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Outcome-Focused Market Intelligence: Extracting Better Value and Effectiveness From Strategic Sourcing

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Preface & Acknowledgements

Welcome to our Tenth Annual Acquisition Research Symposium! We regret that this year it will be a “paper only” event. The double whammy of sequestration and a continuing resolution, with the attendant restrictions on travel and conferences, created too much uncertainty to properly stage the event. We will miss the dialogue with our acquisition colleagues and the opportunity for all our researchers to present their work. However, we intend to simulate the symposium as best we can, and these *Proceedings* present an opportunity for the papers to be published just as if they had been delivered. In any case, we will have a rich store of papers to draw from for next year’s event scheduled for May 14–15, 2014!

Despite these temporary setbacks, our Acquisition Research Program (ARP) here at the Naval Postgraduate School (NPS) continues at a normal pace. Since the ARP’s founding in 2003, over 1,200 original research reports have been added to the acquisition body of knowledge. We continue to add to that library, located online at www.acquisitionresearch.net, at a rate of roughly 140 reports per year. This activity has engaged researchers at over 70 universities and other institutions, greatly enhancing the diversity of thought brought to bear on the business activities of the DoD.

We generate this level of activity in three ways. First, we solicit research topics from academia and other institutions through an annual Broad Agency Announcement, sponsored by the USD(AT&L). Second, we issue an annual internal call for proposals to seek NPS faculty research supporting the interests of our program sponsors. Finally, we serve as a “broker” to market specific research topics identified by our sponsors to NPS graduate students. This three-pronged approach provides for a rich and broad diversity of scholarly rigor mixed with a good blend of practitioner experience in the field of acquisition. We are grateful to those of you who have contributed to our research program in the past and encourage your future participation.

Unfortunately, what will be missing this year is the active participation and networking that has been the hallmark of previous symposia. By purposely limiting attendance to 350 people, we encourage just that. This forum remains unique in its effort to bring scholars and practitioners together around acquisition research that is both relevant in application and rigorous in method. It provides the opportunity to interact with many top DoD acquisition officials and acquisition researchers. We encourage dialogue both in the formal panel sessions and in the many opportunities we make available at meals, breaks, and the day-ending socials. Many of our researchers use these occasions to establish new teaming arrangements for future research work. Despite the fact that we will not be gathered together to reap the above-listed benefits, the ARP will endeavor to stimulate this dialogue through various means throughout the year as we interact with our researchers and DoD officials.

Affordability remains a major focus in the DoD acquisition world and will no doubt get even more attention as the sequestration outcomes unfold. It is a central tenet of the DoD’s Better Buying Power initiatives, which continue to evolve as the DoD finds which of them work and which do not. This suggests that research with a focus on affordability will be of great interest to the DoD leadership in the year to come. Whether you’re a practitioner or scholar, we invite you to participate in that research.

We gratefully acknowledge the ongoing support and leadership of our sponsors, whose foresight and vision have assured the continuing success of the ARP:



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Outcome-Focused Market Intelligence: Extracting Better Value and Effectiveness From Strategic Sourcing

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Abstract

A relatively new approach to government procurement—strategic sourcing—offers substantially increased efficiency and effectiveness to those agencies that seek to implement its tenets. Sound market intelligence is the foundation of effective strategic sourcing. The government's current approach to market intelligence is ad hoc, inconsistent, and redundant because information is rarely shared between buying activities. Additionally, market research is treated as static, sought only to support pre-award acquisition decisions. This article offers a new paradigm for market research/market intelligence and demonstrates ways in which continuous market research/market intelligence will drive the government to achieve desired strategic sourcing outcomes. This article examines many facets of strategic sourcing, including goal setting, strategic cost management, and volume consolidation strategies. The



article concludes with recommendations for enhancing the collection of, dissemination of, and response to market research/intelligence.

Introduction

The federal acquisition system promulgates several objectives in acquisition: to procure goods and services in terms of cost, quality, and timeliness that meet customer needs; to fulfill public policy objectives (e.g., socio-economic); to minimize administrative costs; to ensure integrity, transparency, and fairness to the public; and to attain the best value. The state of the U.S. economy and the looming government budget constraints elevate the relative importance of efficiency as a key acquisition objective. A relatively new approach to government procurement—*strategic sourcing*—offers increased efficiency and effectiveness to those agencies seeking to implement its tenets. The GAO (2012) contended that billions of dollars can be saved annually by strategic sourcing, and criticized government agencies for their lack of commitment to and the subpar results produced by strategic sourcing.

There is a reasonable explanation for the lack of results. Strategic sourcing is not a quick, easy panacea. It requires experienced personnel with strong business acumen, a disciplined process, alignment of organizational goals and resources, leadership, awareness of the organizations' needs and the marketplace's capabilities, and a culture that rewards innovation. Hence, sound market intelligence is the foundation of effective strategic sourcing. Market intelligence can reveal whether goals (e.g., cost savings/avoidance) are attainable. Agencies' resources are limited; market intelligence can help agencies conduct opportunity assessments to discern which products and services should be strategically sourced. Additionally, market intelligence can unveil which acquisition strategies will achieve the greatest efficiencies.

Unfortunately, this area of great need is also an area of great weakness. The government's current approach to market intelligence is ad hoc, inconsistent, and redundant because information is rarely shared between buying activities. Additionally, no existing research or policy addresses how to properly organize or resource the collection and use of market intelligence. Furthermore, specific skills for determining needed information, finding it, analyzing it, and disseminating it are not systematically taught or developed in the government's acquisition workforce.

Therefore, the purpose of this article is to explore ways in which market intelligence can help the government achieve its desired strategic sourcing outcomes. It examines many facets of strategic sourcing, including goal setting, strategic cost management, and volume consolidation strategies and associated socio-economic support. At conclusion, it should be apparent that market intelligence need not be just another checklist requirement; rather, it can be a gateway to attaining significant results.

The article is organized as follows. First, historical and other background information surrounding market research/intelligence (MR/MI) is reviewed. Next, a brief review of key theoretical underpinnings is provided. A new model of MR/MI is proposed, which is then demonstrated in three strategic sourcing applications. Finally, conclusions and recommendations are offered.

Background

Market intelligence (a.k.a., market research) has been a statutory requirement since the passage of the Competition in Contracting Act (CICA) in 1984, which required the use of market research and procurement planning to promote the use of competitive procedures in federal contracting (GAO, 1996). Congress reemphasized the importance of market



research in 1990 with the National Defense Authorization Act for Fiscal Year (FY) 1991 (GAO, 1996). The act encouraged the DoD to save money and reduce cycle time by procuring commercial items. Furthermore, the Federal Acquisition Streamlining Act (FASA) posed additional requirements for market research when enacted in 1994 (GAO, 1996). The act required federal executive agencies to conduct market research before developing new specifications for a requirement and before soliciting proposals for a contract expected to exceed the simplified acquisition threshold. Additionally, the FASA requires that contracting officers use market research to determine whether commercial items or non-developmental items could meet their agency's needs if the requirement was modified to some extent.

DoDI 5000.2-R, Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition Programs (USD[AT&L], 2002), requires that market research and analysis be conducted to determine the availability and suitability of commercial and non-developmental items prior to the commencement of any development effort, during the development effort, and prior to the preparation of any product description (DoD, 1997). FAR Part 10 (2011) prescribes policies and procedures for conducting market research to arrive at the most suitable approach to acquiring, distributing, and supporting supplies and services (DoD, 1997).

The aforementioned laws and regulations require the accomplishment of market research. However, outside of a push for commercial items and services, the laws and regulations offer little in terms of the quality of market research and how this affects acquisition outcomes (in both pre- and post-award contracting decisions). The FAR (2011) offers little direction; Parts 10 and 12 dedicate a mere 1,477 words to the topic of market research. The DoD (1997), Air Force Logistics Management Agency (1997), National Aeronautics and Space Administration (NASA; 1998), and Headquarters, Air Force Material Command (HQ AFMC; 2007) developed market research guides; however, they are outdated and do not address market research needed to support strategic sourcing.

Government agencies rarely budget for commercially available market intelligence, and no existing policy addresses how to properly organize the collection and use of market intelligence. Furthermore, specific skills for finding, analyzing, and disseminating information are not systematically taught or developed in the government's acquisition workforce. However, a study of 30 large firms showed that business and market analysis is a necessary skill of a world-class purchaser (Giunipero, 2000).

Concerning market intelligence, there is a difference between compliance and effectiveness. Today, a contracting specialist can perform a cursory collection and documentation of market intelligence and be compliant with the FAR but at the same time, forego value due to the omission of key information. Clearly, mere compliance is insufficient. Given current fiscal constraints, the federal government is gradually elevating the importance of efficiency—one of several key goals of the federal acquisitions system (FAR Part 1.102, 2011). Smart, informed decisions in pre- and post-award contracting decisions strongly impact the efficiency of contracted outcomes. Market intelligence is the key to making better decisions that provide more value to the customer and to the taxpayer.

Market intelligence also contributes to the development of reliable cost estimates and budgets (Denali Group, 2009). The need for market intelligence does not stop upon contract award; it also supports the negotiation of post-award matters, such as changes and dispute resolution, and is essential throughout the life of the contract (Leenders, Johnson, Flynn & Fearon, 2006). Agencies must ensure that previously negotiated prices remain fair and reasonable prior to exercising options. The more critical, valuable, complex, and risky the procurement, the more important market intelligence becomes in order to craft a contract



that manages performance risk, maximizes contractor performance, balances financial risk to both parties, and meets agency needs. Figure 1 lists contracting processes that require valid and complete market intelligence in order for acquisition teams to make optimal business decisions.

1. The number and identity of capable suppliers	30. Appropriate supplier performance metrics
2. The number and identity of capable small business suppliers by socio-economic category	31. Engaging existing commercial logistics and maintenance support infrastructures to decrease total life-cycle support costs
3. Cost drivers	32. Whether a reverse auction is appropriate
4. The nature of customarily offered products and services	33. Required buyer financing
5. Current market costs and prices	34. Market discounts or rebates
6. Inflation/deflation rates	35. Applicable laws and regulations
7. Typical evaluation criteria used to discriminate between offers	36. Risks of particular suppliers based on their record of performance
8. The structure of the marketplace	37. Customary profit margins
9. Analysis of the industry	38. Typical overhead rates
10. Power positions of the prospective suppliers relative to the buyer	39. Existing government contracts
11. Customary terms and conditions	40. Identify conflicts of interest
12. Incentives that effectively motivate supplier performance	41. Macro- and micro-economic indicators
13. Customary payment terms	42. Improve spend analysis by identifying mergers and acquisitions
14. Intellectual property rights	43. Production rates
15. Typical contract types	44. Assess supply and demand
16. Contract line item structures	45. Labor rates
17. Contract durations	46. Inventories
18. Customary surveillance methods and frequencies	47. Data needed for SWOT analysis
19. Typical service and performance levels	48. Assess market share held by prospective suppliers
20. Prospective supplier financial health	49. Supplier locations
21. Proactively addressing diminishing manufacturing sources and obsolete parts issues (HQ AFMC, 2007)	50. Supplier revenue models
22. Determining how attracted prospective suppliers are to the business	51. Manage subcontracts via subcontract consent, socio-economic goals, and contractor purchasing system reviews
23. Price volatility	52. Whether expected savings will meet thresholds to justify bundling or consolidation
24. Energy conservation potential and the use of recoverable material	53. Supplier capacities
25. Assessing the impacts of emerging technologies to enhance customer capabilities and potential system performance or reliability improvements	54. Optimizing best value acquisitions through competitive market pressures
26. Definitions of requirements	55. Evaluating the government's leverage in the market sector in terms of how extensively the government's requirements influence the available business opportunities and market trends in that sector
27. Delivery lead times	56. Whether performance-based contracts are used
28. The availability of commercial items and services	57. Identification of best-in-class suppliers
29. Customary warranty terms	

Figure 1. Pre- and Post-Award Demands for Market Intelligence



Strategic sourcing is “a collaborative and structured process of analyzing an organization’s spend and using the information to make business decisions about acquiring commodities and services more efficiently and effectively” (Office of Management and Budget [OMB], 2005). In strategic sourcing, requirements are aggregated, contract values are increased, customers per contract are increased, and suppliers are rationalized. Hence, complexity, value, risk, and importance increase with strategic sourcing. In order to save money, government acquisition members must focus more precisely on the cost drivers of the market, necessitating more robust intelligence.

Commercial sector firms have long recognized the importance of market intelligence to effective supply management. Successful market intelligence can become a firm’s competitive advantage (Porteous, 2011). Many firms staff business intelligence cells that feed commodity councils with key information and data (Ashenbaum & Pannelle, 2007; Zsidisin, 2005). One firm saved \$194 million through the collection and use of market intelligence (Zsidisin, 2005).

Literature Review

Market Research/Intelligence

Market research is the continuous process of collecting information (i.e., market intelligence) to maximize reliance on the commercial marketplace and to benefit from its capabilities, technologies, and competitive forces in meeting an agency’s need (DoD, 2011). Market research is a vital means of arming the acquisition team with the expertise needed to conduct an effective acquisition. Market research gathers current data on existing market sectors to identify potential sources of supply, commercial product characteristics, market characteristics, commercial item standards and best practices, emerging technologies, vendor capabilities, non-developmental item solutions, and government leverage opportunities so that informed acquisition strategy decisions can be made (HQ AFMC, 2007). This market intelligence can be classified as two types: strategic or tactical.

- Strategic market intelligence (a.k.a., market surveillance) is an ongoing process, and includes activities that the acquisition team performs continuously to keep themselves abreast of changes in the marketplace, such as technological advances, process improvements, and available sources of supply. The purpose of market surveillance is to maintain a current knowledge base of the depth, breadth, and dynamics of the market sector (HQ AFMC, 2007).
- Tactical market intelligence (a.k.a., market investigation) is a comprehensive market research survey conducted in response to a specific acquisition or need. The purpose of market investigation is to collect supporting data and documentation to determine an appropriate acquisition strategy (HQ AFMC, 2007). The appropriate acquisition strategy may include pre- and post-award considerations. This may include the following: planning for new acquisitions, deciding to exercise an option, and determining the effects of key supplier mergers.

Theoretical Foundation

Information gathering, dissemination, and use are grounded in market orientation theory (Kohli & Jaworski, 1990). This theory depicts how firms collect information regarding customer needs, disseminate the information within the firm, and respond to the information by designing and offering products and services that meet customer needs. A meta-analysis of market orientation (Kirca, Jayachandran, & Bearden, 2005) shows that a market



orientation increases innovativeness. Innovativeness increases customer loyalty and quality which, in turn, increase organizational performance (profitability). In order to facilitate information gathering, dissemination, and use, organizations need top-management support, supporting interdepartmental dynamics, and supporting organization-wide systems. Departmentalization, formalization, and centralization hinder intelligence generation, dissemination, and response. These are strong characteristics of government organizations, which might hinder their effective use of market intelligence.

Firms can also benefit from collecting and using information from suppliers. “A supply chain orientation is defined as the extent to which there is a predisposition among chain members toward viewing the supply chain as an integrated entity and on satisfying chain needs in an integrated way” (Hult, Ketchen, Adams, & Mena, 2008, p. 527). Such information might include supplier capabilities, capacities, constraints, risks, strategic plans, and costs. Using the same processes as market orientation—information collection, dissemination, and response—a buying firm can improve its performance (customer performance, financial performance, internal process performance, and innovation and learning performance), as was shown in a study of 129 firms by Hult et al. (2008). Essentially, this is what the government does with market intelligence—optimizing the requirement definition (i.e., the need) by discovering what is available in the market instead of defining needs based on what was done in the past. The government has an opportunity to improve performance by collecting the market research, disseminating it within the agency, and making appropriate decisions by acting upon the available information. All of this presupposes that we collect the right information and make wise decisions from it. In that vein, the government can enhance credibility by using market intelligence to drive acquisition strategies.

New Approaches to Market Intelligence

A New Paradigm

MR/MI operates within and through three distinct dimensions: the need, the environment, and the plan. The *need* is the definition of the government's requirement and is sought and found in three particular ways: (1) what we think we need based on previous buying history or limited explanation, (2) what we actually need manifested as the final evolved requirement through the long government acquisition process, and (3) the optimal choice we are unaware of or what we could have asked for if we had understood our environmental dimension.

The *environment* is the business and “battlespace” in which the government operates, and is composed of many factors. Some of these factors include the industry, the area of responsibility, political arena, industry analysis, capabilities, standards, and risks. The environment also consists of socio-economic issues and policies, as well as external considerations and risks (e.g., legislation, national conflict, geography, etc.).

The *plan* is the government's strategy for how it satisfies its needs within its environment, including, but not limited to, the acquisition strategy/plan, source selection plan, and small business plan. The current model is a serial process that involves the government doing the following:

- **Step 1:** Determine the need that is pushed by the user, checked against current supplies and previous purchases, and evolved over time (amendments/changes).



- **Step 2:** Assess the environment by reviewing vendor lists, seeing where our funds are spent, posting requests for information, and consulting the Small Business Administration (SBA).
- **Step 3:** Develop the plan, such as acquisition plans, by holding acquisition strategy panels, creating evaluation and incentive criteria, determining contract types and structures, coordinating with the SBA, producing government estimates and performance plans (e.g., quality assurance surveillance plan), and making option determinations.

The current model offers “too little, too late.” The current approach takes a reactionary approach often resulting in defining the need before optimizing the potential solution. Further, we follow a serial approach in a business environment that is not linear. It is global, multi-dimensional, and evolving faster than we can react. We decide the need before we know our environment, and the need starts to change as we develop our plan but we do not reassess the environment. When we use immediate needs to drive MR/MI, we rarely commit time to reassess. Finally, the current model does not meet the intent of FAR (2011) Subpart 10.001(a) to conduct market research on an on-going basis. Current practice is to conduct market research as an initial step to acquisition planning that is done at the beginning and not monitored after the fact.

The proposed model (see Figure 2) recognizes three distinct dimensions to be assessed simultaneously and continuously, while maintaining a high level of education and training. The *need* dimension involves having early talks with management, leadership, approving offices, technical SMEs—as with an early strategy and issues session (ESIS)—and functional users 12 to 24 months prior to an anticipated award. Further, the *need* dimension involves maintaining a robust spend analysis of current contract portfolios with informed projections for future portfolios, using tools such as a purchasing portfolio model to segment spend by type (Kraljic, 1983). It further involves understanding agency tendencies and constraints using tools such as a strengths, weaknesses, opportunities, and threats (SWOT) analysis.

The environment dimension involves holding industry days and issuing requests for information (RFI) periodically to monitor new entrants, market trends, bundling/consolidation issues, and possibilities. Other considerations include Porter’s (1979) five forces analysis, a power-matrix analysis (Cox, 2001), and a risk analysis (cost, technology, performance), and capturing market cost drivers while assessing regulation, standards, and commercial practice. Finally, the environment dimension must consider monitoring external issues such as national political trends and legal and regulatory developments.

The proposed model introduces the concept of an education and training (E&T) cycle, the idea being that all market intelligence collected during the continual processes over time is shaped by previous and current education and training, and must shape future MR/MI efforts and improve education and training.





Figure 2. Proposed Model of Perpetual Market Research

Under the proposed model, the MR/MI process is a synergistic process that combines all dimensions, and assesses how to optimize needs in a changing environment. This proposed model directs our focus to the changing environment and being proactive instead of focusing on reactive, short-term needs. Acknowledging an increasingly-rapid pace of changes to our environment, and recognizing the evolving primacy of efficiency as a critical acquisition outcome, the value of this proposed model of MR/MI becomes apparent. This value can be demonstrated in many steps and activities of the strategic sourcing process. The following sections elaborate on three activities in which MR/MI offers opportunities for improved acquisition outcomes: goal setting and opportunity assessment, strategic cost management, and consolidation/bundling.

Goal Setting and Opportunity Assessment

Purchasing (i.e., supply management) is a strategic activity (Carter & Narasimhan, 1996) due to its ability to contribute to a firm's competitive advantage (Ellram & Carr, 1994). Two of the most important and implemented aspects of strategic supply management are strategic planning and performance measurement (Monczka & Petersen, 2008). Firms that develop supply management strategic plans typically set three-to-five year outlooks with goals linked to key performance indicators. Progress toward goals is measured as often as twice per month. It is often said that what gets measured, gets done, and that metrics drive behavior. Supply management leaders are responsible for setting and achieving appropriate sourcing goals, and such goals should feed into the organization's overall goals and strategies. These goals and metrics focus commodity councils on what is important. Goals should be specific, measurable, attainable, relevant, and timed (Rudzki, Smock, Katorke, & Stewart, 2006).

But how does a commodity director know whether his or her savings, efficiency, and effectiveness goals are attainable? Market intelligence plays a pinnacle role. First, an organization should benchmark its performance against its competitors and against best-in-class organizations (Rudzki et al., 2006). Reports, data, and benchmarks are often available from sources, such as AT Kearney, McKinsey, Aberdeen Group, CAPS Research, Sourcing Interest Group, Gartner Group, IBISWorld, Forrester, Market Reports Online,

MarketResearch.com, Research and Markets, consultants, and various industry-specific trade associations. Participating in electronic reverse auctions (eRA) and buying consortia also unveil current pricing information. Second, routine comparisons to historical prices paid should be made. If the procuring contracting officer were asked the current prices paid, would he or she be able to respond without opening the contract file? Third, prices could be compared to the producer price index available from the U.S. Bureau of Labor Statistics. However, note that this index is not always sufficiently precise (Rudzki et al., 2006).

Rudzki et al. (2006) offered general ranges of savings by type of spend (see Table 1). These benchmarks can be used not only to set goals for a commodity council but for specific requirements as well. Note that these levels of savings are not unique to the for-profit sector. Government buyers have achieved nearly double the savings (28%) compared to their for-profit sector counterparts on sourcing improvement projects (Husted & Reinecke, 2009). There appears to be ample opportunity for the government to improve.

Often, organizations will have more requirements to source than resources available to source them strategically. In this case, strategic sourcing organizations must prioritize sourcing events (i.e., requirements). One tool to facilitate these decisions is an opportunity assessment. Here, each requirement is assessed in terms of *the degree of difficulty of implementation and savings and/or performance impact* (Monczka & Petersen, 2008). Obviously, those requirements that are easier to implement yet yield substantial savings will be sourced first. The important point here is that the savings potential cannot be validly estimated without solid market intelligence that unveils opportunities to alter strategies. This requires near-constant market surveillance and deep category expertise. High turnover will cripple the ability to collect, disseminate, and act upon market intelligence, that is, to know the market.

Table 1. Savings Opportunity by Type of Spend

Type of Spend	Potential Savings (% of total spend)
Raw materials	2–5
Packaging	10–20
Indirect materials and services	10–20
Information technology	15–30
Professional services	8–15
Logistics	7–15
Media/marketing/promotional items	10–20
Other indirects	5–15
Capital projects	7–15

Strategic Cost Management

An important tenet of strategic sourcing is strategic cost management (Monczka & Petersen, 2008, p. 43), defined as “the identification and proactive management of all costs and associated cost drivers throughout the product/service supply chain.” It “requires development, prioritization and implementation of strategies and processes to control, reduce or eliminate costs during each phase of the life cycle” (Monczka & Petersen, 2008, p.



43). Strategic cost management offers substantial opportunities for cost savings and cost avoidance, as illuminated in the following three examples. As evidenced in these examples, market intelligence is essential to identify, quantify, and understand cost drivers.

The first example concerns elevator maintenance services. The Air Force's Enterprise Sourcing Group conducted extensive market research in 2011 (HQ AFMC, 2011). Figure 3 shows elevator maintenance cost drivers provided by IBIS World, a leader in syndicated market research. Labor and profit account for the majority of costs (Ripley, 2011). Employee compensation declined while industry profitability peaked at 29% in 2008 (Ripley, 2011). Compared to similar industries, there may be opportunity to negotiate a lower margin. A comparison of historical rates to prevailing market rates revealed that the Air Force was paying 18–20% more than other federal and commercial clients (HQ AFMC, 2011).



Figure 3. Industry Cost Breakout

Prices depend on cost drivers, such as the number of units, type of equipment, age of equipment, manufacturer, equipment usage, desired service call frequency, and location of equipment. Prices differ significantly by equipment types. Because traction elevators contain more moving parts and maintenance requirements than do hydraulic elevators, their cost is two to three times higher. Additionally, equipment age is highly correlated with the degree of required maintenance and repair. The Air Force's oldest elevator equipment is 60 years old, with an average age of approximately 20 years. The equipment manufacturers also drive costs. A contractor may charge more to service a wide variety of equipment. Contractors seek to offset the risks of obsolescence costs from servicing equipment from manufacturers that are no longer in business. The frequency of service calls affects pricing as well. Customers requiring more frequent service incur greater cost due to the need for on-site technician time and associated travel expenses. A growing trend in the industry is usage-based service rather than regularly scheduled maintenance. Relatively low usage by the Air Force could yield cost savings by converting to demand-based versus time-based service (HQ AFMC, 2011).

As a second example, consider a Fortune 500 firm that outsourced the supply and management of its service vehicle fleet. The total cost of ownership breakdown (see Figure 4) reveals the major cost categories to be the lease expense, fuel, and vehicle maintenance. However, the underlying cost drivers were the quantities, ages, types of vehicles, depreciation rates, cost of capital, miles driven, cost per barrel of oil, vehicle condition, and maintenance labor and parts. Most government acquisition professionals would look to minimize the major cost categories but often overlook a deeper investigation of underlying cost drivers. For example, a contracting officer might leverage competition to reduce the cost of capital, or, again via competition, might influence offerors to seek the most cost-effective national maintenance network. However, they may overlook other opportunities for cost avoidance via tenets of strategic sourcing, such as demand management and e-

sourcing. For example, prior to the vehicle strategic sourcing event, the internal customer defined the fleet needs as in the past: The firm needed 2,600 service vans. By staying abreast of developments in the market, an astute commodity manager discovered that an auto manufacturer altered its strategy to sell one of its models. This model did not sell well in the consumer market (Kiley, 2005); thus, the manufacturer repositioned it as a fleet vehicle—at a steep discount compared to traditional vans. By collecting this market intelligence, disseminating it within the user community, and acting upon it (i.e., switching vehicle types), the commodity manager saved approximately \$1 million on its \$23 million fleet spend. Hypothetically, using another savings lever, the commodity manager could require the fleet management contractor to source its fleet vehicles from manufacturers using electronic reverse auctions (eRA), an e-commerce tool that typically saves buyers 20% (Cohn, Brady, & Welch, 2000) via online, real-time competition (Hawkins, Randall, & Wittmann, 2009).

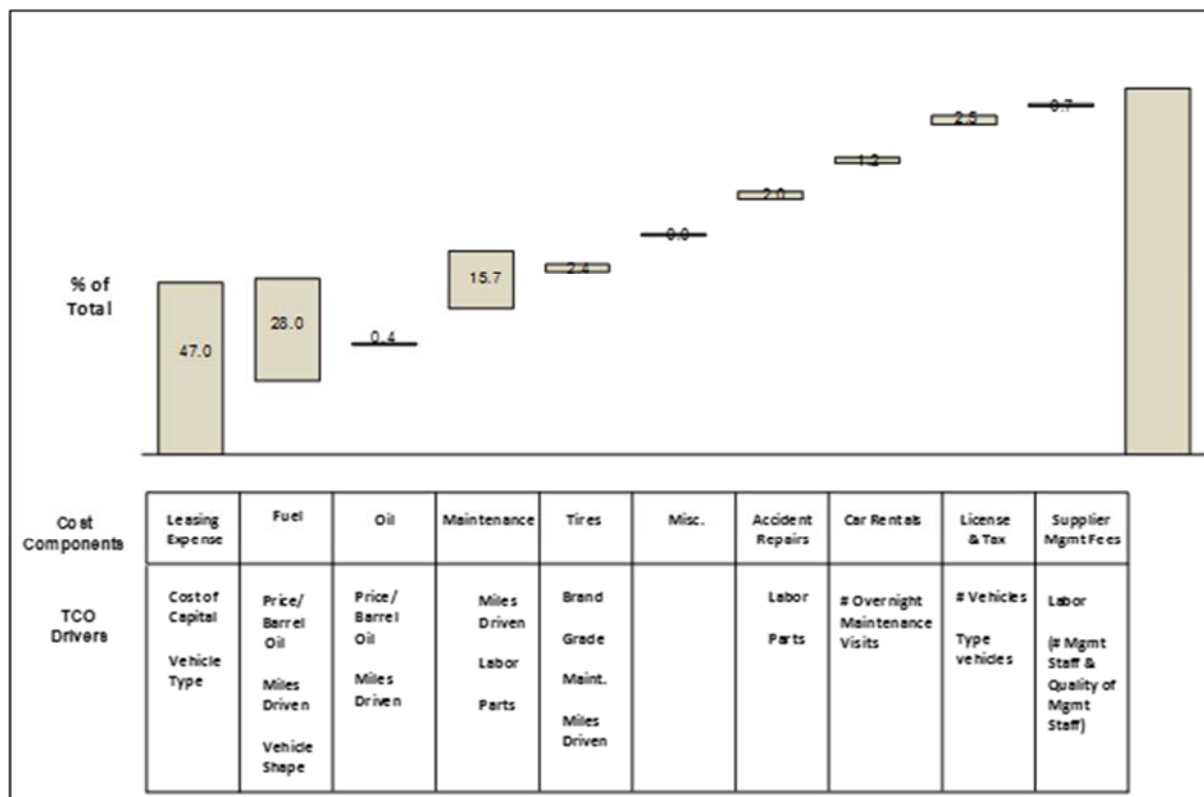


Figure 4. Vehicle Fleet Total Cost of Ownership Analysis

As a final example, consider the Air Force's attempt to strategically source security guard services at 29 installations in 2004 (Bowman, Reed, Hudgens, & Searle, 2006). The major cost category was labor. The savings lever sought was economies of scale by consolidating separate contracts at several installations. However, rigidity of the major cost driver was overlooked. The labor rates were subject to the Service Contract Act of 1965; thus, the Department of Labor established minimum wage rates via wage determinations (based on average wages in each locale). These wage rates remained constant regardless of the number of employees hired under a single contract. Thus, while transaction costs were somewhat reduced, the resultant contract failed to yield meaningful savings from economies of scale. These three examples highlight the importance of market intelligence in strategic cost management.

Consolidation Strategies and Socio-Economic Support

MR/MI proves critical to bundling and consolidation procurement strategies. Both bundling and consolidation aggregate requirements to (1) achieve volume savings from the marketplace, (2) reduce transaction costs associated with multiple source selections and multiple contracts, and (3) reduce performance risks associated with managing a greater variance of performance across more suppliers. FAR (2011) Subpart 2.101 defines *bundling* as consolidating two or more requirements for supplies or services, previously provided or performed under separate smaller contracts, into a solicitation for a single contract that is likely to be unsuitable for award to a small business concern.

DFARS (2011) Subpart 207.170-2 defines *consolidation* of requirements as

the use of a solicitation to obtain offers for a single contract or a multiple award contract to satisfy two or more requirements of a department, agency, or activity for supplies or services that previously have been provided to, or performed for, that department, agency, or activity under two or more separate contracts.

Consolidation or bundling of requirements increases the scope of work performed by the contractor. Because a firm's revenue or number of employees determines its small business designation within its industry, the increased scope can make it more difficult to obtain competitive offers from two or more small businesses. Subsequently, consolidated or bundled procurement solicitations may go out as *unrestricted*, requiring small businesses to compete directly with large businesses.

FAR (2011) Subpart 7.107 specifically addresses bundling contract actions as they relate to small business. In order to bundle requirements, the government must ensure that it considers the impact on small business participation and the measurable benefits of bundling (e.g., quality improvements, administrative or direct cost savings, etc.). Additionally, FAR (2011) Subpart 7.107(a) states that "because of the potential impact on small business participation, the head of the agency must conduct market research to determine whether bundling is necessary and justified." The FAR establishes minimum percentage savings thresholds for bundling to balance the government's cost efficiency goals with socio-economic goals. According to FAR (2011) Subpart 7.107(b), the agency may justify bundling as compared to the benefits that it would derive from contracting to meet those requirements separately if it results in savings equal to or greater than

(1) ten percent of the estimated contract or order value (including option) if the value is \$94 million or less; or (2) five percent of the estimated contract or order value (including options) or \$9.4 million, whichever is greater, if the value exceeds \$94 million.

Due to the perceived negative impact to small business, bundling and consolidation are politically sensitive, to say the least. Any savings estimates will likely be scrutinized. MR/MI provides the key information required to quantify and substantiate the realistic savings potential. Although a solid business case may justify bundling or consolidation, such a strategy may be perceived as politically untenable. Nevertheless, compelling savings and performance improvement opportunities may open avenues to compromises (e.g., consolidated or bundled small business set asides, partial small business set-asides, or requirement offsets) that offer a win-win outcome.

The FAR and DFARS are very specific in their requirements for bundling contracts to minimize the impact on small businesses. However, while the information required is clear, the methods of collection are ambiguous. Examining current and past contracts, contracts of



other agencies, industry best practices, academic articles; attending conferences; or conferring with third party consultants are all valid methods of data collection. The amount of evidence necessary to substantiate cost savings will rely on the amount required by the Head of Contracting Activity. Additional considerations may exist within the industry or market further limiting bundling. All these issues must be considered when performing market research to bundle or consolidate contracts. MR/MI is pivotal in determining whether a small business can provide the desired product or service.

An example was the Air Force's Furnishings Commodity Council (AFFCC) in 2009. The AFFCC utilized MR/MI to identify industry best practices, benchmarked those best practices, and created business cases for cost savings initiatives. To identify the savings opportunity for each business case, the AFFCC used a percentage-of-savings methodology based on government and commercial savings benchmarks, historical Air Force spend analysis from FY2000 to FY2007, and furnishings market forecast information.

The AFFCC relied heavily on a spend analysis to determine historical spend data on which to base the savings estimates. Based on the historical spend, the AFFCC was able to forecast spend data from 2009 to 2013. The results of the spend analysis showed that over 76% of furniture purchases were made from small businesses. Additionally, market research showed that over 50% of an office furniture manufacturer's cost structure was variable, and that labor made up the majority of fixed costs. This led the AFFCC to the volume purchasing sourcing strategy. The market research showed that manufacturers are attracted to volume purchases due to the ability to lower cost by fully utilizing labor, which is the second largest component of furniture cost. As a result, the AFFCC utilized industry benchmarks from government and commercial sources to estimate five-year savings within three categories: conservative (3%), moderate (6%), and aggressive (9%; Air Mobility Command [AMC], 2009).

The three savings estimate categories were applied to three business cases to show cost savings. The business cases included the following savings levers: develop Air Force furnishing standards and supporting policy (standardization); develop centralized contract vehicles (leverage volume to drive price reductions and improve purchasing efficiency); and acquire comprehensive furniture management services consisting of seven categories to include project management, asset management, reconfiguration/relocation management, space planning and design, packaged furnishings, asset maintenance, and site preparation and reconfiguration (AMC, 2009). The market research enabled the AFFCC to conclude that over a five-year period, furniture standardization, a centralized contract vehicle, and comprehensive furniture management services savings combine for an estimated cost savings between 10.6 to 215 or \$41.2 million to \$81.8 million, respectively (AMC, 2009). The conservative estimates of savings exceeded the thresholds necessary for bundling and consolidation.

The commodity team's goal was to reduce life-cycle costs, eliminate duplicate efforts, standardize requirements, and lower total ownership costs. The AFFCC created a standardized requirements list for all bases. This list included basic specifications for different types of office chairs such as executive, executive guest, and side/general seating. Each requirement also had a minimum warranty that vendors would have to guarantee. The idea was to make the requirements as basic as possible and to allow suppliers to quote various options. Once they identified what the requirements would be, the AFFCC began to research the available furniture vendors in the market.

Most of the furniture manufacturers, large and small, used furniture dealers to market and sell their products. Most of these dealers are small businesses located throughout the



country. Manufacturers typically do not have their own showrooms. Some dealers only specialize in certain manufacturers' brands, but for the most part, dealers represent all manufacturers. One of the methods used to gain vendor awareness was the National Exposition of Contract Furnishings (NEOCONs) world's trade fair in Chicago. Participants of the trade show learn about the latest designs, trends in fashion, and scientific breakthroughs in chair ergonomics.

Through further research and the help of consulting firms, the Air Force determined that 63% of furniture manufacturing was done by the "Big Five" companies. An RFI was posted in 2007, and 41 responses were received. Most of the distributors proposed teaming agreements with large manufacturers. In 2008, members of the AFFCC attended the 2008 NEOCON. The teams also learned what each manufacturer's production capacity was and whether they could handle the increased capacity of supplying the Air Force.

After thorough market analysis and research, the AFFCC determined that the commercial marketplace could fulfill the Air Force's needs, and that the seating products offered via the GSA schedule met the minimum requirements. Through spend analysis, the Air Force Small Business Solution Center (AFSBSC) identified that only 23% of the suppliers of office furniture were small business non-GSA manufacturers (AFSBSC, 2009b). However, the AFSBSC found that wood seating comprised of mostly niche small business manufacturers (AFSBSC, 2009b). In addition, the Air Force bought 80% of dorm furnishings from small businesses (AFSBSC, 2009a). Thus, it was determined that even with consolidation, the AFFCC would receive adequate small business competition for Spiral 1 (wood seating) and Spiral 1A (dorm furnishings). Extensive MR/MI gave the AFFCC current market condition information necessary to make an informed and substantiated small business participation determination for some wood seating and dorm furnishings while supporting consolidation for office furniture.

Conclusion

The importance of thorough MR/MI cannot be overstated. MR/MI informs both pre- and post-award processes and decisions, and therefore has a direct, lasting impact on the quality of the product or service the government receives and the price it pays. The primary purposes of MR/MI are to arm the acquisition team with an accurate picture of the state of industry, to help assess the feasibility of varying procurement options, to optimize value and mitigate costs, to identify potential sources of supply and services, to identify and mitigate risks, and to be cognizant of similar historical procurements.

A handful of guides and tools to aid in the conduct of market research exist, but they are lacking in one or more respects—they are either vague or lacking sufficient detail or examples, more prescriptive than descriptive, too lengthy—and therefore not used and often ignored by the majority of acquisition professionals. In recognition of these weaknesses, the Naval Postgraduate School recently published the most comprehensive market research guide to date (Hawkins et al., 2012).

Furthermore, government acquisition personnel tend to follow a "needs-based" archetype for market research. The acquisition team first determines the need by working with the user to refine the definition of the requirement to come to a common understanding in a process known as "requirements definition," and then cross-checks the need against existing sources of supplies or contracts, vendor lists, and previous purchases, as well as consulting with the small business office as applicable. When the initial market research is complete, the team should use the information acquired to develop the acquisition plan and to create a suitable contract structure based on appropriate evaluation criteria relevant to



the acquisition. When properly applied, market research is a powerful pre-award tool, although market research should not stop after the award of a contract.

Market research is an iterative process and should be applied over the entire life cycle of an acquisition. Rather than a reactive stance to MR/MI, a more optimal solution involves a continual, proactive approach that yields better contracts and more fluent contract administration, and that provides acquisition teams the leverage they need to obtain the best value for the government. To obtain the benefits of MR/MI, a shift in the current culture of acquisition professionals is required.

Historically, anecdotal evidence shows that far too often, market research is underscored by limited effort and documentation to comply with the general requirement to conduct it as mandated by the FAR, which results in another box to check on a lengthy list of mandated pre-award tasks. Fully realized, MR/MI can better inform critical acquisition processes (see Figure 1) such that the government realizes meaningful differences in needed outcomes. This leads to the following recommendations.

Recommendations

To become proficient at gathering, disseminating, and responding to market intelligence, greater attention is needed. Currently, market research is a stepchild in federal acquisition; it is not resourced commensurate with its importance in affecting contracted needs. Therefore, we offer a short list of ideas to enable a stronger infusion of market intelligence into outcome-driven acquisition decisions.

- Create a central repository of market reports and information searchable by NAICS code and by date. This will help acquisition teams share gained knowledge and prevent the duplication of effort. The Air Force had an on-line market research repository system known as MRPost. MRPost was a good idea, but it was not utilized because (1) policy did not enforce usage, (2) it was not publicized well enough to users, or (3) the users viewed it as just another task to perform instead of a valuable source of information.
- As Handfield (2006) recommended, stand up a central market intelligence cell staffed with experts in certain industries who are available to generate market analyses to acquisition teams.
- Budget for market intelligence, such as that found in syndicated and customized market reports (e.g., Gartner Group, Hoovers, Dun and Bradstreet Supplier reports, IBISWorld, and the Sourcing Interest Group).
- Develop a course available from the Defense Acquisition University that teaches best practices in market research by walking the students through a case study where market intelligence made the difference in efficiency and effective contractor performance.

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