



GUIDELINES
FOR
DUAL USE SCIENCE AND TECHNOLOGY PROGRAM
FISCAL YEAR 2000

January 1999

Fiscal Year 2000 Guidelines Dual Use Science & Technology Program

Program Overview

The increased use of dual use technologies is essential to reduce the costs and increase the performance and sustainability of defense systems. The Dual Use Science & Technology (DU S&T) Program was started in FY 1997 to increase the use of dual use technologies in defense systems. The Initiative has two primary purposes. The first is the development of dual use technologies with industry. The second is to embed the concepts being developed under this Program and earlier dual use programs in the Services and to make the development of dual use technologies with industry a normal way of doing business throughout the Department of Defense. This second goal laid the groundwork for the transition of the Program to the Services in FY 1999, the first year the Services had their own dual use S&T program elements to execute.

The DU S&T Program jointly funds research projects with industry for the development of dual use technologies to solve specific technical problem(s). A dual use technology is defined as a technology that has both military utility and sufficient commercial potential to support a viable industrial base. By increasing the use of these technologies in defense systems, we can take advantage of the same competitive pressures and market-driven efficiencies that have led to accelerated development and savings in the commercial sector. The key is to identify where the Services and firms have mutual interests and can work together to develop technologies that meet both defense and commercial needs. This Program is accelerating this process by encouraging the implementation of dual use technology development projects in the Services.

FY 2000 will be the fourth year of the Program. In previous years approximately \$160 million of DU S&T funds have been used to initiate over 200 dual use projects. These funds, combined with the Service and industry cost share, have resulted in the investment of over \$600 million in the development of dual use technologies.

Project Identification and Selection

As in FY 1999, it is planned to have a single Broad Agency Announcement (BAA) to solicit proposals from industry. The Navy has agreed to take the lead for the joint FY 2000 BAA. The Navy point of contact for the joint BAA is Cathy Nodgaard who can be reached at (703) 696-0289 or by e-mail at nodgaac@onr.navy.mil. This BAA will be the primary source of new projects initiated under the DU S&T Program and as such, it is imperative that each Service support this joint BAA and meet the milestones contained in the schedule. The only other source of new projects that can be funded with FY 2000 DU S&T funds are those that were identified through the FY 1999 DU S&T BAA.

Schedule for FY 2000 Solicitation

Services Provide Navy Topic Areas for Joint BAA	Jan 19, 99
Navy Issues Two Step BAA	Feb 1, 99
Step 1 – White Papers - Due	Mar 30, 99
Step 2 – Industry Proposal – Due	May 4, 99
DU S&T Investment Strategy Conference	Mar 25, 99
Anticipated Service Announcements of Awards	Jun 4, 99

PROPOSALS ARE DUE MAY 4, 1999

Bidders' Conferences – The Investment Strategy Conference will be held in Chicago, IL on March 25, 1999. Service participation in the Joint Conference is essential to the success of the FY 2000 solicitation.

Two Step BAA – The two step BAA will provide industry advanced notice of the topic areas and the opportunity to submit white papers to obtain feedback from the government on their proposed response to the solicitation. This advanced notice and feedback will allow industry to better prepare their proposals to address the needs of the Services. However, white papers are an optional part of the BAA process. Contractor will **not** be required to submit a white paper in order to submit a proposal.

Focus Areas – The focus areas that will be contained in the FY 2000 BAA are:

- Affordable Sensors
- Advanced Propulsion, Power, and Fuel Efficiency
- Information and Communications Systems
- Medical and Bioengineering Technologies
- Weapons Systems Sustainment
- Distributed Mission Training
- Advanced Materials and Manufacturing
- Environmental Technologies

Minimum requirements and the selection criteria for DU S&T projects are identified below. Proposals selected by the Services to be funded under the DU S&T Program must meet these minimum requirements and must be selected using these selection criteria. The total funds in the FY 2000 DU S&T Program for each Service is expected to be approximately \$20 million. These funds should be obligated by March 31, 2000. Proposals selected should have reasonable expectation of meeting this obligation goal if the above schedule is maintained. While OSD approval for project selection is not required this year, it is required that a summary sheet be completed and provided to OSD prior to the funds being obligated on a project. The format for these summary sheets is at Tab B.

Minimum Requirements - Selected proposals must meet the following minimum requirements:

1. The proposal should be for the development of a dual use technology that will meet a military need and have sufficient potential commercial applications to support a viable production base.
2. At least half the cost of each proposed project's statement of work (SOW) must be paid by non-federal participants, one of which must be a for-profit company. In addition, a minimum of 50% of the non-federal cost share must be in the form of high quality, as defined below. The remaining cost of the project will be shared by the sponsoring Service and the DU S&T Program. The DU S&T Program can contribute no more than 25% of the cost of the project. Both the source of industry's cost share and the Service funds, by Program Element (PE), must be identified on the Summary Sheet.
3. Industry awards must be based on competitive procedures and based solely on merit.
4. Projects must be awarded using Technology Investment Agreements (TIAs), i.e. Cooperative Agreements or "Other Transactions." These vehicles provide a less burdensome and more creative arrangement between the government and industry and attract participation of commercial companies that do not normally participate in defense procurements.
5. The projects must result in the development of a technology, not the application of a technology. Prototypes of the technologies are encouraged. Examples of work not funded under DU S&T include market studies, technology roadmaps, strategic plans, state of the art surveys, etc.

Selection Criteria -The following criteria will be included in the joint solicitation for proposals and should be used to evaluate and prioritize proposals:

Technical & Management Approach - A proposal should score well if it has the following characteristics:

- Offers a superior, innovative, or unique solution to a military problem, challenge or need.
- Provides clear, quantifiable technical objectives and a technical approach with a schedule showing definite decision points and endpoints.
- Clearly lays out project risks and plans for dealing with them, including a statement of time-to-market considering available resources and the existing state-of-the-art.
- A project team that includes all the resources needed to both successfully develop the technology into a product or process needed by the military and to commercialize the technology.;
- A project team that is organized for efficient and effective execution of the project. There should be clear, complementary roles for all members and clear lines of responsibilities and authority in the management of tasks and cost control.

Military Benefit - Projects should focus on technologies that will have a major impact on the cost, performance or sustainability of defense systems. In general, technologies that

will have the greatest impact on the Nation's defense as well as those that will have a pervasive impact across a range of defense systems will be rated higher. In addition, the proposal must include a strategy (specifically, the need and timing for planned system or upgrade) for incorporating the technology into a defense system(s).

Commercial Viability of Technology - An objective of the DU S&T Program is to obtain the economies of scale, accelerated product improvements, and increased sustainability inherent in the commercial marketplace for defense procurements. Thus, it is essential that a commercialization path for the proposed technology be identified and that potential commercial applications be sufficient to support a production base that would be capable of meeting future defense requirements. To be avoided is a technology that would not be economically viable without significant military buys.

Quality of Cost Share - When evaluating the quality of the proposed cost share the primary focus must be on the risk being assumed by the for-profit members of the proposal team. Proposed cost share should be evaluated and identified as “High,” “Low,” or “Unacceptable” according to the three definitions below. The sum of high and low quality cost share must be at least 50% of the cost of the project’s SOW, of which at least 50% must be high quality. High quality cost share is preferred, and those proposals containing predominately high quality cost share should be ranked higher in this criterion than those containing a large percentage of low quality cost share.

High Quality Cost Share - These are financial resources that will be expended on the proposed project’s SOW and will be subject to the direction of the project management team. These are funds expended by the non-federal participants for man-hours, materials, new equipment (prorated if appropriate) and subcontractor efforts on the project’s SOW, and restocking of parts and material consumed. High quality cost share can include government-reimbursed IR&D funds, but only if those funds are offered by the proposers to be spent on the SOW and subject to the direction of the project management team.

Low Quality Cost Share - These are non-financial resources that will be expended on the proposed project’s SOW and will be subject to the direction of the project management team. This is typically wear-and-tear on in-place capital assets like machinery or the prorated value of space used for the project.

Unacceptable - This is a resource that either (1) will not be expended on the proposed project’s SOW; or (2) will not be subject to the direction of the management team as discussed above. Unacceptable cost share should be subtracted from the proposers claimed total cost for the project, and the required industry cost share recalculated. A non-exhaustive list of examples include:

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- sunk costs, i.e., costs incurred before the start of the proposed project;
- foregone fees or profits;
- foregone G&A or cost of money applied to a base of IR&D;

- bid and proposal costs;
- value claimed for intellectual property or prior research;
- parallel research or investment, i.e., research or other investments that might be related to the proposed project, but which will not be part of the SOW or subject to the direction of the project management team. Typically these activities will be undertaken regardless of whether the proposed project proceeds.
- Off-Budget Resources - These are resources that will not be risked by the proposer on the SOW, and should not be considered when evaluating cost share.

Foreign Access to Technology Developed Under this Program

It is an objective of the DU S&T Program that, to the maximum extent practical, both the military and economic benefits that derive from the successful development of a technology under the Program accrue to the United States. In keeping with this philosophy, agreements entered into under the DU S&T Program should require the non-federal participant(s) to disclose to the government any proposed transfer of technology to foreign entities and to obtain permission prior to implementing such transfer. If the government determines that the transfer may have adverse consequences to the national security interests of the United States, the government should endeavor to find alternatives to the proposed transfer which obviate or mitigate potential adverse consequences of the transfer while providing substantially equivalent benefit to the non-federal participant(s). The controls contemplated in this provision are in addition to, and do not change or supersede, the provisions of the International Traffic in Arms Regulation, the DoD Industrial Security Regulation and the Department of Commerce Export Regulation.

In keeping with this philosophy, it is imperative that Nation's security interests be ensured before entering into agreements with a foreign company or business entity. The results of a successful development of a technology controlled by a foreign company or business entity, having military relevance, must be evaluated on a case by case basis to assure sufficient precautions have been taken to maintain the security of the United States.

Guidelines for Service Cost Share

Service cost share must be funds placed on the funding instrument to industry, expended on the proposed project's SOW, and subject to the direction of the project management team. These funds can be drawn from outyears (e.g. FY 2001 or 2002) but they must be identified by PE on the project summary sheet and must not be contingent on the success of the initial phase(s) of the project. As in the case of industry's cost share, sunk costs or parallel research will not be counted toward the Service's share of the project cost.

The FY 1998 Defense Authorization Act established goals for the initiation of dual use projects for each of the military departments. The goals are based on obligations of 6.2 – Applied Research funds and started at 5% for FY 1998 and climb to 15% for FY 2001. The FY 1998 Authorization Act also requires that a report be sent to Congress describing the progress each military department is making in obtaining these goals. It is imperative to understand that

only Service 6.2 – Applied Research funds can be used to meet these goals. While other funding can be used for Service matching funds it is recommended that to the maximum extent possible 6.2 – Applied Research funds be used. In addition, because this is an S&T program the use of other funds besides S&T (6.1 to 6.3) funds should be kept to a minimum.

Out of Scope Proposals - The DU S&T Program will not fund the following types of proposals:

Studies – The primary output of DU S&T funded research should be a new product or process technology, not paper. Types of studies not funded under DU S&T include market studies, technology roadmaps, strategic plans, state of the art surveys, etc.

Capitalization or Facilities – DU S&T projects should focus on the development of a militarily useful, commercially viable technology, not the capitalization of a factory or the building of a testing facility. DU S&T cannot pay for equipment not needed for project research.

Proxy or Fee-for-Service Organizations – DU S&T cannot fund the mere establishment or sustainment of organizations with an agenda of problems but no specific solutions. It also cannot fund the establishment of fee-for-service testing or technology transfer organizations.

DU S&T Program Office

The DU S&T Program Office is staffed with representatives from each Service who are available to assist you with your program development. The Service representatives have been instrumental in the execution of the DU S&T Program and have been involved in the development of the topic areas; evaluation of proposals; and execution of the Cooperative Agreements and “Other Transactions.” Assistance can be requested from the DU S&T Program Office by calling (703) 681-9312 or from the Service representatives.

Army	- Dr. Tom Killion (killiont@sarda.army.mil)
Navy	- Ms. Cathy Nodgaard (nodgaac@onr.navy.mil)
Air Force	- Dr. Joan Fuller (fullerjo@af.pentagon.mil)

Information on the DU S&T Program and this solicitation is also available on the Web at www.dtic.mil/dust.

DU S&T Program Funding

It is anticipated each Service will have approximately \$20 million for the execution of DU S&T Projects in FY 2000. DU S&T funds may not exceed more than 25% of the cost of the project at the time of award.

Funding obtained from defense agencies or other government agencies in support of a project should also be matched by industry, but these other federal funds can not be counted toward meeting the Service goals. DUS&T funds can not exceed the Service matching funds for the project.

Data Requirements

It is requested that each Service submit the following summary sheets.

1. The DUS&T Proposer Summary Sheet, which should accompany each proposal received in response to the FY 2000 BAA. The summary sheet is a requirement of the BAA. By submitting these forms we will be able to derive the following metrics: the number of proposals received; approximate funding broken down by DUS&T, Service matching, and industry cost share; and the number of firms proposing broken down by the number of commercial firms/divisions versus defense firms. A copy of the form is at Tab A and should be submitted by each proposer with each proposal.
2. The Dual Use S&T Summary Sheet on each selected proposal prior to the obligation of funds on that project. A copy of the form is at Tab B or can be obtained from the Web site.

Summary sheets should be either e-mailed to dus&t@acq.osd.mil or sent to:

Director, Defense Research & Engineering
ATTN: Dual Use Technology Office
5203 Leesburg Pike, Suite 1401
Falls Church, VA 22041

In addition to these summary sheets, the FY 1998 Defense Authorization Act requires the Office of the Secretary of Defense to maintain oversight over the DUS&T program and to report to Congress on the Department's progress in initiating dual use projects with industry. To meet these requirements it will be necessary for the Services to provide progress reports on each project initiated under this Program. A request for these progress reports will be made each fall.

TAB A

<p>Dual Use S&T Proposer Summary Sheet</p>	<p>Service Customer <input type="checkbox"/> Army <input type="checkbox"/> Navy <input type="checkbox"/> Air Force</p>
<p>Proposal Title:</p>	<p>Topic Area Supported:</p>
<p>Category of Firm (indicate next to name of ALL anticipated participants ALL codes that apply):</p> <p>(1) Commercial Firm/Division* (3) Defense Firm/Division (5) Small Business (2) Not-for-profit (4) Foreign Owned (6) Other _____</p> <p>*What percentage of your sales over the last 5 years have been Commercial rather than Defense? _____</p>	
<p>Name of Lead Proposer: (<i>Category Codes Here</i>) Address: City: State: Zip: Technical POC: Phone: Fax: E-Mail: Business POC; Phone: Fax: E-Mail:</p>	
<p>Names of All Anticipated Participating Companies: (<i>For Each, Include All Category Codes That Apply</i>)</p>	

Proposed Project Cost Summary:

<p>Total Proposed Project Cost:</p>	
<p>Government Share:</p>	
<p>Participant Share:</p>	

Include one copy on top of your proposal when submitted.

