Chapter One

INTRODUCTION

BACKGROUND

In 1998, the Department of the Army asked RAND Arroyo Center to support an internal review of the U.S. Army Materiel Command (AMC). This review team, called the AMC Redesign Overarching Integrated Product Team (OIPT), was chartered to look at possible redesigns of AMC, and the Arroyo Center’s role was to independently assess the technology-generation aspects of an AMC organizational redesign. A central issue facing AMC in the technology-generation area is how to keep its capability intact during a period of dramatic downsizing of its civilian acquisition workforce.

The Arroyo Center study found that in the science and technology (S&T) area, more cost-sharing and leveraging possibilities were possible. The study introduced a framework for managing technology developments that depends on two dimensions: the technology’s utility to the Army and its market breadth. When the Army’s research and development activities listed in the S&T budget were placed against the two management approaches that overlap commercial technology areas—“initiate” and “participate”—a number of potential opportunities to improve the Army’s technology-generation capability through more collaborative efforts were identified.

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These findings were briefed to the Under Secretary of the Army, who recognized the importance of more collaborations and partnerships with industry and was interested in expanding beyond the traditional options the Army currently uses. Understanding what options exist means understanding the nexus between what is available to the Army in terms of the various innovations occurring in industry and elsewhere and what the Army can actually do to exploit those innovations given the relaxation of government control that has resulted from acquisition reform efforts.

What Innovations Are Occurring in Industry?

On the industry front, there are several ongoing trends. First, high-tech firms are focusing on innovations, not simply on research and development (R&D). The new paradigm is “searching not researching,” which means that firms are seeking new ideas to exploit and are not necessarily performing the research themselves. This results in firms acquiring expertise from other firms as required, using technology licensing agreements, and forming various types of partnership agreements.

Second, many firms are putting their money into venture capital funds. Some have their own corporate in-house venture capital funds (such as Oracle or Siemens), while others prefer “arm’s-length” funds (such as what Boeing has done in investing in venture capital opportunities).

Third, while a few firms with large conglomerate operations are forming new horizontal businesses to exploit the synergies of the conglomerate (e.g., General Electric), almost all firms are concentrating on core competencies and spinning off activities that are no longer consistent with corporate goals. A classic example of an industrial spin-off is General Motors (GM) selling off Electronic Data Systems (EDS) and part of its Delphi parts operation.

The innovative options that industry is pursuing fall into seven general categories: (1) spin-off, (2) strategic partnership, (3) venture capital, (4) merger/acquisition/consolidation, (5) consortium, (6) closure/liquidation, and (7) vendor consolidation (prime vendor). Six of the seven options have analogs in the military. Only venture capital does not have a direct analog, although, as we will discuss
later, the CIA has recently taken a plunge into the venture capital arena.

**What Innovations Are Occurring in Government?**

On the government front, innovative initiatives have been implemented under the rubric of acquisition reform. As summarized in the “Defense Reform Initiative Overview,” acquisition reform is intended to force the government to adapt better business processes, pursue commercial alternatives, consolidate redundant functions, and streamline organizations. A primary function of the Army’s acquisition reform is to “foster innovation [to create] creative and cost-effective solutions” by forming collaborative business arrangements, by relying on performance-based acquisition, by capturing and utilizing knowledge of the commercial marketplace, by enhancing competition, by consolidating requirements, and by incorporating innovative contractor incentives. Thus, the scope of innovative approaches permitted under acquisition reform is large.

Probably the most innovative partnering concept in the military today as part of acquisition reform is the Military Housing Privatization Initiative (MHPI) and the Army’s pilot program, the Residential Communities Initiative (RCI). The Department of Defense (DoD) estimates that about 200,000 military family housing units are old, lack modern amenities, and require renovation or replacement. Completing this work at the current funding levels and using traditional military construction methods would take 30 years and cost about $16 billion. To improve military housing Congress enacted legislation at DoD’s request authorizing a five-year pilot program to allow private-sector financing, ownership, operation, and maintenance of military housing. Under the MHPI/RCI, the Army can provide direct loans, loan guarantees, leasing and rental guarantees, 

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differential lease payments, conveyance or lease of existing property and facilities, and other incentives to encourage private developers to construct and operate housing either on or off military installations. In turn, the military service members use their housing allowance to pay rents and utilities to live in privatized housing.

The above example illustrates the extent to which the government is willing to change the way it does business to implement a cost-saving program. In addition, many positive changes have occurred as a result of acquisition reform. Among efforts to assist collaboration and partnering with industry, two notable changes stand out: the introduction of the “Other Transactions” (OT) authority with its flexibilities in constructing contractual agreements for R&D and prototyping, and the modification of the Federal Acquisition Regulations (FAR) to remove some of the (from industry’s perspective) more inhibiting regulations.

**What Innovations Seem Most Promising for the Army to Exploit?**

Given the two sets of ongoing innovations, three approaches emerge as the most promising candidates for collaborating and partnering with industry: (1) forming real estate public-private partnerships, (2) using Army venture capital mechanisms, and (3) spinning off Army activities into Federal Government Corporations (FGCs).

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6The process used to sort through the various data and come up with these three approaches was thorough, although somewhat unstructured. It consisted of synthesizing individual analyses of relevant financial, legal, and political issues; discussions with leading “out-of-the-box” business thinkers representing four professional types (real estate developers, venture capitalists, business school scholars, and technology-transfer experts); and brainstorming sessions with study team members and consultants. This iterative process led to some interesting possibilities, as well as some false starts. As a result, it is difficult to reconstruct the exact course the analysis took.

In the end, however, three approaches emerged as promising candidates for collaborating and partnering with industry. Each appears to have significant potential payoff for the Army.
OBJECTIVE

While these three approaches seem promising on the surface, there is a need to more fully understand their potential and their liabilities. Chapters Two, Three, and Four explore each approach in more detail. Chapter Five draws some larger conclusions and insights and makes some recommendations. Appendixes A and B describe the models used in our analysis of spinning off Army laboratories and depots, respectively; the analyses themselves are described in detail in Chapter Four.