



AFWEX
ADVENTURES

RDT&E

Overview

- What is RDT&E
- COTS & NDIs
- Modification vs Continuous Technology Refreshment
- Historical Lessons Learned
- More Examples
- Possible DQ and Proposal Suggestions



What is R/R&D?

1. A **systematic study** directed toward **greater knowledge or understanding of the subject studied**
2. A **systematic study** directed specifically toward **applying knowledge and innovation to meet a recognized but unmet need**
3. A **systematic application of knowledge and innovation** toward the production of useful materials, devices, and systems or methods, **including design, development, and improvement of prototypes and new processes** to meet specific requirements
Includes **ALL** fields (physical sciences, engineering, ect)

COTS & NDIs

Items purchased directly from a commercial source that can be utilized **without alteration through design and development, or without modification**, are Commercial Off-the-Shelf (COTS) or Non-Developmental Items (NDI)

Examples:

Ready-to-use products

Training Services

Software licenses for ready-to-use software (including Software as a Service (SaaS))

COTS & NDIs

COTS and NDIs *by themselves* are not suitable for SBIR/STTR funding

Example: A company is proposing to sell the Air Force an innovative, new gaming chair to reduce back and neck strain

****HOWEVER****

If (A) an end item requires design and development in order to accept the COTS or NDI
OR
if (B) a COTS or NDI is required for RDT&E test purposes

THEN funding for design and development could be funded by SBIR/STTR funds.

Example A: A company has a COTS product that increases antenna GAIN 10-fold, but the DAF system must be designed to accept the product.

Example B: A COTS device is required to develop the proposed solution.

COTS & NDIs

Modified COTS or Modified NDI: Commercially available items that **must be modified** to satisfy user requirements.

The prototype, modification of the prototype, and prototype testing could be funded by SBIR/STTR. Follow-on purchases will NOT be funded by SBIR/STTR.

Example: A COTS C-sUAS device will be modified through the proposed SBIR effort to securely interface with a Force Protection platform. The modification work can be funded by SBIR/STTR. The follow-on procurement of the modified devices cannot be funded by SBIR/STTR.

The quantity of modified prototypes bought with SBIR/STTR funds will NOT exceed quantity needed to conduct RDT&E acceptance tests.

Example: A proposed SBIR effort adapts a wireless device for DAF use, and 5 devices are needed for deployment & testing. SBIR funds CAN cover the needed 5 devices. SBIR funds cannot cover devices 6-10 for deployment to a second site.

Modification vs Continuous Technology Refreshment

Modification - technology refreshment that **significantly changes** the performance envelope of the end item.

If a commercially-available item is modified and requires testing prior to approval for service use or inventory, it may be funded by SBIR/STTR

EXAMPLE: An AI/ML language detection software is modified to read SBIR proposals and determine if all qualification standards are met.

Continuous Technology Refreshment – the intentional, **incremental insertion** of newer technology to improve reliability and maintainability, reduce cost, and/or add **minor performance enhancement**, typically in conjunction with depot or field level maintenance.

This is NOT funded by SBIR/STTR

EXAMPLE: A company with night-vision goggles used by SOCOM is applying for a SBIR to insert the next-generation comfort padding they have developed.

Historical Lessons Learned

- **T&E Authority allows for SBIR funds to be used for DT&E**
- **DevSecOps requires “deliverables” to be amenable to the utilization of RDT&E**
- **Licenses and other ancillary costs must be commensurate with proposed R&D activity (but this can be the “jet fuel” to RDT&E)**
 - Non-traditional companies often lump R&D costs under licensing from a cost-proposal standpoint, making R&D determinations difficult
 - Training is not considered R&D, but can be included as part of overall ancillary costs on a limited basis
- ****SBIR PHASE II** Milestone reviews are critical to the determination of R&D, as they articulate the full scope of work. Companies need to clearly articulate R&D activity to be done**

More Examples

Approved STTR/SBIR Proposals:

T&E for COTS product IOT determine adaptations needed for weapons system integration

“(8) Agencies may issue Phase II awards for testing and evaluation of products, services, or technologies for use in technical or weapons systems.”

[2019 SBIR/STTR Policy Directive \(2019\)](#), section 4(b)(8) on p.75

Not Approved STTR/SBIR Proposals:

Known, minor customizations needed for an existing COTS solution in order to incorporate for government use

Preponderance of Phase II funds used for purchasing equipment / services

“I know the AF needs red fire fighter boots so I will use my phase II to make our black boots red”

Possible RDT&E Disqualification?

- If a proposal is determined to not meet RDT&E qualification for the SBIR/STTR program, it will be disqualified and the company will receive a Not-Selectable status.

Suggestions:

- Carefully review the content of these slides to determine if your solution meets the RDT&E requirements
- Ensure your proposal is explicit in explaining the RDT&E work you will be accomplishing
- Ensure your proposal does not lump R&D costs under licensing to provide clarity to the actual costs



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Questions?

Please type your questions in the Q&A section