VPV-managed depots. From April 1998 through March 1999, issue effectiveness only failed to surpass the 90 percent level in one month, though Hamilton Standard still was short of its 100 percent goal.⁴³ However, the 100 percent goal may be overly ambitious—VPV performance levels already have matched non-VPV performance levels. Even so, when adjusted for parts never explicitly identified in contracts (1 percent) and parts never actually placed on order (4 percent), the average issue effectiveness for the six-month period ending March 1999 reached 99 percent.⁴⁴ Moreover, Hamilton Standard has reached pre-VPV levels of performance with inventories significantly smaller than the depots' former bloated levels.

In addition to stocked-item delivery, the VPV was required to supply non-stocked items to the SSCs within 90 days. Again, this requirement had to be met 100 percent of the time. Data indicate that the VPV could deliver non-stocked items within the 90-day window less than one-third of the time, through 1998. However, there were only six requisitions for non-stocked items. It is possible that these requisitions were outliers, indicating that the true issue effectiveness for non-stocked items may be significantly better.⁴⁵ Apart from both stocked and non-stocked items, all requests for back-ordered parts had to be filled within 10 days, and no parts could remain on a back-ordered list for more than 90 days. After an initial transition period, the performance in this area has improved—less than 1 percent of parts remained back ordered for more than 90 days during the first six months of 1999.

The VPV also was required to provide parts to repair shops worldwide. The contract specified different requirements for priority and routine items. The worldwide effectiveness requirement for priority items was set at 97 percent, to be shipped within two days. For routine items, 85 percent had to be shipped within eight days. The VPV again failed to meet these goals, shipping only 30 percent of priority items and 57 percent of routine items within their respective required time frames on average during the six-month period ending February 1996.⁴⁶

The quality of the goods was another major concern. Even though the VPV was allowed to supply only those parts approved by DoD, they still could be of questionable quality and still could be damaged in transit. To examine quality concerns across a range of goods, the contract measured the rate of returned goods. Quality of goods was not measured under the traditional arrangements, and it is therefore difficult to gauge the impact of the VPV program on quality. However, there has been no observable degradation in the quality of delivered parts after the VPV assumed control. Only one item has been returned in the last five years, and, at the time, it seemed likely that the part was damaged because it was dropped by Warner Robins SSC personnel. Even so, the vendor accepted the return without conflict.⁴⁷

The C-130 propeller shop had been plagued with parts-availability problems for several years, and it is unclear how much this has improved under the VPV compared to previous levels.⁴⁸ However, vendor performance continues to improve. Hamilton Standard consulted with DLA to develop a “get well” plan, and it is likely that Hamilton Standard will continue to approach its performance requirements. DLA, in turn, will be able to pass these service improvements along to its customers.

Performance at the Repair Shops

The true value of an integrated supply chain is reflected in how it affects the performance of the operation to which it is being applied. In this case, however, overlapping demands between the Air Force- and Navy-managed repair shops and the DLA-managed consumable supply logistics centers made it difficult to measure productivity. Consequently, it was difficult to develop incentives

to boost performance. The VPV contract focused on supply support, but the metrics never matured to the level of performance management.⁴⁹

Even without direct incentives, the initial results seem positive. Although hub and blade production at Warner Robins has increased by 39 percent and routine parts availability increased 15 percent between June 1998 and May 1999, the impact directly coming from the improved supply chain is uncertain.⁵⁰ It does appear, however, that fewer delays in parts availability have allowed the SSCs to work more efficiently. In fact, there has been “no waiting for parts at Warner Robins ... since 2000.”^{51,52}

Lessons Learned

Integrating government supply chains for the government is no easy task because of their size, complexity, and overall importance. However, the transition to providing C-130 propeller parts at Robins Air Force Base via the Virtual Prime Vendor model proves that supply chain enhancements can result in improved logistics support, even for large, complicated weapons systems. Closer working relationships between the public and private sectors through VPVs allow each to take advantage of their respective core competencies—and the results can include increased efficiency, reduced redundancy, and improved performance.

It is important to remember that the Warner Robins C-130 propeller VPV contract was undertaken as a proof-of-concept effort and was meant to be a learning experience.⁵³ Acquisition plans had to change as all parties were experiencing periods of learning and growth. The plans and the contracts were continually corrected to blend into the cultures of the public-private world, incorporating the lessons learned from each contract period.⁵⁴

The program has focused on maintaining customer satisfaction, and DSCR believes that the depots continue to be satisfied with successive performance improvements. Furthermore, the customers continue to benefit from better service and reduced inventories, and inventory savings continue to grow in successive years with the follow-on contracts. Because these numbers have not been quantified, it is difficult to measure the over-

all impact to date. However, according to DSCR VPV Team Leader Brown, “any reduction would reflect favorably [on the progress], and therefore contribute to the decision to maintain versus terminate the contract.”⁵⁵ Based on this case, the following lessons stand out:

Lesson 1: The Virtual Prime Vendor concept can improve efficiency and meet surge requirements, even for non-commercial parts for major weapons systems.

Lesson 2: Before instituting a prime vendor program, complete a Business Case Analysis with as much detail as possible. In order to engineer a successful VPV program, everyone involved in the contract process must know the system.

Lesson 3: Rapid systems integration is essential to create confidence and to start off on the right foot. Contractors must be ready to work with legacy systems that complicate information sharing. Recognizing that there will be a transition period while the VPV gets up to speed helps align expectations of when and to what extent cost savings can be realized. As such, all parties must prepare for a transition period so that operations are not interrupted and change is not overly resisted.

Lesson 4: Confidence must be built at all levels. This will minimize the “bull whip effect” and reassure stakeholders that their operations will not be interrupted.

Lesson 5: Develop a plan to address what should be done with existing inventory stockpiles. While any number of solutions may be acceptable, the adopted solution must be reversible to ensure that government is not locked into an inefficient or ineffective operation.

Lesson 6: Devote time to analyzing pricing. Pricing is difficult even under the best of conditions. Setting prices based on market conditions helps, but markets do not always exist—and may not function properly—for pure military applications.

Lesson 7: Develop performance metrics. Although customer satisfaction is an important measure of program effectiveness, identification and collection of other program metrics also are critical to measure program efficiencies, assess progress toward program goals, enable problem areas to be diagnosed quickly and addressed as necessary, and

make the decision whether to continue or terminate a VPV contract.

Epilogue

Although the focus of this report was to examine the initial transition from DLA-managed stockpiles of non-commercial parts to partnering with a virtual prime vendor, we believed it would be of interest to see how the program has fared since. The first C-130 Propeller Assembly VPV Contract expired in June of 2002. At that time DLA awarded a follow-on VPV contract to Hamilton Sundstrand (formed by the merger of United Technologies’ Hamilton Standard Division with the Sundstrand Corporation in 1999).⁵⁶

DLA has continued to reduce its remaining inventory. As of September 2004, the value of the remaining inventory was down to \$222,000—it started at \$12 million in 1996. *This is a reduction of 98 percent.* Additionally, the vendor now fully manages this segment of the supply chain (the vendor decides how much static inventory is necessary versus how much product is in motion through his support pipelines) to meet the requirements necessary for satisfactory performance under this contract.⁵⁷

DLA has also re-evaluated and modified the metrics that it uses to monitor the contractor’s performance in this virtual environment; consequently, a direct comparison to the results previously reported is not possible. The performance metrics used in the new contract are Contractor Performance Time (CPT) and Time on Backorder (TOB).⁵⁸

- CPT is defined as the number of days from the date the delivery order is issued to the date that the total quantity ordered is shipped, and it applies to each delivery order individually. The CPT requirement for routine shipments is that 90 percent of all orders received will be shipped within eight days, and for expedited shipments the requirement is that 90 percent of all orders received will be shipped within two days.
- TOB is defined as the vendor’s average time for delivery of back-ordered items, as well as the average time for all back-ordered delivery orders still outstanding at the end of the performance period. The requirement is that TOB must average between 30 and 45 days.

Table 1: Current Contractor Performance Requirements and Results⁵⁹

	Requirement	Performance as of September 2004
CPT—routine	90% shipped within 8 days	99.4%
CPT—expedited	90% shipped within 2 days	97.8%
TOB	Average between 30 and 45 days	20.5 days

The vendor has exceeded the contract performance requirements (see Table 1).

Additionally, the current contract has added a Contract Incentive Plan, which provides a method to motivate the vendor to exceed performance requirements—the vendor can earn additional service fees for exceeding the CPT and TOB performance requirements, but earns negative points when failing to meet the minimum requirements.⁶⁰

Endnotes

1. DLA Factsheet, March 29, 2004. Viewed at http://www.dla.mil/public_info/DLAFactsMar29.htm
2. Consumable items are discarded after use rather than repaired.
3. GAO, Defense Inventory, GAO/NSIAD-00-30, January 2000.
4. Michael Lippitz, Sean O’Keefe, and John White, with John Brown, “Advancing the Revolution in Business Affairs,” *Keeping the Edge: Managing Defense for the Future*, Cambridge, Mass.: Preventive Defense Project, September 2000, pp. 170–171. (Accessed April 2004.) Viewed at http://bcsia.ksg.harvard.edu/BCSIA_content/documents/KTE_ch7.pdf.
5. Brig. Gen. Timothy P. Malishenko (Air Force), Statement for the Subcommittee on Acquisition and Technology, Committee on Armed Services, U.S. Senate, March 18, 1998.
6. Drawn from GAO/NSIAD-00-30, op. cit., and “Materiel Management Plan for the Virtual Prime Vendor Program for the Warner Robins Air Logistics Center—SSC servicing C-130 Propeller System and all other worldwide DoD customers for the 54H60,” prepared by DSCR-RZO.
7. William Lucyshyn and Russell Lundberg, interview with Brian Benfer (Chief, Cost/Price Analysis Branch), Mikal L. Brown (Deputy Director, Supplier Operations), and Rita A. Stocks (Chief, Acquisition Management Division Supplier Operations), March 19, 2004.
8. Reproduced from Jacques S. Gansler, Robert E. Luby, and Bonnie Kornberg, “The Integration Enabler,” in *Transforming Government Supply Chain Management*, Jacques S. Gansler and Robert E. Luby, eds. Lanham, Md.: Rowman & Littlefield Publishers, Inc., 2003, p. 44.
9. Acquisition Plan for Virtual Prime Vendor, BAA VPV 96-01.
10. Four were from DSCR, and four were from Warner Robins.
11. Interview, supra.
12. Air Force Link—Fact Sheet: C-130 Hercules.
13. The E-2, C-2, and P-3 aircraft are used for all-weather, carrier-based tactical airborne warning and control system platforms; critical logistics support for aircraft carriers; and long-range anti-submarine warfare patrol missions, respectively.
14. Interview, supra.
15. Following the acquisition of the Sunstrand Corporation by Hamilton Standard’s parent corporation, United Technologies Corporation, on July 10, 1999, Hamilton Standard became known as Hamilton Sunstrand.
16. Interview, supra.
17. Answers to Questions about Contract SP0400-96-D-9426 for Lieutenant General Glisson, Director, DLA. Provided by DSCR officials.
18. This specific exemption was justified under the rationale that it was “necessary to award the contract to a particular source or sources in order to maintain a facility, producer, manufacturer, or other supplier available for furnishing property or services in case of a national emergency or to achieve industrial mobilization....” See 10 U.S.C. 2304(c)(3) Industrial Mobilization.
19. “Materiel Management Plan for the Virtual Prime Vendor Program for the Warner Robins Air Logistics Center—SSC servicing C-130 Propeller System and all other worldwide DoD customers for the 54H60,” prepared by DSCR-RZO.
20. Answers for Lieutenant General Glisson, op. cit.
21. DLA began developing DSS software in March 1992 to improve overall distribution depot performance and to help control the costs of materiel distribution. Installation of the DSS system was to be completed by

the end of Fiscal Year 1997, at a total cost of \$90.1 million. The DoD inspector general found that DLA capitalized DSS incorrectly, which also caused problems.

22. Office of the Inspector General, Audit Report for Capitalization of Software Developed for the Distribution Standard System, Report No. 97-097, February 19, 1997.

23. Interview, *supra*.

24. Mikal Brown e-mail to William Lucyshyn, July 20, 2004.

25. As a result of this troubled experience, DSCR now recommends attrition in place rather than relocation of inventory. Although the revised strategy has the advantage of immediate visibility of stock, it delays the full savings of the VPV arrangement because dual inventories and management roles must be maintained.

26. Office of the Inspector General, Audit Report for Spare Parts and Logistics Support Procured on a Virtual Prime Vendor Contract, Report No. D-2000-098, June 14, 2000.

27. Report No. D-2000-098, *op. cit.*

28. *Ibid.*

29. Acquisition Plan for Virtual Prime Vendor, BAA VPV 96-01.

30. Spare Parts and Logistics Support Procured on a Virtual Prime Vendor Contract, September 30, 1999.

31. Report No. D-2000-098, *op. cit.*

32. *Ibid.*

33. Interview, *supra*. Emphasis added.

34. Report No. D-2000-098, *op. cit.*

35. *Ibid.*

36. IG Audit of DLA (C-130 Propeller) Virtual Prime Vendor Contract, April 15, 1999, updated presentation. Provided by DSCR officials.

37. Virtual Prime Vendor 54H60 Propeller System Business Case Analysis presentation. Provided by DSCR officials.

38. Mikal Brown e-mail, *supra*.

39. DLA was working to create a Strategic Supplier Alliance with Hamilton Standard. DLA's alliances—of which there were 11 in 2003 with plans to add 21 more by the end of 2005—were projected to reduce inventory costs by \$304 million by the end of 2008.

40. Scottie Knott, "Teaming With Business at DLA: Strategic Supplier Alliances Help Agency Save Costs," *The Federal Times*, September 1, 2003.

41. Interview, *supra*.

42. Acquisition Plan, *supra*.

43. IG Audit of DLA presentation, *supra*.

44. *Ibid.* The IG reported a base rate of 94 percent issue effectiveness for stocked items during this period.

45. Fact sheet provided by DSCR officials.

46. IG Audit of DLA presentation, *supra*.

47. Interview, *supra*.

48. *Ibid.*

49. *Ibid.*

50. Business Case Analysis presentation, *supra*.

51. Interview, *supra*.

52. Cherry Point reports that the PV program has improved their maintenance line performance. The propeller assembly turn-around-time (TAT) at Cherry Point was reduced from 110 days to 88 days (a 20 percent reduction), and blade TAT also decreased significantly (a 16.7 percent reduction) between June 1998 and May 1999. Business Case Analysis presentation, *supra*.

53. Indeed, DSCR was designated a "Reinvention Laboratory" in the middle of the process, which gave it greater flexibility and allowed it to seek waivers from certain constraining regulations. The National Partnership for Reinventing Government Task Force defined Reinvention Laboratories as "innovative organizations or activities that are established to test or prototype new 'reinventing government' initiatives. The reinvention laboratories are empowered to begin experimenting with radical new ways of doing business, and share their ideas, successes and lessons across government."

54. Interview, *supra*.

55. Mikal Brown e-mail, *supra*.

56. Mikal Brown e-mail to William Lucyshyn, September 14, 2004.

57. *Ibid.*

58. *Ibid.*

59. *Ibid.*

60. *Ibid.*

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