DEFENSE BUSINESS BOARD

For the Secretary of Defense

Future Models for Federally Funded Research and Development Center Contracts

DBB FY17-02

Recommendations on managing federally funded research and development center contracts

PREFACE

This study, *Future Models for Federally Funded Research and Development Center Contracts*, is a product of the Defense Business Board (DBB). Recommendations by the DBB contained within are offered as advice to the Department of Defense (DoD) and do not represent DoD policy.

The DBB was established by the Secretary of Defense in 2002, as authorized by the Federal Advisory Committee Act of 1972 (5 U.S.C., Appendix, as amended), and governed by the Government in the Sunshine Act of 1976 (5 U.S.C. § 552b, as amended), 41 CFR 102-3.140, and other appropriate federal and DoD regulations. The DBB provides the Secretary and Deputy Secretary of Defense with independent advice and recommendations on how "best business practices" from the private sector's corporate management perspective might be applied to overall management of DoD. The DBB's members, appointed by the Secretary of Defense, are senior corporate leaders and managers with demonstrated executive-level management and governance expertise. They possess a proven record of sound judgment in leading or governing large, complex organizations and are experienced in creating reliable and actionable solutions to complex management issues guided by proven best business practices. All DBB members volunteer their time to this mission.

Future Models for Federally Funded Research and Development Center Contracts

TASK

In September 2015, the Deputy Secretary of Defense directed the DBB to form a task group to explore actions the DoD should take to recommend an appropriate future model and focus for DoD sponsored Federally Funded Research and Development Center (FFRDC) contracts. The Terms of Reference guiding this effort can be found at **Tab A**.

The task group reviewed existing governance models and compared management activities to those of the private sector or other governmental organizations. The group members sought to ascertain areas currently being addressed by FFRDCs, determine whether the work should continue, and identify barriers to be overcome. A review of University Affiliated Research Centers (UARCs) was accomplished in the same manner since some UARCs perform services similar to FFRDCs.

Mr. Phil Odeen served as the task group Chairman. Other task group members include the Honorable Jerry Hultin and Mr. Taylor Glover. Lieutenant Colonel Tony Cianciolo, Air National Guard, and Major George Delong, U.S. Air Force, served as the task group's DBB staff representatives.

PROCESS

The task group interviewed numerous senior executives and experts within the DoD, other government agencies, and the private sector. A review of applicable laws, regulations, and policies regarding FFRDCs was also accomplished. Additionally, the task group compiled and compared the results of previous reports and studies from the Government Accountability Office, Professional Services Council, and Defense Science Board, as well as DoD audits, and mandated Federal Acquisition Regulation comprehensive reviews.

The task group findings and recommendations were presented to the full DBB membership for deliberation and voting at the October 20, 2016 DBB quarterly public meeting. The DBB voted to approve all

recommendations offered. See **Tab B** for the briefing. **TAB C** includes public comments received. **TAB D** includes DoD component feedback. Mrs. Ramona Lush, Deputy Director, Office of the Secretary of Defense (OSD) Studies & FFRDC Management provided comments to the study. I wish to thank Mrs. Lush and her department for the quality staff work that went into developing them. Any factual errors identified were incorporated into the final study.

BACKGROUND

1. FFRDC - Description

FFRDCs serve all the military departments, OSD, Defense agencies and field activities, and the National Security Agency. When created in the 1940s and 1950s, FFRDCs possessed technology that was not typically available in commercial companies (e.g. radar and space operations). Today, the commercial sector has robust capabilities in most of these areas. In contrast with their for-profit counterparts, however, FFRDCs are generally considered free of potential conflicts of interest which can be significant in evaluating programs and technology.

There are ten FFRDCs (see Figure 1) across three categories; Research and Development Laboratories (3), Systems Engineering and Integration Centers (SE&I) (2), and Study and Analysis (S&A) Centers (5). Total annual DoD funding for FFRDCs is about $2 billion and they provide 5,750 Staff Years Technical Effort (STE).[1]

The two SE&I Centers receive over 50% of the funds and staff years.[2] The five S&A Centers receive less than 20% of the funds and staff years.[3] A small portion of the FFRDC funds are line items in the annual appropriations act and are allocated to the FFRDC's primary sponsor. The bulk of the funding for FFRDC work is provided by program offices (from their own resources) to the work sponsor for each project initiated.

1. § 8024 (d) of P.L. 114-113, Consolidated Appropriations Act, 2016 states DoD's STE allocation be "not more than 5,750 staff years of technical effort (staff years) may be funded for defense FFRDCs…" and "that not more than 1,125 staff years may be funded for the defense studies and analysis FFRDCs…"
2. Based upon FY15 obligations provided by OSD Studies & FFRDC Management office.
3. Ibid.

FFRDCs	Sponsor	Primary Location	Primary User	Obligation ($M)	Staff Years Tech Effort	Cost Per STE ($000)
Research & Development Laboratories						
Lincoln Laboratory	USD(AT&L)	Lexington	DoD	447	1,154	387
Software Engineering Institute	USD(AT&L)	Pittsburgh	DoD	59	178	331
Institute for Defense Analyses Communications & Computing Center	NSA	Alexandria	NSA	2	7	282
Systems Engineering & Integration Ctrs						
Aerospace	Air Force	El Segundo	DoD	463	1,354	342
MITRE National Security Engineering Center	USD(AT&L)	McLean & Bedford	DoD	587	1,953	301
Study & Analysis Centers						
Center for Naval Analysis	Navy	Arlington	Navy	88	247	356
Institute for Defense Analysis	USD(AT&L)	Alexandria	DoD	130	463	281
RAND Arroyo Center	Army	Santa Monica	Army	38	112	339
RAND National Defense Research Institute	USD(AT&L)	Santa Monica	DoD	53	150	353
RAND Project Air Force	Air Force	Santa Monica	Air Force	43	121	355

Figure 1 (Source: OSD Studies & FFRDC Management)

2. **UARC - Description**

UARCs are not centrally managed and primarily serve the military departments, Program Executive Officers (PEOs), and Systems Commands. Their purpose is to give DoD access to the advanced technology of leading universities. There appears to be no centralized accounting or management of the funds dedicated to UARCs.

The 13 UARCs (see Figure 2) range in size from over $1B annually to less than $2M.[4] The smaller UARCs provide a specific technology to a Service or agency. The larger ones provide a spectrum of technical support. Funding for the UARCs come from the Services or agency customer. There is no line item funding in the DoD budget.

4. Ibid.

UARCs	Sponsor	FY15 Obligation ($M)	Scientist/ Engineers
John Hopkins University – Applied Physics Lab	Navy	1254.6	4404
Penn State University – Applied Research Lab	Navy	175.1	529
University of Texas – Applied Research Lab	Navy	76.9	363
Utah State Space Dynamics Lab	MDA	61.6	205
University of Southern California – Institute for Creative Technologies	Army	26.2	48
Georgia Tech Research Institute – Applied Systems Laboratory	Army	25	126
University of Maryland – Center for Advanced Study of Languages	NSA	18.6	50
University of California Santa Barbara – Institute for Collaborative Biotechnologies	Army	11.2	134
University of Washington – Applied Research Lab	Navy	8.6	182
Massachusetts Institute of Technology – Institute For Soldier Nanotechnologies	Army	8.5	148
University of Nebraska – National Strategic Research Institute	Strategic Command	8.3	54
Stevens Institute of Technology – Systems Engineering Research Center	AT&L	5.9	72
University of Hawaii – Applied Research Lab	Navy	1.9	41

Figure 2 (Source: OSD Studies & FFRDC Management)

FINDINGS

Overall, the task group found there is broad agreement that the FFRDCs/UARCs provide high quality R&D and technical support to DoD. The task group made observations in the following areas:

1. **Work and Personnel Quality.**

   A. FFRDC customers tend to be very positive about the quality of the work and skills of FFRDC staff. FFRDC researchers and analysts are regarded as free from conflicts of interest when supporting weapon system decisions.

   B. FFRDCs attract and retain high quality staff and have deep expertise and long-term experience in key technical areas. Some routinely upgrade their talent base, moving out low performers to ensure the most technically proficient staff. Others indicate this is also a priority.

2. **Areas of Expertise.**

   A. Today, the for-profit sector can provide most of the technical services that was, in the past, only available from a FFRDC. However, in many cases there remain sound reasons to give the work to FFRDCs, such as avoiding potential conflicts of interest, access to confidential competitive information or deep historical knowledge and experience not available in for-profit companies.

   B. FFRDCs areas of expertise and the focus of their services have evolved over time and, in most cases, they now provide a much broader range of offerings. The S&A centers, in particular, provide diverse services to customers across client organizations.

      i. Much of the FFRDC work is short term using a small number of staff, although there are some areas where their expertise is broad and enduring.

      ii. The most consistent reasons given for using FFRDCs are deep experience or expertise, close relations with customer, and responsiveness.

      iii. FFRDCs are strong candidates for those requirements where avoidance of conflicts of interest is requisite. Further, the primary sponsor is charged with assuring that only work appropriate for an FFRDC is put on an FFRDC contract.

3. **Avoiding Delays in Acquisition and Contracting Processes.**

   A. FFRDCs provide quick response to unanticipated DoD needs via sole source contracts, thus mitigating the delays inherent to the competitive contracting process.

      i. This is especially useful for customers of the analytic FFRDCs.

      ii. This results in cases where a for-profit company could provide the service if the government customer was willing and had the time to undertake a competition.

iii. Program offices and contracting officers are not incentivized to look for ways to provide a timely competition (e.g. a task order contract) in these cases.

B. Significant changes in technology services acquisition over the past 5 to 10 years have made using a FFRDC more attractive. DoD's embrace of 'low price, technically acceptable' choices in lieu of 'best value' during the budget crisis resulted in industry losing current and future capability, given the need to reduce costs and compete on price. FFRDCs, without this market competitive pressure, have been better able to preserve higher cost talent and capabilities.

i. A sharp rise in bid protests has also made price a more important factor in decisions since technical differences are difficult to assess and low cost frequently prevails.

ii. At the same time, the government has steadily lost its more experienced, technically-capable staff, making judgements on relative technical merit difficult. All this makes a FFRDC an attractive, low risk choice.

4. **Roles, Responsibilities, and Governance.**

A. Previous recommendations to significantly change the nature of support to DoD have not been generally adopted. This is especially true in reaching out to the commercial sector for advanced technologies or to assist DoD in vetting advanced technologies.

B. The five-year comprehensive review conducted by the sponsor of an FFRDC is a long, detailed process that assesses the current services and support FFRDCs provide to DoD. It is not clear whether this review effectively evaluates the extent to which FFRDCs are offering effective solutions to counter the ever-evolving security threats to the U.S. A more independent and critical assessment could provide fresh insights on their role and ways to enhance FFRDC contributions.

C. The congressional ceiling on defense STEs constrains the growth of DoD FFRDCs and limits competition with the private sector. DoD can and must prioritize the work it directs to FFRDCs and allocate STEs

to meet its highest priority requirements. An increase in work in one area requires a reduction in other areas of effort.

i. It is not clear how much rigor is applied to the allocation process. The very limited changes in STE allocations suggest the rigor is minimal.

ii. FFRDCs are able to work for other Federal agencies or perform work outside the government. Some research institutions that operate FFRDCs support other Federal departments and agencies.

D. The UARCs play a key role in supporting the Services and other agencies on highly technical issues. They have outstanding access to advanced technology at leading universities and have the potential to play a greater role in DoD's outreach to companies and organizations not traditionally affiliated with DoD.

E. For-profit overhead rates and compensation costs do not appear to be significantly different from the high-end rates of the more technical-oriented FFRDCs.

i. Studies in 2012 showed roughly similar man-hour costs; a recent update in 2014 had similar results.[5]

ii. Reviews of both for-profit and FFRDC organizations suggest FFRDC cost multiples in today's highly competitive environment are higher than those of for-profit companies. The differences found was primarily in 'general and administrative' costs and 'overhead expenses.'[6] These are areas where cost pressures on for-profit companies have been severe.

iii. For-profit companies frequently shift bids to lower cost bands so the percentage of work using higher rates declines significantly. Thus, the resulting cost to the government could potentially be much lower in some cases.

5. Cost analysis data from 2012 DoD internal review. Data sources are considered proprietary in nature. Therefore, names of private entities were omitted. Updates to the 2012 cost data were provided by OSD Studies and Analysis Office.

6. General and Administrative and overhead costs are two types of classifications of indirect costs.

RECOMMENDATIONS

The DBB offers the following recommendations to ensure the best management of FFRDCs.

1. **Conduct a fundamental look at the FFRDC charter and mission** through the FFRDC comprehensive reviews.

   A. FFRDCs should be given a greater role in tracking and evaluating new science and technology in order to enhance military capabilities, avoid strategic or technological surprise, and counter threats from potential adversaries. Government guidance and funding for this effort would be required.

   B. Use FFRDCs to vet and prototype scientific breakthroughs and the advanced technologies being offered by defense industry and private sector. This will help ensure the capability meets DoD's requirements and is technologically mature. This is an area where the DoD has clear needs and inadequate in-house talent.

   C. Clarify the roles of the FFRDCs and defense industry to minimize friction and enhance cooperation. This would be especially important should the FFRDCs be given a greater role assessing those relevant technologies offered by industry.

2. **Conduct periodic (e.g. 7-10 years) in-depth reviews** of FFRDCs using independent experts. Review the FFRDCs: missions and priorities; assess the quality of their work and workforce; their capacity to provide independent, high-value, transformative analysis; and the relevance of their strategic or technical expertise.[7]

3. **Strengthen the STE allocation process** to reinforce a focus shift toward new technology. Reduce the level of FFRDC effort on the less technically challenging work which can be performed by commercial companies.

7. One of the larger FFRDCs used the expert analysis of an external "Blue Ribbon" team to assist in their five-year comprehensive review. USD(AT&L) approved the use of the Blue Ribbon team.

4. **Provide clear guidance to program managers** and contracting officers to compete work that does not require an FFRDC to perform.

5. **Direct DCAA to do an in-depth review of FFRDC overhead rates** to ensure they are reasonably comparable to those of commercial firms supporting DoD which provide similar high-end technical support.

6. **Simplify the contracting process** (e.g. use a 5-year indefinite delivery/indefinite quantity-type contract) to reduce the diversion of technical talent and dollars responding to complex, annual contract requests.

7. **Direct the Services to leverage access to advanced technology** at the UARCs to the maximum extent possible. These participating universities are excellent sources of advanced technology. This effort could be facilitated by the Services through their own labs and Systems Commands.

CONCLUSION

FFRDCs provide high quality research and both technical and non-technical advice to their DoD customers. The expertise and experience of FFRDC staffs remains excellent and still able to attract and retain quality personnel. FFRDCs remain less burdened by potential conflicts of interest and can often respond more quickly to client needs than their for-profit counterparts. This is true even though the unique expertise they possessed when established 50 to 60 years ago is now much more widely available in the for-profit sector. FFRDCs are able to provide experience and in-depth expertise in key areas of technology and capitalize on the long-term relationships they have with their clients.

Statutory requirements cap the work performed by the FFRDCs for DoD at 5,750 STE.[8] This limits their competition with the private sector. FFRDCs could easily shift their focus to supporting DoD's efforts to access the more advanced technology available outside the traditional defense industrial base given the availability of comparable technology in many areas. FFRDCs could play an important role in identifying relevant technologies and vetting them for suitability, applicability, and maturity. The

8. § 8024 (d) of P.L. 114-113, Consolidated Appropriations Act, 2016.

task group found that these are areas where DoD's in-house capabilities are inadequate.

Finally, participating UARCs could also play a more effective role working with DoD laboratories by facilitating greater access to relevant and evolving technologies. These leading universities have the potential to provide DoD access to the most advanced technology.

On behalf of the Chairman and the Defense Business Board this study is respectfully submitted.

Phil Odeen
Task Group Chairman

Defense Business Board

TAB A

TERMS OF REFERENCE

DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

SEP 2 3 2015

MEMORANDUM FOR CHAIRMAN, DEFENSE BUSINESS BOARD

SUBJECT: Terms of Reference – Future Models for Federally Funded Research and Development Center Contract

The Department of Defense (DoD) has contracts with the Federally Funded Research and Development Centers (FFRDCs) that were established to address complex national challenges by providing unique long-term core competencies in the areas of analysis, engineering, acquisition support, and research & development, that otherwise did not exist in the commercial-private sector. These organizations, through and under the terms of specific government contracts, provide independent advice, research and development and other similar work product developed by their highly specialized workforce. The 10 DoD FFRDC contracts are managed by the Under Secretary of Defense (Acquisition, Technology, and Logistics) under the Federally Funded Research and Development Center (FFRDC) Management Plan and Associated "How-to Guides" dated May 2, 2011.

The factors that drove the creation of FFRDC contracts have changed over time. Today, the private sector has well established core competencies in the areas of analysis, engineering, acquisition support, and research and development. Additionally, the DoD faces an enhanced pace of threat development, the solution to which may require expertise beyond the traditional Defense Industrial Base and the FFRDCs. Although funding trends for Independent Research and Development (IR&D) remain consistent in recent years, the Defense Industrial Base has dramatically reduced self-funded R&D investments over the past two decades. These challenges require a fresh look into what role the DoD FFRDC contracts should play as an innovation resource.

To help the Department maximize its resource utilization, I am establishing a Task Group under the Defense Business Board (DBB) to recommend an appropriate future model and focus for DoD sponsored FFRDC contracts. Specifically, the DBB should:

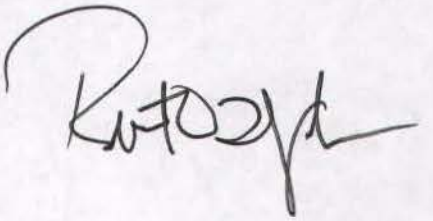
- Review the existing governance models for DoD sponsored FFRDC contracts and other non-DoD government agency sponsored FFRDCs. Compare the management of current research and development activities of the DoD sponsored FFRDC contract to those of other private sector companies or other governmental organizations (both foreign and domestic).

- Identify areas that are currently being accomplished under the DoD FFRDC contracts, whether this should continue, and what barriers need to be overcome.

- Review such other matters as the DBB determines relevant.

The DBB will provide its findings and recommendations to the Secretary of Defense or the Deputy Secretary of Defense no later than April 21, 2016.

As a subcommittee of the DBB, and pursuant to the Federal Advisory Committee Act of 1972, as amended, the Government in the Sunshine Act of 1976, as amended and other applicable federal statutes and regulations, this Task Group shall not work independently of the DBB's charter and shall report its recommendations to the full DBB for public deliberation and approval. The Task Group does not have the authority to make decisions on behalf of the DBB, nor can it report directly to any federal representative. The members of the Task Group and the DBB are subject to 18 U.S.C. 208, which governs conflicts of interest.



Defense Business Board

TAB B

PUBLIC MEETING BRIEFING

PROVIDED TO THE DEFENSE BUSINESS BOARD

DEFENSE BUSINESS BOARD

Presentation on:

Future Models for Federally Funded Research and Development Center Contracts

Approved by the DBB 20 October 2016

Task Group

MEMBERS

- Mr. Phil Odeen (Chair)
- Mr. Taylor Glover
- Mr. Jerry Hultin

STAFF

- Lt Col Tony Cianciolo, ANG
- Maj George Delong, USAF

The Task

Establish DBB Task Group to recommend an appropriate future model and focus for DoD sponsored Federally Funded Research and Development Center (FFRDC) contracts. Specifically, the DBB should;

- Review existing governance models, compare management activities to those of the private sector or other governmental organizations.
- Identify areas currently being addressed by FFRDCs and whether the work should continue, and what barriers need to be overcome.
- Review University Affiliated Research Centers (UARCs) in the same manner, as some perform services similar to FFRDCs.

Methodology

- Review previous DoD and outside reports and studies
- Interviews
  - OSD oversight officials (AT&L, Comptroller)
  - Service Sponsors of DoD FFRDCs & UARCs
  - DoD FFRDC Chief Executive Officers
  - UARC Directors
  - Former Government Officials
  - Government Accountability Office
  - Professional Services Council
  - Defense & Technical Services Industry

FFRDC - Description

- The FFRDCs serve all the military departments, OSD, Defense Agencies, and NSA. When created in the 1940s and 1950s they possessed technology that was not available in commercial companies (e.g. radar and space operations). Today, the commercial sector has robust capabilities in most of these areas. FFRDCs are also considered free of potential conflicts which can be important in evaluating programs and technology.

- There are ten FFRDCs across three categories.
  - Research and Development Laboratories – 3
  - Systems Engineering and Integration Centers – 2
  - Study and Analysis Centers – 5

- Total funding is about $2 Billion and they provide over 5700 staff years of technical effort (STE).
  - The two SE&I Centers receive over 50% of the funds and staff years.
  - The five S&A Centers receive less than 20% of the funds and staff years.

- A small portion of the FFRDC funds are line items in the budget (less than 10%). The rest of the funding is from program offices who funnel it through the sponsor.

UARCs – Description

- UARCs are not centrally managed and primarily serve the military departments, Program Executive Officers (PEOs), and Systems Commands. Their purpose is to give DoD access to the advanced technology of leading universities. There is no formal accounting or management of either the funds spent or STEs provided.
- UARCs are not centrally managed and primarily serve the Services, PEOs, and Systems Commands.
- The 13 UARCs range in size from over $1B annually to less than $2M. The small ones provide a specific technology to a Service or agency. The large ones provide a spectrum of technical support.
- Funds for the UARCs come from the Services or agency customer. There is no line item funding in the budget.

FFRDC - Governance

- Regulations and Guidance
  - Federal Acquisition Regulation (FAR) 35.017
  - DoD FFRDC Management Plan 2011
  - USD (AT&L) concurrence required prior to renewal of contract
- The sponsor conducts Comprehensive Review every 5 years which is the key management process. The review is a detailed assessment of the FFRDC prepared with inputs from users of the FFRDC's services.
  - Evaluate technical needs and mission requirements being performed and whether they continue to be valid.
  - Consider alternative sources for the services provided.
  - Provide detailed assessment of the efficiency and effectiveness of the FFRDC.
  - Conduct assessment of their management controls to ensure cost-effective operation.
  - Determine if criteria for establishing a FFRDC is satisfied and that the Sponsoring Agreement is in compliance with the FAR and DoD Management Plan.
- The total work performed by FFRDCs for DoD is capped as a result of Congressional action. The 5700 STEs that can be provided to the FFRDCs are allocated to them by OSD/Services. The allocation is reviewed annually, but changes are minor.

Findings

- There is a broad agreement that the FFRDCs/UARCs provide high quality R&D and technical support to DoD that meet DoD needs. Their customers are very positive about the quality of the work and skills of their people. When supporting weapon system decisions, they are seen as able to do so without conflicts of interest.

- FFRDCs attract and retain high quality staff and have deep expertise and long-term experience in key technical areas.
  - Some routinely upgrade their talent base, moving out low performers to ensure the most technically proficient staff. Others indicate this is also a priority.

- Unlike when many FFRDCs were created, today the for-profit sector can now provide most of the technical services provided by FFRDCs. In many cases however, there are sound reasons to give the work to FFRDCs, such as potential conflicts of interest, access to confidential competitive information or deep historical knowledge and experience not available in for-profit companies.

Findings (continued)

- Areas of expertise and the focus of their services have evolved over time and, in most cases, they now provide a much broader range of offerings. The Study and Analysis Centers in particular, provide diverse services to customers across client organizations.
  - While they have some areas where their expertise is broad and enduring, much of the work is short term using a small number of staff.
  - The reasons given for using them are 1) deep experience or expertise, 2) close relations with customer, and 3) responsiveness.
- FFRDCs provide quick response to unanticipated DoD needs via sole source contracts without the delays of the competitive process.
  - This is especially useful for customers of the analytic FFRDCs.
  - This results in cases where a for-profit company could provide the service if the government customer was willing and had the time to undertake a competition.
  - The Program Offices and Contracting Officers are not incentivized to look for ways to provide a timely competition (e.g. a task order contract) in these cases.

Findings (continued)

- Significant changes in the acquisition of technology services over the past 5 to 10 years have made the use of an FFRDC more attractive. DoD's embrace of "low price, technically acceptable" choices in lieu of "best value" during the budget crisis forced industry to lose current and future capability given the need to reduce costs and compete on price. FFRDCs, without this market competitive pressure, have been more able to preserve higher cost talent and capabilities.
  - The sharp rise in bid protests also makes price a more important factor in decisions as technical differences are difficult to assess and low cost frequently prevails.
  - At the same time, the government has steadily lost its more experienced, technically capable staff making judgements on relative technical merit difficult. All this makes an FFRDC a more attractive, less risky choice.
- Proposals to provide significantly different support roles to DoD, especially in reaching out to the commercial sector for advanced technologies or to assist DoD in vetting advanced technologies, have not been generally adopted.

Findings (continued)

- The five-year comprehensive review is a long, detailed process that assesses the current services and support to DoD missions. But it is not clear if this review explores the opportunity for the FFRDCs to evaluate and offer solutions that meet the evolving (and potentially revolutionary) defense threats posed by other nations. A more independent and critical assessment could provide fresh insights on their role and ways to enhance FFRDC contributions.

- The STE process constrains the growth of DoD FFRDCs, limiting competition with the private sector. New work requires reductions in other areas of effort.
  - It is not clear how rigorous is the allocation process. Is shifting STE to meet higher technical challenges considered in lieu work that could be performed by for-profit companies? The very limited changes in STE allocations suggest not.
  - FFRDCs are free to work for other Federal agencies. Some FFRDCs support other Federal departments and agencies and a few have a broad base of business outside of DoD and the government.

Findings (continued)

- While cost comparisons are very complicated, overhead rates and compensation costs do not appear to be significantly different from the high-end rates of the more technical providers.
  - Several studies in 2012 showed roughly similar man-hour costs; a more recent update (in 2014) had similar results.
  - For-profit observers suggest FFRDC cost multiples in today's highly competitive environment are higher with the difference in General and Administrative and overhead expenses, areas where cost pressures on for-profit companies have been severe. A review of FFRDC rates confirms this.
  - For-profit companies however, are frequently shifting bids to lower cost bands and the percentage of work using higher rates have declined significantly. Thus the resulting cost to the government can be much lower in some cases.

- The UARCs play a key role in supporting the Services and other agencies on technical issues. They have outstanding access to advanced technology at leading universities and have the potential to play a greater role in DoD's outreach to the non-DoD world.

Recommendations

To Ensure The FFRDCs Provide Continued Value:

- The FFRDC Comprehensive Reviews should take a fundamental look at the FFRDC Charter and Mission. The areas of focus to be addressed should include;
  - Give the FFRDCs a greater role in tracking and evaluating new science and technology that can enhance our military capabilities, avoid strategic or technological surprise, or counter a threat from our potential adversaries.
  - Give the responsibility for vetting and prototyping scientific breakthroughs and advanced technology being offered by defense industry and the private sector to ensure its relevance to DoD's capability needs and maturity. This is an area where the DoD has clear needs and inadequate in-house talent.
  - Clarify the roles of the FFRDCs and Defense industry to minimize friction and enhance cooperation. This would be especially important, if the FFRDCs are given a greater role assessing technology offered by industry.

Recommendations (continued)

- Conduct periodic (e.g. 7-10 year) in-depth reviews of FFRDCs by independent experts, to review their missions and priorities, assess the quality of their work and workforce; their capacity to provide independent, high-value, transformative analysis; and the relevance of their strategic or technical expertise.

- To reinforce the shift of focus to new technology, the STE allocation process should be strengthened to reduce the level of effort on less technically challenging work, which often could be performed by commercial companies, shifting their resources to the new focus discussed above

- Give clear guidance to program managers and contracting officers to compete work that does not require an FFRDC to perform.

Recommendations (continued)

- Direct DCAA to do a in-depth review of FFRDC overhead rates, to ensure they are not out of line with the commercial firms supporting DoD with comparable high-end technical support.
- Simplify the contracting process (e.g. use a 5-year IDIQ-type contract) to eliminate unneeded diversion of technical talent and dollars responding to complex, annual contract requests.
- Direct the Services to exploit the access to advanced technology at the UARC affiliated leading universities. These universities are excellent sources of advanced technology. This effort could be driven by the Service labs and/or systems commands.

Deliberations and Vote

"Future Models for Federally Funded Research and Development Center Contracts," *by Task Group Chair: Phil O'Deen*

- ❑ *Accept Task Group recommendations?*

1. **The FFRDC Comprehensive Reviews should take a fundamental look at the FFRDC Charter and Mission.**
2. **Conduct periodic (e.g. 7-10 year) in-depth reviews of FFRDCs by independent experts.**
3. **STE allocation process should be strengthened to reduce the level of effort on less technically challenging work.**
4. **Direct DCAA to do a in-depth review of FFRDC overhead rates.**
5. **Simplify the contracting process (e.g. use a 5-year IDIQ-type contract) to eliminate unneeded diversion of technical talent and dollars responding to complex, annual contract requests.**
6. **Direct the Services to exploit the access to advanced technology at the UARC affiliated leading universities.**

Defense Business Board

TAB C

PUBLIC COMMENTS

As a Federal advisory committee, the DBB is statutorily bound to make publically available comments received in response to its studies. The DBB additionally offers those DoD entities wherein a study focuses, the opportunity to respond to the study's recommendations. During the course of a study, DBB task group members seek DoD feedback to the findings in order to ensure the data collected is as accurate as possible.

PUBLIC COMMENTS

As of the date of this study being published no public comments were received by the Defense Business Board for inclusion.

Defense Business Board

TAB D

DoD COMPONENT RESPONSES

SUBMITTED TO THE DEFENSE BUSINESS BOARD

DEPARTMENT OF DEFENSE COMPONENT RESPONSES

One Department of Defense component response was received for inclusion as of the completion of this study.

On January 3, 2017, Ramona L. Lush, then Deputy Director, OSD Studies & FFRDC Management, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, provided a Memorandum to the DBB Chairman in response to the public briefing. The memorandum is provided in full.

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ACQUISITION,
TECHNOLOGY,
AND LOGISTICS

MEMORANDUM FOR DEFENSE BUSINESS BOARD CHAIRMAN

SUBJECT: Comments on DBB Presentation: Future Models for Federally Funded Research and Development Center Contracts

Thank you for the opportunity to comment on this presentation. We have reviewed the briefing package and offer the following comments.

Page 4 (Findings)

- Task Force Statement: "Total funding is about $2 billion and they provide over 5700 staff years of technical effort (STE)"

Comment: The actual total STE ceiling should be used—recommend changing "over 5700" to "5750."

- Task Force Statement: "A small portion of the FFRDC funds are line items in the budget (less than 10%). The rest of the funding is from program offices who funnel it through the sponsor."

  Comment: The small portion of the FFRDC funds that are line items in the appropriations act are allocated to the FFRDC's Primary Sponsor—not direct to the FFRDC. The bulk of the funding for FFRDC work is provided by program offices (from their own resources) to the work sponsor for each project initiated.

Page 5 (Findings)

- Task Force Statement: "There is no formal accounting or management of either the funds spent or STEs provided."

  Comment: UARCs are not managed by staff years of technical effort (STE), but by funding placed on contract(s) for individual projects.

Page 6 (Findings)

- Task Force Statement: "The sponsor conducts Comprehensive Review every 5 years which is *the key management process*."

Comment: The Comprehensive Review that must be performed every 5 years is a key part of the government management process for the FFRDCs, but not the only one. The primary sponsor also has an equally important and continuous responsibility to oversee the FFRDC's work program through the life of the FFRDC contract—including approving all work prior to adding to the contract

- Task Force Statement: "The 5700 STEs that can be provided to the FFRDCs are allocated to them by OSD/Services. The allocation is reviewed annually, but changes are minor."

  Comment: The actual total congressionally mandated STE ceiling (currently 5750) set should be referenced. Also, it is OSD, not the Services, that allocates the STE to the primary sponsors of each of the FFRDCs. (The STE are not allocated directly to the FFRDCs, but are allocated to the primary sponsors.) The STE allocation is adjusted annually and also during the fiscal year, as necessary, to best respond to the Department's requirements.

Page 7 (Findings)

- Task Force Statement: "In many cases, however, there are sound reasons to give the work to FFRDCs, such as potential conflicts of interest, ..."

  Comment: Recommend that the word "potential" be replaced with "the avoidance of". It is the government's position that there must be no conflict of interest on the advice that it receives concerning its programs. (For example, company profit interests of a for-profit contractor may influence the work it performs for DoD. This is a situation that doesn't exist when using an FFRDC—a non-profit entity that is required to be free of conflict of interest.)

Page 8 (Findings)

- Task Force Statement: "The reasons given for using them are 1) deep experience or expertise, 2) close relations with customer, and 3) responsiveness."

  Comment: Recommend adding a fourth reason "avoidance of conflict of interest." As FFRDCs must be free from conflicts of interest, DoD can be satisfied that the advice received is not biased by other considerations.

- Task Force Statement: "FFRDCs provide quick response to unanticipated DoD needs via sole source contracts without the delays of the competitive process."

  - "This results in cases where a for-profit company could provide the services if the government customer was willing and had the time to undertake a competition."
  - "The Program Offices and Contracting Officers are not incentivized to look for ways to provide a timely competition (e.g. a task order contract) in these cases."

Comment: The quick response capability of the FFRDCs is due to their deep knowledge and experience with DoD programs and issues. Most of the FFRDCs have long-term task order contracts in place. The DoD FFRDC management approach requires the Primary Sponsor to establish a long-term contract to benefit many diverse "work sponsors" who may use that contract for individual projects without having to establish their own contract. While DoD utilizes for-profit contractors for the bulk of its work, FFRDCs are the strongest candidates for those requirements where avoidance of conflicts of interest is requisite. Further, the Primary Sponsor is charged with assuring that only work appropriate for an FFRDC is put on "their" FFRDC contract.

Page 9 (Findings)

- Task Force Statement: "Significant changes in the acquisition of technology services over the past 5 to 10 years have made the use of an FFRDC more attractive. DoD's embrace of "low price, technically acceptable" choices in lieu of "best value" during the budget crisis forced industry to lose current and future capability given the need to reduce costs and compete on price.

    - FFRDCs, without this market competitive pressure, have been more able to preserve higher cost talent and capabilities.

    - The sharp rise in bid protests also makes price a more important factor in decisions as technical differences are difficult to assess and low cost frequently prevails.

    - At the same time, the government has steadily lost its more experienced, technically capable staff making judgements on relative technical merit difficult. All this makes an FFRDC a more attractive, less risky choice."

  Comment: The FFRDCs maintain the capabilities needed to support the Department's requirements. The Department's use of its FFRDCs is strictly limited by Congress. Even if use of an FFRDC is more attractive for the reasons stated, there's still a finite limit of STE, so this is a moot point. FFRDCs were not responsible for the impacts of policies such as LPTA on for-profit contractors or for the erosion of organic government technical competence. To the contrary, the current situation argues for making the preservation and responsible use of FFRDCs more important than ever.

- Task Force Statement: "Proposals to provide significantly different support roles to DoD, especially in reaching out to the commercial sector for advanced technologies or to assist DoD in vetting advanced technologies, have not been generally adopted."

  Comment: DoD spends much more with the commercial sector for advanced technology than it does for FFRDC support. DoD needs to be able to use its FFRDCs with their

freedom from conflicts of interest to provide evaluations and advice that can be trusted as being independent and unbiased.

Page 10 (Findings)

- Task Force Statement: "The five-year comprehensive review is a long, detailed process that assesses the current services and support to DoD missions. But it is not clear if this review explores the opportunity for the FFRDCs to evaluate and offer solutions that meet the evolving (and potentially revolutionary) defense threats posed by other nations. A more independent and critical assessment could provide fresh insights on their role and ways to enhance FFRDC contributions."

  Comment: FFRDCs perform work that is tasked by the Department. That work could include evaluation of threats posed by other nations. It is up to the Department to task the FFRDC for what work needs done. The purpose of the comprehensive review is to determine if the Department has a continuing need for the FFRDC and if there are alternatives on how this support could be provided. The primary sponsor is free to assess if there are better options for this support to be provided.

- Task Force Statement: "The STE process constrains the growth of DoD FFRDCs, limiting competition with the private sector."

  Comment: The congressional ceiling on defense STE for DoD FFRDCs has prevented any growth since FY11. STE can be allocated to meet requirements. Only work that the sponsor believes is best performed by the FFRDC is placed on the FFRDC contract. Since there is higher demand for FFRDC support than the STE ceiling allows, DoD has an incentive to place the highest priority work with its FFRDCs.

- Task Force Statement: "FFRDCs are free to work for other Federal agencies. Some FFRDCs support other Federal departments and agencies and a few have a broad base of business outside of DoD and the government."

  Comment: The Federal Acquisition Regulation (FAR) and DoD policy allow the primary sponsor to determine if the FFRDC can perform work for other Federal government agencies. Any work from other Federal agencies must meet the same requirements before being placed on contract, including using the core competencies of the FFRDCs and approved by the primary sponsor. However, DoD policy does NOT allow the FFRDC to perform work outside the government.

Page 11 (Findings)

- Task Force Statement: "While cost comparisons are very complicated, overhead rates and compensation costs do not appear to be significantly different from the high-end rates of the more technical providers.

- Several studies in 2012 showed roughly similar man-hour costs; a more recent update (in 2014) had similar results.

- For-profit observers suggest FFRDC cost multiples in today's highly competitive environment are higher with the difference in General and Administrative and overhead expenses, areas where cost pressures on for-profit companies have been severe. A review of FFRDC rates confirms this.

- For-profit companies however, are frequently shifting bids to lower cost bands and the percentage of work using higher rates have declined significantly. Thus the resulting cost to the government can be much lower in some cases.

Comment: As stated, studies in 2012 and an update using 2014 data found that FFRDC costs were comparable to for-profit contractors. The Department is dependent on the deep experience and expertise that the FFRDCs provide and having the FFRDC provide lesser experienced and skilled staff would not meet its needs.

Page 12 (Recommendations)

- Task Force Statement: "The FFRDC Comprehensive Reviews should take a fundamental look at the FFRDC Charter and Mission. The areas of focus to be addressed should include;

  - Give the FFRDCs a greater role in tracking and evaluating new science and technology that can enhance our military capabilities, avoid strategic or technological surprise, or counter a threat from our potential adversaries.

  - Give the responsibility for vetting and prototyping scientific breakthroughs and advanced technology being offered by defense industry and the private sector to ensure its relevance to DoD's capability needs and maturity. This is an area where the DoD has clear needs and inadequate in-house talent.

  - Clarify the roles of the FFRDCs and Defense industry to minimize friction and enhance cooperation. This would be especially important, if the FFRDCs are given a greater role assessing technology offered by industry."

Comment: If FFRDCs were to be given a greater role in tracking and evaluating new science and technology, and for vetting and prototyping scientific breakthroughs and advanced technology, there would also need to be a corresponding Government entity that would provide guidance and funding for them to do so. FFRDCs are not independently funded. They cannot generate their own revenue. A government sponsor would be necessary to provide the impetus for FFRDCs to serve in these roles, to facilitate the transition of FFRDCs' efforts into programs of record—and to ensure that the FFRDCs do not encroach into the domain of for-profit industry or erode the relationship between them.

Page 13 (Recommendations)

- Task Force Statement: "To reinforce the shift of focus to new technology, the STE allocation process should be strengthened to reduce the level of effort on less technically challenging work, which could be performed by commercial companies, shifting their resources to the new focus...."

  Comment: Each DoD FFRDC has a mission to support for the Department. Some work may be seen as less technically challenging work, but all of the work is important to the Department. The vast majority of the STE is allocated to technically challenging work and that will continue.

Page 14 (Recommendations)

- Task Force Statement: "Direct DCAA to do an in-depth review of FFRDC overhead rates, to ensure they are not out of line with the commercial firms supporting DoD with comparable high-end technical support."

  Comment: This recommendation is based on a false equivalence between FFRDCs and commercial firms, which have fundamentally different business models. Commercial firms have much greater flexibility in generating revenue to offset overhead costs. The freedom of conflict of interest that is so essential to the value of FFRDCs comes at the cost of moderately higher overhead rates.

- Task Force Statement: "Simplify the contracting process (e.g. use a 5-year IDIQ-type contract)...."

  Comment: Eight of our 10 DoD FFRDCs now have 5-year IDIQ contracts. The primary sponsors of the other two FFRDCs and their contracting offices are considering the use of 5-year IDIQ contracts for their next contract award.

If you have questions regarding any of our comments or wish to discuss further, please contact Mr. Rob Flowe (robert.m.flowe.civ@mail.mil, 571-372-6231), Mr. Bob Williams (robert.d.williams336.ctr@mail.mil, 571-372-6202), or me (ramona.l.lush.civ@mail.mil, 571-372-6207)

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