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**Contractors on the Battlefield: When and How? Using the US
Military's Risk Management Framework to Learn from the Balkans
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Contractors on the Battlefield: When and How? Using the US Military's Risk Management Framework to Learn from the Balkans Support Contract¹

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¹ This paper draws from Greenfield, V.A., & Camm, F. (2005). Performance and risk management in the Balkans Support Contract (MG-282-A). Santa Monica, CA: RAND, which can be found in its entirety at www.rand.org/pubs/monographs/MG282/; a related presentation developed by Victoria A. Greenfield for "Contractors on the battlefield: Learning from the experience in Iraq," held at The George Washington University on January 28, 2005, and a paper presented at a conference of the American Bar Association on March 3, 2006. We thank the sponsors of the originating RAND report; however, we bear sole responsibility for all errors or omissions and for the views expressed in this paper, which are our own and do not reflect those of our employers or the research sponsor.



programming, budgeting, and other financial management processes; and sourcing of support services. His other work has focused on tax, pricing, and regulatory issues relevant to environmental and energy policy. Effective cost measurement, process improvement, and adaptation of best commercial management practices for government use are themes running through much of his work.

Dr. Camm has served on many government committees, including: Member of the congressionally mandated Commercial Activities Panel (2001-02); Chair of the Reparable Spares Management Board that developed actionable recommendations to improve the cost-effectiveness of the Air Force Materiel Command (1997-8); Member of the Air Force Scientific Advisory Board for its study of life-extension and capability-enhancement options for major weapon systems (1994).

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Abstract

For centuries, the US military has wrestled with decisions about when and how to use private contractors, especially “Contractors on the Battlefield.” Reports of mixed performance, inexperienced contracting officers, miscommunication, and profiteering date back to the Revolutionary War. History may be “living history,” in part, because decision-makers have lacked adequate means of systematically anticipating future outcomes and harvesting lessons from the past. The US military’s risk-management framework, a familiar tool in other operational settings, may fill that void. To illustrate, this paper applies the framework to the Army’s Balkans Support Contract (BSC); the contract covers a variety of life support, transportation, and maintenance services and has registered a substantial track record in deployment. The application demonstrates the utility of the risk-management framework and draws general lessons from the BSC experience for selecting service providers and for contract development, management, and oversight. Four deceptively simple lessons emerge from the analysis: first, not all risks are inherently contractual; most are environmental or activity-based. Second, risk is dynamic; appropriate responses change over time. Third, a contract is only as good as its customer; design and execution determine outcomes. And fourth, risk management is not risk elimination; not all risk can or should be eliminated.

Introduction



For centuries, the US military has wrestled with decisions about when and how to use private contractors, especially “Contractors on the Battlefield.” Under what circumstance should it hire contractors and, if it does hire them, what can it do to insure that it gets what it wants, when it wants it, at a reasonable cost?

Shrader (1999, p. 3) describes the use of contractors in the Revolutionary War and the apparent timelessness of the Army’s experience:

The Army experience with private contractors in the War for Independence contained most of the elements which would characterize the later use of contractors on the battlefield: mixed results in terms of performance and adequate support for the troops; lack of experience and expertise on the part of Army officers in dealing with contractors; lack of clarity in communications between the Army and supporting contractors as to requirements, capabilities, and costs; and financial manipulation and desire to increase profits at the expense of the Army on the part of contractors.

Much of what Shrader describes rings true today, but why? History may be “living history,” in part, for reasons of resources and culture, e.g., the number of billets allocated to contract oversight and the relative status of contracting officers, and, in part, for reasons of analytical capability: decision-makers have lacked adequate—both tractable and broadly applicable—means of systematically anticipating future outcomes and harvesting lessons from the past. A prospective analysis would enable planning, and a retrospective analysis would enable evaluation.

The US military’s risk-management framework, a familiar tool in other operational settings, offers one possible means of filling the analytical void: it is simple and easy to use and can be replicated under wide-ranging circumstance. The framework consists of a 5-step continuous risk-management process—(1) identifying hazards, (2) assessing hazards, (3) developing controls and making risk decisions, (4) implementing controls, and (5) supervising and reviewing—and a complementary risk-assessment matrix. Decision-makers can use the framework to recast “when” and “how” in terms more amenable to systematic analysis: what risks does contracting present; how do they compare to the risks involved in using US military, host nation, or other support; and how, if at all, can any or all of those risks be mitigated—and at what cost?

To illustrate, this paper applies the risk-management framework to the Army’s Balkans Support Contract (BSC). With particular attention to hazard identification and assessment, the application demonstrates the utility of the framework and draws general lessons from the BSC experience for selecting service providers—of different types—and for contract development, management, and oversight.

We chose the BSC because it covers a variety of life support, transportation, and maintenance services, and it has registered a substantial track record in deployment. Prior to the war in Iraq, it was also the largest contract of its kind, both in terms of dollars and contract staff. Among its limits as a case study, the BSC does not cover all types of services—it does not, for example, provide weapon system support.

In the sections that follow, we review the origins, principles, and structure of the BSC as the basis for analysis, present and apply the US Military’s risk-management framework, and summarize our findings.



BSC Origins, Principles, Structure, and Participants

The BSC, as described in this paper, began operating in 1999, but can trace its roots to the first Logistics Civil Augmentation Plan (LOGCAP) contract, which the Army awarded to Brown and Root Services, now Kellogg Brown and Root (KBR), in 1992.² The Army established LOGCAP as a performance-based, indefinite-delivery-indefinite-quantity (IDIQ), pre-planned umbrella contract, capable of delivering a wide range of services worldwide, in contingencies or crises, on demand. Flexibility and responsiveness are central concepts in LOGCAP and other such contracts.

- A performance-based contract tells the contractor what the customer wants done, but does not tell the contractor how to do it. The contractor is free to leverage its resources, including expertise.
- An IDIQ contract does not specify the delivery date or exact quantities at the time of the award; instead, the customer orders services and work under the contract, as needed. This level of generality can accommodate uncertainty about timing and quantities.
- In a pre-planned contract, the contractor develops an implementation plan for a future contingency, ideally in close collaboration with the customer. The plan should cover all activities posited in the statement of work, potentially reducing turnaround times on service and work orders.
- An umbrella contract covers a broad range of activities, hence the term “umbrella,” but the customer can choose to turn to other service providers on a task-by-task basis as it sees fit; indeed, under certain circumstances the customer must consider using other providers, including other contractors, US military personnel, and host-nation support.

The Army activated the LOGCAP contract in the Balkans in 1995. In 1997, the Army replaced the Balkans element of the LOGCAP contract with a sole-source contract and, almost two years later, the Army awarded the BSC in an open competitive process based on “best overall value.” The selection factors for the BSC award consisted of: the management execution plan, the contractor’s experience, the contractor’s past performance, and cost (CETAC, 1998). The cost factor spoke to realism, completeness, and financial capability, but not directly to level. The selection process weighed all non-cost factors equally—together, they were deemed “significantly more important” than cost—and considered performance risk for all four factors.

² The BSC is now in its second iteration; the first, as described in this paper, expired in 2004. On June 21, 2005, the Army awarded a re-specified firm-fixed-price and cost-plus-award-fee contract to KBR for a 5-year term; the Army solicited 66 bids on September 29, 2003, and received three. The contract’s spending limit is \$1.25 billion. (For more information, see www.defenselink.mil/contracts and Halliburton (2005) at www.halliburton.com.) This paper addresses the terms of the BSC as established in 1999 and modified over the primary period of research encompassed in Greenfield and Camm (2005), i.e., 2001-2003. For a much more detailed treatment of the contract, see Greenfield and Camm (2005), which draws material from: CETAC (1998), CETAC (1999), CETAC (2001), and CETAC (2002); CETAC-OC (1997); Kolar (1997); McElroy (1999); USACE (1994); Wynn (2000); and others. For a particularly readable overview of the contract and the roles of its participants, see Wynn (2000).

The principles and structure of the BSC closely mirror those of the original LOGCAP contract and impart similar flexibilities to both the customer and the contractor. The BSC is also a performance-based, IDIQ, pre-planned umbrella contract. As such, the contract confers an opportunity, but not an obligation to obtain life support, transportation, and maintenance services. The performance-based work scope tells the contractor what needs to be done, e.g., that the Army requires laundry, food, waste removal, road repair, or other services, but it does not tell the contractor how many people or what type of equipment to use.

And, as was true of the LOGCAP contract, the BSC is also a cost-plus-award-fee (CPAF) contract.

The CPAF payment structure warrants further consideration, especially with regard to the incentives it creates for cost control and cost inflation. The bases for award-fee calculations, cost reimbursement, and future contract awards each play a part in determining those incentives.

First, award-fee payments are calculated on the basis of negotiated estimated costs, not actual costs, and they depend on the results of regularly scheduled performance evaluations. In the BSC, the contractor may obtain an award-fee payment of up to 8% of the negotiated estimated cost, depending on its performance rating. If, for example, the contractor receives a perfect score in a performance evaluation and the estimated negotiated cost of the service it provides is \$100, then it would receive an \$8 award-fee payment; if the estimated negotiate cost is \$50, it would receive a \$4 award-fee payment; and so on. If it receives a less-than-perfect score, it would receive a pre-determined fraction of the \$8 or \$4 award-fee payment.

If actual costs differ from estimated costs, the award-fee payment will only change if the difference affects the contractor's performance rating, which would depend, in turn, on the specification of the performance-evaluation criteria. If cost is among the criteria, the contractor might obtain a higher rating (and payment) for lower costs and a lower rating (and payment) for higher costs. The BSC criteria have to varying degrees addressed cost, quality, coordination, flexibility, and responsiveness.

Second, CPAF means that the Army reimburses only those costs that are "reasonable," "allowable," and "allocable" under the contract (Wynn, 2000, p. 6). The Army must approve the expenditure. If the contractor spends above and beyond the cost estimate, the contractor may not get that approval. Moreover, even if the contractor gets the approval, it may, as already noted, obtain a lower rating in its performance evaluation, which would, in turn, result in a lower award-fee payment.

Third, if the contractor develops a reputation for inflating costs; that is, spending above and beyond the negotiated estimated costs, the Army might not view it favorably in future competitions for other contracts.

Together, these three considerations suggest that, once the customer and contractor have finished negotiating the cost estimate, the CPAF structure provides little or no incentive to inflate cost, could provide incentive to control cost, and may even provide incentive to reduce costs, if reductions result in higher performance ratings. Inflating cost will not generate more award fee; indeed, it may result in less fee and fewer future contract awards. However, tensions may arise when quality is also a



criterion, particularly if additional spending can improve the quality of service.³ Higher costs, all else constant, might result in a lower performance rating, but higher quality, all else constant, might result in a higher rating. The contractor's response to these competing incentives would depend on their relative weights and net effect in the evaluation process, which would also depend on the preferences of the customer.

Ultimately, the CPAF structure places the burden on the customer to clearly establish and articulate its needs and preferences in developing the contract, to scrutinize the contractor's plans, to firmly negotiate appropriate cost estimates, to closely review actual costs when the contractor presents them for approval and reimbursement, and to uphold its preferences in the performance-evaluation process. The analysis of the BSC that follows confirms each of these points in part or whole.

Finally, the contract's participants constitute a near "cast of thousands," spanning the globe, contributing a range of talents, skills, and other resources, and representing diverse and sometimes conflicting interests. For example, US Army Europe in Germany is the bill-payer; the operational units deployed in the theater are among the end-users; the US Army Corp of Engineers in Winchester, VA, provides the Principle Contracting Officer (PCO); and the contractor, KBR in Houston, TX, provides service. The Defense Contract Management Agency and the Defense Contract Audit Agency also provide substantial administrative support. Notwithstanding several foregoing references to "the customer" as if it were a single monolithic entity, the interests of the bill-payer, end-users, PCO, and others are not necessarily the same and at times may be at odds with one another. In particular, end-users may want more or better service from the contract and the bill-payer may want lower cost, leaving the PCO to address resulting frictions. Given the PCO's "location" between the end-users and the bill-payer, he or she may have a strong interest in minimizing those frictions.

The Risk-management Framework

Army and joint doctrine (Department of the Army, 1998; Department of the Army, Marine Corps, Navy, & Air Force, 2001) provide a risk-management framework that can be used to identify hazards, assess their probability and severity, establish risk-mitigation measures or risk controls, and compare risks and potential responses across alternative service providers.⁴ The framework consists of a 5-step continuous risk-management process and a complementary risk-assessment matrix. The doctrine focuses on tactical and operational considerations, but refers to other applications, including contracting. Discussions with Army and other military personnel suggest that

³ Economists would also note two other considerations: first, the possibility of low-balling in the negotiation to win the award, with the intent to charge actual, higher costs later; and, second, the possibility of inflating costs in the current period to increase the value of contracts in later periods. In the first instance, issues of reimbursements and award-fee determinations could discourage low-balling. In the second instance, another factor would come into play, i.e., the potential for future gain. The contractor would need to assess the effect of its current behavior on the likelihood of winning a future contract and weigh the possible sacrifice of current earnings, e.g., through loss of reimbursement or award-fee payment, against the value added to future contracts, appropriately discounted.

⁴ Greenfield and Camm (2005) offer a more detailed treatment of risk, the risk-management framework, and the applicability of the framework.

the underlying concepts are ingrained in their thinking about deployment generally, but not in their thinking about the use of contractors specifically.

The Army⁵ defines *risk* as the, “chance of hazard or bad consequences; the probability of exposure to chance of injury or loss from a hazard; risk level is expressed in terms of hazard probability and severity” (Department of the Army, 1998, p. Glossary-2). The Army further defines *hazard* as, “a condition or activity with potential to cause damage, loss, or mission degradation” and any actual or potential condition that can cause injury, illness, or death of personnel; damage to or loss of equipment and property; or mission degradation (Department of the Army, 1998, pp. Glossary-1 and 2-2).⁶ In loose, non-technical terms, “bad things” can happen in a field operation or elsewhere, with varying degrees of likelihood and impact.

The 5-step risk-management process unfolds as follows:

First, “Identify hazards” by analyzing the mission, listing possible hazards, and listing their causes. This step is forward-looking: for example, a hypothetical planner faces concerns about a service provider’s performance, e.g., will food be cold or roads impassable (see the discussion in the following section). The planner identifies specific “bad things” and, perhaps as importantly, their causes. Failure to identify the causes—especially the sometimes less obvious root causes—could lead a planner to suggest the wrong type of risk control, which could either leave the risk unchecked or create additional risk. An assertion that “bad things can happen” won’t suffice.

⁵ The Army (1998) and joint (2001) doctrine each make use of slightly different vocabulary in their discussions of risk; this analysis draws primarily from the Army doctrine.

⁶ Department of the Army (1998, p. ii) defines “mission” as including “mission, operation, or task.”



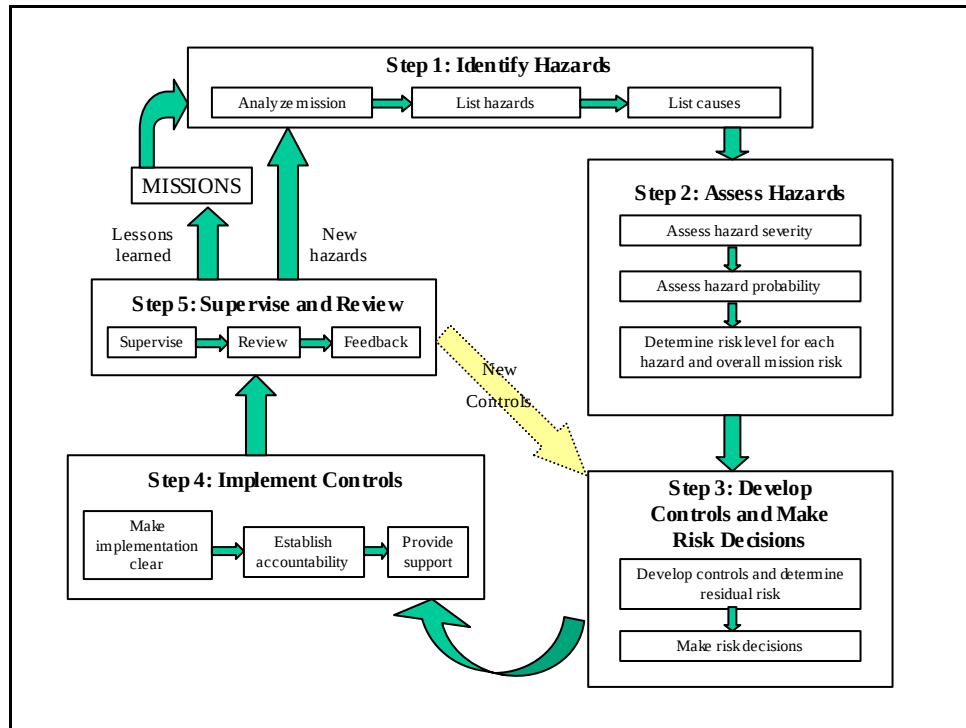


Figure 1. A 5-step Continuous Risk-management Process
(Department of the Army (1998); Department of the Army et al. (2001))

Second, how likely is it that the “bad things” will happen and how bad are they? This step, assessing hazard probability and severity, can be used to establish priorities for allocating resources and, speaking to the issue at hand, determining whether or not a contract is an appropriate vehicle. As shown in Figure 2, Army doctrine provides a simple matrix for addressing the issues. Third, develop controls and make risk decisions. With a reasonable understanding of the hazards and their potential consequences, the planner can develop controls, determine residual risk, and make risk decisions. The process instructs the planner to make decisions about how much risk to accept, implying that it may not be possible or appropriate to eliminate all risk. Fourth, implement controls in the operating environment and, if possible, before entering the operating environment. Fifth, supervise and review the process and develop new controls. This step enables continuous feedback. At this stage, it may be helpful to re-invoke steps one and two to review any realized hazards—what “bad things” have actually happened, what caused them, and how bad are they?

Risk Assessment Matrix						
Severity		Probability				
		Frequent A	Likely B	Occasional C	Seldom D	Unlikely E
Catastrophic	I	E	E	H	H	M
Critical	II	E	H	H	M	L
Marginal	III	H	M	M	L	L
Negligible	IV	M	L	L	L	L
E—Extremely High Risk H—High Risk M—Moderate Risk L—Low Risk						

Figure 2. Risk-assessment Matrix: How Likely and How Bad?
 (Department of the Army (1998); Department of the Army et al. (2001))

The BSC in Theory and Practice

This section focuses on applications of Steps One and Two of the 5-step process: first, in a prospective assessment of underlying hazards in the BSC; second, in a retrospective assessment of the contract's performance.

Underlying Hazards

Two broad categories of hazards emerge from a review of the BSC work scope and its operating environment. One category relates to the performance and cost of day-to-day activities, such as food preparation, laundry, road repair, and waste removal; the other to higher-order concerns about mission success, force management, and safety and security.⁷ Context matters. Faulty road repairs may delay a postal delivery in one instance and prevent troops from reaching the battlefield in another.

Framed in terms of the risk-assessment matrix in Figure 2, a planner might rank most day-to-day hazards as negligibly or marginally severe and most higher-order hazards as critically or catastrophically severe.

In some instances, hazards across and within categories are interrelated. For example, seemingly minor day-to-day problems can give rise to higher-order concerns over time. If quality-of-life suffers, e.g., if food is cold, laundry is dirty, and latrines overflow, the Army may have difficulty recruiting and retaining troops. Moreover, if the

⁷ Mission success includes readiness.

costs of these services are too high,⁸ the Army may eventually run short of funding for other mission-essential activities. Hazards may also involve trade-offs between competing objectives, especially cost and quality. Typically, the customer must pay more to get more, sometimes, as already noted, causing tension and friction among contractors, bill-payers, end-users, and PCO's.

Categorizing and recognizing relationships among hazards is important to understanding the nature of risk; but drilling down to underlying causality yields equally important insight for developing risk controls.

Consider an anecdotal example: a soldier returns from a late shift, cannot get a hot meal, and complains. The immediate hazard is the lack of a hot meal, but what is the cause? The most obvious answer might be, "a closed kitchen," possibly because the contractor is short staffed, but the terms of the BSC point elsewhere. The BSC directs the contractor to "Provide 24-hour food service operations"; however, it also calls for "limited food service during non-meal hours" (CETAC, 1998). As such, the contract does not require hot meals after the late shift. It permits and arguably directs the opposite. In this case, the "cause" is the underlying statement of work. The customer is getting what it asked for, nothing more and nothing less.

Had the analysis ended with a closed kitchen or short staffing, a planner—or reviewer—might have suggested the wrong control, perhaps a staffing mandate, which might have increased cost, but would not have solved the problem.

As this example suggests, one possible source of hazard is the contract itself or, more accurately, a poorly framed statement of work. On this basis, it might be tempting to argue for eliminating the contract—if the contract is the source of the hazard, why not eliminate the contract? Merely shifting to another provider, e.g., a US military provider, will not resolve the problem if the customer continues to misstate its needs; moreover, shifting from contract personnel to troops could reduce the availability of troops for other activities that only they can perform.

Framing can be made better or worse with performance standards. In a performance-based contract, such standards do not specify "how"; rather, they clarify "what" and, ideally, provide an objective basis for evaluation. Without standards, the contractor may substitute its own or other commonly accepted standards and may provide the wrong service or the wrong amount of service. However, if standards are overly prescriptive they may negate intended flexibility.

A lack of performance standards may also contribute to so-called gold-plating, in which a contractor provides better or more service than is necessary at a higher cost. But, gold-plating cannot occur without willing participants on both sides of the contractual table. A CPAF contract might create incentives to over-provide by rewarding higher-quality service with a higher performance rating, but the customer must approve the contractor's plan, negotiate the cost estimate, and authorize reimbursements for actual costs. Ultimately, it takes two—or more—to gold-plate effectively.

⁸ Separate from concerns about intentional cost inflation, realized costs might be higher than expected costs within the confines of "reasonable, allowable, and allocable."

Other possible sources of hazard include ambiguous roles and responsibilities and inadequate communication and coordination. For example, a contract that calls for weekly deliveries of fuel oil should specify whether the contractor or the customer is providing the fuel, the truck, or the security. If the customer is providing any of these goods or services, it must be aware of and plan for its commitment; moreover, the customer must communicate with the contractor and vice versa, e.g., regarding timetables and whereabouts, to coordinate activities.

More recently, attention has turned to two other issues involving “roles and responsibilities,” those of chain of command and protections under international law. Contractors operate through the contracting chain of command and outside the military chain of command, which has raised concerns about responsiveness in the field; in some circumstances, their standing under international law is uncertain, which has raised concerns about their security.⁹

BSC Performance

Realized hazards under the BSC have involved day-to-day activities, with unsatisfactory outcomes arising from poorly stated service or work orders, inadequate communication and coordination, and incentives to accept higher costs in exchange for higher quality. Higher-order concerns have not borne fruit.

A GAO¹⁰ report (2000a) on controlling costs in the BSC describes an instance in which planned firefighting services would have been too costly and potentially unsupportable, but available evidence strongly suggests that a lack of performance standards and communication between the customer and contractor contributed to the conflict. Concerns about unnecessary redundancy in power generation also seem to have had their roots, at least partly, in standards and communication issues. The GAO report also suggests instances of gold-plating. It describes spending on base camp personalization, e.g., changing street names for each new rotation of troops.

Another GAO report (2000b) issued at about the same time finds a high level of customer satisfaction with services under the BSC. The concurrent release of the two GAO reports—one criticizing spending and the other praising quality-of-life—calls to mind the inherent tension between cost and quality. The two reports address different costs and qualities, but the juxtaposition is striking.

Acknowledging a need to better control costs, the Army responded to the GAO by clarifying its service requirements, by publishing a handbook of performance standards,¹¹ and by placing greater emphasis on cost, especially in performance criteria. It re-oriented the criteria to weigh cost more heavily and to require ongoing reductions.

⁹ For background on these issues, see Department of the Army (2003); for a more general discussion of concerns about readiness in this and other contracts, see GAO (2003).

¹⁰ GAO is now known as the “US Government Accountability Office”; at the time of the report cited here, it was known as the “US General Accounting Office.”

¹¹ The Army issued a call to more closely scrutinize services just prior to the publication of the GAO report.

The Army's response may reflect a natural shift in priorities. At the start of an operation, the Army may seek to allocate managerial talent and manpower to mission-essential activities; it may be more willing—and able—to devote these resources to controlling costs as the operation proceeds.

Lessons for Future Operations

The foregoing analysis applies the US military's risk-management framework to the BSC to consider hazards, both prospectively and retrospectively. The results suggest four general lessons for future operations.

First, not all risks are inherently contractual. Few of the hazards uncovered in the BSC were "contractual" *per se*; most were environmental or activity-based, including those stemming from trade-offs that the Army—or any customer—routinely faces, regardless of the provider. Were the hazards attributed solely to contracting, any subsequent risk controls (including any decisions to replace contract personnel with troops) might be ineffectual or worse. Staffing with troops will not guarantee the "right" services if the customer asks for the "wrong" services; alternatively, a staffing mandate will not correct a statement of work, but may incur unnecessary costs.

But, risks are not identical across providers. The probability and severity of hazards and the costs of controls may differ by type of provider, as in the case of security requirements. Moreover, in some instances, the hazards themselves will differ, as when concerns arise about the chain of command or about the status of contractor employees under international law. Clearly, the results of the analysis will be circumstance-specific and will depend on conditions in the operating environment.

The real lesson is to compare risks, controls, and costs across potential service providers—be they contractors, US military, host nation, or otherwise—considering both common and unique hazards and conditions in the operating environment. For example, a contractor's employees may require more security than US military personnel, especially in an unstable operating environment, such as at or near the battlefield, but the Army may still use fewer resources on balance if it opts for the contractor.

Second, risk is dynamic, and appropriate responses may change over time. Prominent concerns at the start of an operation may differ vastly from those at the end of an operation. Action typically dominates the start. Initially, the customer must focus on getting the job done and might be willing to pay a premium to do so, especially if it means increasing mission effectiveness by freeing up managerial talent and manpower for other purposes. The customer, either explicitly or implicitly, may be considering the "price" of controlling cost in the face of other resource constraints. However, as the operation proceeds and conditions stabilize, concerns about cost tend to increase. GAO criticisms of the BSC and the Army's response suggest that cost became a more central theme as conditions stabilized in the Balkans.



Third, the contract is only as good as its customer. The success of a contract hinges first on its design and then on its execution, including the selection process, management, and oversight.¹² This means that the customer must be able to:

- Clearly establish and articulate its needs, including its preferences for cost and quality in the face of tradeoffs;
- Carefully review the contractor's plans, firmly negotiate appropriate cost estimates, and judge the validity of actual costs;
- Uphold its preferences during the performance-evaluation process; and
- Communicate effectively, coordinate activities, and respond to changes in the operating environment as they arise.

Here too, the customer faces a potential hazard; that is, if it is overly prescriptive in stating its needs, it may lose some of the flexibility it initially sought in the contract, especially in a performance-based, IDIQ contract.

A participatory "cast of thousands" may bring a richness of talents, skills, and other resources to the contract, but it also adds complexity and potential conflict to design and execution. By implication, each participant—not just a single monolithic customer—must understand the terms of the contract and, as already noted, its roles and responsibilities under the contract.¹³

For all these reasons, good training, especially with potentially less familiar constructs like CPAF contracting, is essential.

Fourth, risk management is not risk elimination. Not all risk can or should be eliminated, but decisions about how much risk to accept should be made consciously and intentionally with adequate information. The Army—or any other customer—can structure a contract to address many forms of risk, but it may want or need to tolerate some. The costs of controls might be too high in view of the probability and severity of the consequences. Moreover, as conditions in the operating environment change, decisions about risk controls and acceptance may also change.

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¹² For more recent evidence on this point, see GAO (2004).

¹³ Wynn (2000) also emphasizes the importance of clarifying roles and responsibilities.



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