TUTORIAL

PARTICIPATORY CONTRACTING

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Participatory contracting represents a philosophy in which the government attempts to involve outside entities in a form of partnership or coordinated effort, with the goal either of reducing costs or improving performance; private industry seeks to increase profits and have greater control over the effort. This win-win scenario can thus appeal to all participants, and makes administration of the contract more of a partnership effort, for its success benefits all the participants.

ver the past several years, the federal contracting world has seen several changes, as the government has attempted to modernize practices and find innovative ways to improve on the procurement process. One of these trends, which I shall term "participatory contracting," is to involve entities outside the government in a form of partnership or coordinated effort. Four types of general contracting seem to fall into this type of arrangement: partnership agreements, cooperative research and development (R&D) agreements (CRADAs), share-insavings (SiS), and research tournaments.

PARTNERSHIP AGREEMENTS AT DEPOTS

This is part of a continuing change in function for the depots, in that the depots are currently seeking outside work in order to better utilize existing facilities, and thus reduce costs. This is in keeping with recent Department of Defense (DoD) guidance to promote commercialization of military depots ("Maintenance of Military Equipment," 1996), and is also discussed in a Government Accounting Office (GAO) Report (1998). Further, these types of arrangements are legal under Title 10 of the *United States Code*. Generally, these efforts have fallen under four types of arrangements, which are valued at about \$500 million annually (Cahlink, 1999):

- direct sales (the government facility acts as a subcontractor for private industry);
- workshare (the program manager sends funds directly to the depot for part of the work, and contract is awarded to private industry for the remaining portion);
- directly contracting out the repair of military equipment to private industry,

where the depot and private industry form a team effort; or

• leasing the space or facilities at depots to private industry.

These partnership agreements portend the future for depot facilities and usher in the concept of "commercialization" of these facilities, which in turn has the potential to provide both small and major defense firms with several benefits, such as:

- applied engineering programs;
- advanced manufacturing knowledge; and
- state-of-the-art laboratory or manufacturing resources.

These efforts further bring to the depots outside work and money that would lower the depots' costs by fully utilizing existing personnel and facilities. Further, through working with other government and Service programs (such as the CRADAs mentioned below) they can promote technology transfer and areas of science, of interest to the military, supporting both these programs and the depots (Washington, 1999).

COOPERATIVE R&D AGREEMENTS

Cooperative R&D agreements (CRADAs) have been used for teaming or technology transfer projects with small businesses, universities, and government laboratories.

Teaming and technology transfer projects can involve commercial work only, projects with technology transfer incubators (TTI), small business innovation research (SBIR), and small business technology transfer (STTR). These approaches can serve as a bridge between commercial, government, and university R&D and production applications (Washington, 1995). They can also incorporate existing federal, state, and local funding initiatives which promote small businesses (in 1988 this represented \$550 million to promote technology innovation [Peterson, 1993]) to help provide funding for the projects. These approaches can tie into the Services' Centers of Excellence Programs or the Office of the Secretary of Defensefunded university research initiatives.

Further, these programs have been expanding somewhat to now also include joint university-industry research projects (Gaumond, 1994). The Advanced Research Projects Agency (ARPA) also funds engineering programs through its technology reinvestment project (TRP) initiative, in conjunction with the National Science Foundation (Wax, 1995). Through these programs, the Services have leveraged the best universities in the nation to advance the state of science in areas of interest to the military (and also provide external funding for those same projects). These approaches are thus a win-win scenario for new technologies, in that they promote the growth and development of new firms or universities, and provide additional research and development on technologies of interest to the military at reduced costs (being partially subsidized by federal, state, and local funding).

SHARE-IN-SAVINGS

Another type of initiative contracting represents a variation on the value engineering change proposal (VECP) theme, which is similar to the gain sharing approach used in private industry. The Sharein-Savings (SiS) instrument was a product of the National Defense Authorization Act of Fiscal Year 1996, titled "Share-in-Savings Pilot Programs" (1998). The program allows for the use of saved monies from government accounts to reward a contractor(s) for successful programs and procedures that enable the government to save money. The use of SiS in government outsourcing is relatively new, and since it has only been approved for limited information technology pilot projects (10 projects between \$25 million and \$100 million, and another 10 projects between \$1 million and \$5 million), it has not received much attention.

So far, three projects have received Office of Management and Budget (OMB) approval for an SiS pilot program: the Department of Energy's "Energy Savings Performance Contracts" (1998); the National Aeronautics and Space Administration's "Shared Savings Clause" (1998) used for the modernization of their headquarters' computer networking; and the General Services Administration's "information technology projects" (Frank, 1999). The premise behind SiS is to allow a contractor to share in either internal or collateral savings that have been generated as a result of the contractor's actions; similar to a VECP. However, SiS can operate on a higher funding level, both in terms of the absolute dollars that can be awarded (\$100 million), and in terms of not being limited to internal savings from a specific department or program. In this type of program the contractor makes the capital investment needed to execute the initiative, then shares substantially in the savings that are derived (i.e., under current initiatives up to 50 percent).

An additional feature of this type of program, unlike VECPs, is that actual savings to the overall agency can be used for the award payments to the contractor, unlike the normal fiscal rules, where those savings would have to be returned to the

general treasury. This feature can be a definite advantage in some circumstances, and has been much sought after by program managers for the past several years. Similarly, at about the same time as SiS was ap-

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proved, Dr. Kenneth Oscar, Deputy Assistant Secretary of the Army (Procurement), suggested an "Acquisition Reform Incentives Clause" (1996). This clause represents a variation on the VECP theme for use on nonhardware item contracts. It would work like a VECP proposal, but reflects the larger percentage savings (based on a five-year reward payout schedule) typified in the SiS initiatives, with a slightly different but appealing wrinkle, that the contractor's percentage payment would decrease over time.

Research Tournaments

Research tournaments (Fullerton, 1995; Taylor, 1995; Washington, 1997) represent a competition process that is structured like an auction, with the winner awarded a "prize" for the best product. The auction component consists of the participants paying a fee for entering the

"This process promotes innovation on the part of the offerors, and provides firmer cost estimates for equipment, since costs are based upon completed hardware and not conceptual hardware estimates." tournament, which could be used to defray the cost of the prize, or offset the cost of conducting the competition.

The government commits to pay the research tournament winner a set amount that is verifiable by

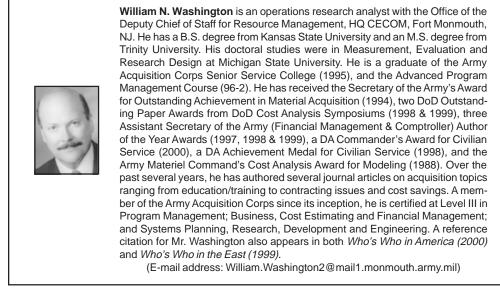
the courts, and must be awarded. The selection of the winner would be based upon specified priorities (e.g., performance or cost) established by the government, which would be specified in the request for proposal, so that the competing firms would know which innovations or priorities were most important in winning the prize. Finally, each firm would submit its prototype at the end of a specified period of time, for the government to evaluate and subsequently award the prize for the best product. Thus, the competition would differ from a patent competition, in that it would select the most innovative design across a group of offerors that would win, with the quality of the design stressed over the date of discovery.

This process promotes innovation on the part of the offerors, and provides firmer cost estimates for equipment, since costs are based upon completed hardware and not conceptual hardware estimates. Rich and Janos (1994) also point out that the "beauty of a prototype is that it can be evaluated, and its uses clarified, before costly investments for large numbers are made." This is also in keeping with DoD Directive 5000.1 (1996), which stresses modeling and simulation of new systems.

An additional benefit of this type of procurement is that it should require less government oversight, since the offeror has already developed the item, and is offering it at a fixed price to the government. Thus, concerns about overseeing development and production costs are negated. Finally, as mentioned above, the contractors could specify along with their proposals what they consider to be appropriate rewards or fees for additional or alternative performance goals. This would allow the source selection authority to perform up-front tradeoffs and assessments. To date, the author has not seen any research tournaments used by any of the Services, but the National Academy of Engineering workshops have recently endorsed the concept (National Academy of Engineering, 1999).

SUMMARY

These various types of contracting afford both the government and private industry significant benefits. For the government, they offer the potential for reduced costs and improved performance; private industry receives the potential for increased profits and more control over those projects. This win-win scenario can thus appeal to all the participants, and makes the administration of the contract more of a partnership effort, for its success benefits all the participants. Further, while each of these different contracting vehicles approaches this partnership process from a different perspective, they all attempt to seek optimum performance through assigning the work in the "best division of labor" between the government and outside agencies to achieve their shared goals.



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