



# **GUIDELINES FOR PREPARATION AND SUBMISSION OF NAVY STTR PHASE II PROPOSALS**

These guidelines are provided for all phase II proposal submissions to the Navy Small Business Technology Transfer Program (STTR).

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## **SECTION 1 - ELIGIBILITY AND LIMITATIONS**

Only those companies which have successfully executed a Phase I contract and have been invited formally or informally by the Navy technical point of contact (TPOC) for the Phase I contract, or the STTR Program Manager, are eligible to submit a follow-on Phase II proposal. The STTR program reserves the right to make no award, one award, or more than one award under any topic. Any contractor proposing research that requires human, animal and recombinant DNA use is advised to view requirements at website [http://www.onr.navy.mil/sci\\_tech/ahd\\_usage.asp](http://www.onr.navy.mil/sci_tech/ahd_usage.asp). This website provides guidance and notes approvals that may be required before contract/work may begin.

Each proposing firm must:

- Continue to qualify as an independently, U.S. citizen (or lawfully admitted permanent resident alien) owned and operated small business qualified for research or research and development purposes, as defined in the most recent DoD STTR Solicitation, and certify to this on the Cover Sheet of the proposal.
- Perform a minimum of 40% of the research or research and development effort (Phase II) in-house; a minimum of 30% of the effort must be performed by the research institute.
- The principal investigator must be primarily employed with the small business firm or the research institution.
- Perform the research or research and development within the United States (as defined in the solicitation.)

Joint ventures and limited partnerships are permitted, provided that the entity created qualifies as a small business in accordance with the Small Business Act, 15 USC 631 and the requirements of the most recent DoD Solicitation, and provided that the Phase I contract was awarded to the joint venture or partnership. Note: Any deviation from these requirements must be explicitly approved in writing by the Contracting Officer during negotiations.

## **SECTION 2 - PROPOSAL PREPARATION/SUBMISSION**

**GENERAL REQUIREMENTS** -- Submissions to the STTR program must comply with all relevant instructions contained in the most recent DoD STTR solicitation - including those in the Navy section. Electronic submissions of STTR Phase II proposals to the DoD SBIR /STTR Submission website at <http://www.dodsbir.net/submission> are required and must include Cover Sheets, Technical Proposal, Cost Proposal, and Company Commercialization Report. In addition, each Phase II proposal must include 5-10 pages of a Phase II Transition Plan as part of the technical proposal, addressing the items in Appendix A.

Offerors should adhere to the following STTR technical proposal and cost proposal preparation requirements:

- Phase II proposals should have a base period of 18 months for \$500K. Base periods can be for less money but will rarely be approved for more than the \$500K level. Companies are encouraged to submit up to 2 options. The first option should have a performance period of 9 months for \$250K, and the second option should have a performance period of 18 months for up to \$750K. A Technology Transition Plan (TTP), coordinated with the office transitioning the technology, is required prior to exercising the first option. For the second option, companies are required to secure 1:1 cost sharing from a non-SBIR/STTR funding source (e.g. \$375K non-SBIR/STTR & \$375K STTR funding) and a Technology Transition Agreement (TTA) with the Navy program office transitioning the technology.<sup>1</sup> Cost-sharing is a means to help bridge the transition to Phase III and examples of cost-share funding sources are, but not limited to, Future Naval Capability (FNC) offices, acquisition program offices, and prime contractors. The option phases usually include test and evaluation work along with activities required to mature the technology so that it can be implemented into a targeted DoD application. For the base and all options, companies must meet the STTR minimum requirements that 40% of the work be done by the small business and 30% by the research institution.
- Before the options are funded, companies will be required to present their business case for the technology to this office and the technical monitor describing how the technology will be transitioned into the selected application. Based on the technical success, transition potential, priorities and additional funding sponsors, the option funding increment will be determined. Please prepare your cost proposal and work plan accordingly. It is desired that 50% option funding for Phase II efforts come from DoD non-STTR funds (preferably the program of record), prime contractors, or the private sector. It is the firm's responsibility to locate the option funding in conjunction with your technical monitor. Please define the amount of funding, its source and how it will be used. Letters of endorsement and promises of funding for Phase III efforts from within the DoD are encouraged and can be added as an attachment to your plan.

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<sup>1</sup> A TTP is a transition plan written by either the company or the technical monitor (to be determined by the SYSCOM STTR Program Manager) and reviewed by the PEO/FNC SBIR technology manager and the SYSCOM STTR program manager for continuity with the program of record's transition roadmap. A TTA is a detailed transition agreement, written by either the company or the technical monitor (to be determined by the SYSCOM STTR Program Manager) and signed by the acquisition program office and the cost-share funding source, agreeing to the transition of the technology. Templates will be provided by the STTR program office.

- The proposed Phase II effort should be based on further development of the technological innovation performed in Phase I, should stay within the scope of the solicitation topic, and should have high potential to provide new or improved products, processes, or services to the Navy and/or other Defense components with additional benefits to the commercial and the private sector. It is very important that you work closely with your technical monitor when developing your phase II proposal. In assessing the DoD market, offerors are encouraged to use various resources, including the free technical information services available from the Defense Technical Information Center (DTIC) and other information assistance organizations noted in the most recent DoD Solicitation. First-time awardees should register as a Phase I contractor at DTIC to access the DTIC's data bases. The DTIC SBIR Services Internet link is <http://www.dtic.mil/dtic/sbir>.
- An STTR proposal must provide sufficient information to persuade evaluators that it is worthy of support. The evaluation criteria stated in the most current DoD Solicitation will be used.
- The Phase II award will typically be for a Cost Plus Fixed Fee (CPFF) type contract. The contractor must be able to pass a DCAA accounting system audit in order to be awarded a Phase II contract. At the time of award, a job-order-based accounting system capable of accruing costs under a government CPFF contract must be in place. A list of Defense Contract Management District East and West Associate Small Business Directors is found at <http://www.dcmawest.com/dcmawest/index.htm> & <http://www.dcmawest.com/dcmawest/index.htm>, respectively.
- Submissions to the STTR program must comply with all relevant instructions contained in the most recent DoD solicitation on markings required for proprietary and classified information, etc. Do not include proprietary information or classified information in the coversheet abstract or benefits sections (on-line submission).
- Limit your technical proposal to 40 pages including the first option but excluding the Cost Proposal, the 5-10 pages of the Phase II Transition Plan (see Appendix A), and Supporting Material. All pages from the first through the last must be consecutively numbered.
- All Phase II award winners must attend a one-day Transition Assistance Program (TAP) meeting in the Washington D.C. area prior to or during the second year of the Phase II effort. If you receive a Phase II award, you will be contacted with more information regarding this program or you can visit <http://www.dawnbreaker.com/navytap/index.php>. Recommend budgeting at least one trip to Washington in your Phase II cost proposal.

All guidelines in the most current DoD STTR Solicitation are also applicable to both Phase I and Phase II; e.g., On-Line (electronic) Submission of coversheets & commercialization reports, Deliverables/ Payment Schedules, Copyrights, Patents, Technical Data Rights, Cost Sharing, Joint Ventures (or Limited Partnerships), and Contractor Commitments.

**TECHNICAL PROPOSAL** -- The technical proposal should consist of the following sections:

1. Completed Cover Sheet. The on-line data entry forms are accessible from the DoD SBIR/STTR Submission site at <http://www.dodsbir.net/submission>. The abstract should include a brief description of the objectives and proposed approach. Anticipated benefits and commercial applications of the proposed effort should be summarized in the space provided. The data from these coversheets may be accessed by the public, and therefore, must not contain proprietary or classified information.

2. Identification and Significance of Phase I Work (Begin this text on page three of your proposal). Summarize the proposed effort and its actual and/or anticipated results.

3. Phase II Technical Objectives. Enumerate the specific objectives of the Phase II work. Clearly distinguish between the objectives of the Phase II base and those of the first option.

4. Phase II Work Plan. This section should be the major portion of the technical proposal and propose an advancement over the Phase I results appropriate for Phase II. This section must include a proposed statement of work to delineate clearly and unambiguously what the offeror proposes to do and deliver for the basic effort and for the option(s).

[a] The proposed statement of work should describe, in chronological order, each task to be performed. Each task description should include: an explanation of the work to be performed; the product of the task (report, hardware, etc.); the roles of the research institute and other subcontractors and/or consultants (if any); the use of materials, software, special equipment, special tooling, etc. in the performance of the task; the period of performance in days; the number of hours to be allocated to the task by the principal investigator and other principal personnel (by name); other personnel (by labor category); and subcontractors and/or consultants (by name).

[b] Bidders should anticipate opportunities for the government to augment the proposed level of effort or to initiate follow-on R&D for a specific transition (e.g., an aircraft, ship or missile application) therefore the two options should help facilitate this transaction. Please note that the statement of work for an option may be overtaken by events during execution of the basic award, and proposed changes may be authorized by the Contracting Officer, if and when exercised, as long as the cost proposal remains valid.

[c] Logical technical "milestone(s)" should be scheduled to allow the government to assess progress and to consider the exercise of any negotiated option(s).

5. Related Work. This section should demonstrate the offeror's awareness of the state-of-the-art and relevant concurrent efforts. Describe significant activities, including any conducted by the principal investigator, by the proposing firm, the research institute, consultants, and others. Describe how these activities relate to the proposed effort, and discuss any planned coordination with outside sources.

6. Relationship with Future Research or Research and Development. This section should describe the results and opportunities anticipated if the proposed approach is successful. Explain how the Phase II effort will provide a foundation for follow-on research and development.

7. Key Personnel. Identify key personnel who will be involved in the Phase II effort including information on directly related education and experience. A concise resume of the principal investigator, including a list of relevant publications (if any), must be included. Clearly identify which personnel will perform on the basic effort and which will perform on the option(s).

8. Facilities/Equipment. Describe availability of special instrumentation and physical facilities necessary to carry out the Phase II effort. Items of equipment to be leased or purchased as detailed and priced in the Cost Proposal for the base award and option(s) must be justified under this section. Also state whether or not the facilities where the proposed work will be performed meet federal, state (name) and local government environmental laws and regulations for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.

9. Consultants/subcontractors. All subcontractors, including the research institution partner, must be identified and described according the [Cost Breakdown Guidance](http://www.dodsbir.net/solicitation/pdf/costbreakdown.pdf) (<http://www.dodsbir.net/solicitation/pdf/costbreakdown.pdf>) provided by the DoD on the submission website. The STTR program may only make awards to small businesses; therefore, the research institution must have a subcontracting arrangement with the small business. More than one subcontractor is allowed; however, the small business must perform at least 40% of the effort and the research institution listed on Proposal Cover Sheet must perform at least 30% of the work. Subcontractor costs and consultant costs must be detailed at the same level as prime contractor costs in accordance with the [Cost Breakdown Guidance](#) (in regards to labor, travel, equipment, etc.).

10. Prior, Current and/or Pending Support. If there is no such effort, include the following statement in this section, "No prior, current or pending support for proposed work." Indicate on the coversheet if the proposal is relevant to or substantially the same as that of any completed, ongoing or pending proposal by the offeror and provide the following information in this section:

- Name and address of the federal agency(s) or DoD Component to which the proposal was submitted, or will be submitted, or from which an award is expected or has been solicited.
- Date of award or date of proposal submission.
- Title of proposal.
- Name and title of principal investigator.
- Issuing agency, title, number and date of solicitation(s) under which the proposal was submitted.
- If an award was received, state the contract or grant number.
- Identify the topic number and title for each STTR proposal submitted and award received.
- Attach available documentation of strong third-party interest (including specific funding

commitments) --these attachments will be treated as proprietary if so marked.

Note: The proposal must indicate awardee's agreement to provide Transition/Marketing Plan Status Reports and/or Success Stories as discussed below.

**COST PROPOSAL** – The on-line data entry forms for the cost proposal on the DoD SBIR/STTR Submission website at <http://www.DoDsbir.net/submission>. This file, however, may only allow details for a single option; consequently, roll up the costs for all of the options for this display, and provide a summary cover sheet of the basic award and each option cost as page 1 to the cost proposal section. A thoroughly itemized cost proposal can significantly reduce the amount of time required for contract negotiation. A cost proposal will also need to be provided by the Research Institute. This can be included in the technical proposal if necessary. Separate costs must be submitted for the Phase II basic effort and for each Phase II option. If an item does not apply to the proposed effort, state, "Not Applicable." Sufficient information should be provided to allow the evaluator to understand planned use of the funds. A semimonthly, monthly, or quarterly payment schedule may be proposed. The following paragraphs illustrate the level of cost detail that a Contracting Officer requires before beginning negotiations. For proprietary reasons, subcontractors, consultants, or vendors may want to give you only bottom line quotes. In such cases, detailed quotes from these should be sent directly to the government contracting officer.

- Offeror's direct labor. List all key personnel by name and other personnel by labor category; e.g., senior scientist. Specify the number of hours to be dedicated to the project and hourly costs for each.
- All subcontractors, including the research institution partner, must be identified and described according to the [Cost Breakdown Guidance](#). The STTR program may only make awards to small businesses; therefore, the research institution must have a subcontracting arrangement with the small business. More than one subcontractor is allowed; however, the small business must perform at least 40% of the effort and the research institution listed on Proposal Cover Sheet must perform at least 30% of the work. Subcontractor costs and consultant costs must be detailed at the same level as prime contractor costs in accordance with the [Cost Breakdown Guidance](#) (in regards to labor, travel, equipment, etc.).
- Special tooling, testing, test equipment, and material. The need for these items, if proposed, will be carefully reviewed. The offeror should provide competitive quotes to support the proposed costs or should justify why only one source is available. Competitive quotes may be signed quotes from vendors or copies of catalogue pages. Normally the costs of any equipment should be quoted on a purchase basis, unless the offeror can demonstrate that lease or rent of the equipment is clearly advantageous to the Government. The Contracting Officer will make the final determination.
- Travel costs. Travel (i.e., airfares, car rental and per diem) must be justifiable in terms of the proposed effort. Specify how many people will travel to what places for how many days. Please note that all Phase II award winners must attend a one-day Transition Assistance Program (TAP) meeting in the Washington D.C. area prior to or during the second year of the Phase II effort. If you receive a Phase II award, you will be contacted with more information regarding this program or you can visit <http://www.dawnbreaker.com/navytap/index.php>. Recommend budgeting at least one trip to Washington, DC for the TAP kickoff and an additional trip for each 6-month period to accommodate program reviews as needed.
- General & Administrative (G&A). If applicable, include your G&A rate and its application base consistent with your approved accounting system.
- Facility Capital Cost of Money (FCCM). If applicable, include your FCCM rate(s) and its application base consistent with your approved accounting system.

- Fixed Fee/Profit. If applicable, include the proposed fixed fee/profit.
- In order to facilitate the Government's evaluation of your cost proposal, you should provide the following information.
  - (a) If you have an approved accounting system, and your indirect costs have been reviewed by a Government auditor, provide the name, address, and telephone number, of that auditor.
  - (b) If your accounting system has not been approved by the Government auditor, please provide:
    - a description of your accounting system, and
    - the method you used to compute your indirect costs. (Include the details of indirect cost pools and the base against which they are applied as summarized above.)

**TRANSITION/MARKETING PLAN**-- In a 5-10 page unclassified plan, indicate your strategy for moving the technology to Naval, military, and/or government use including widespread commercial markets as appropriate. See Appendix A.

**COMPANY COMMERCIALIZATION REPORT** -- All SBIR and STTR proposals must be accompanied by an on-line report that summarizes the “value” of all prior SBIR & STTR awards to the offeror. The on-line data entry forms for the Company Commercialization Report are accessible from the DoD SBIR/STTR Submission website at <http://www.DoDsbir.net/submission>.

- Any relevant success story(ies) which resulted directly from a Phase I or Phase II award may be summarized briefly and submitted separately through the Navy SBIR website at <http://www.onr.navy.mil/sbir>. A Navy success story is any follow-on funding that a firm has received based on technology developed from a Navy SBIR or STTR Phase II award. The success stories should be included as appendices to the proposal. The success story information will be used as part of the evaluation of the third criteria, Commercial Potential (listed in Section 4.2 of this solicitation) which includes the Company’s Commercialization Report and the strategy described to commercialize the technology discussed in the proposal. The Navy is very interested in companies that transition SBIR efforts directly into Navy and DoD programs and/or weapon systems. If a firm has never received a Navy SBIR Phase II it will not count against them. Phase III efforts should also be reported to the Navy SBIR program office.

**AGREEMENT BETWEEN THE SMALL BUSINESS AND RESEARCH INSTITUTE**-- The small business must negotiate a written agreement with the research institution allocating intellectual property rights and rights, if any, to carry out follow-on research, development, or commercialization. The agreement must be finalized and signed by both parties no later than 15 days after the small business receives notification that it has been selected for an award. The small business must submit this agreement to the Navy STTR program manager on request and certify in all proposals that the agreement is satisfactory to the small business. The agreement should, as a minimum, state:

- (1) Specifically the degree of responsibility and ownership of any product, process, or other invention or innovation resulting from the cooperative research. The degree of responsibility shall include responsibility for expenses and liability, and the degree of ownership shall also include the specific rights to revenues and profits.

(2) Which party may obtain U.S. or foreign patents or otherwise protect any inventions resulting from the cooperative research.

(3) Which party has the right to any continuation of research including non-STTR follow-on awards.

See: [Model Agreement for the Allocation of Rights](#) for a guideline or model for such an agreement.

The Federal government will not normally be party to any agreement between the small business concern and the research institution. Nothing in the agreement is to conflict with any provisions setting forth the respective rights of the United States and the small business with respect to intellectual property rights and with respect to any right to carry out follow-on research. All agreements between the small business and the research institution cooperating in the STTR projects, or any business plans reflecting agreements and responsibilities between the parties during the performance of Phase I or II, or for the commercialization of the resulting technology, shall reflect the controlling position of the small business.

## Appendix A

### Navy SBIR/STTR Phase II Transition Plan

**Purpose:** The Phase II Transition Plan provides qualitative and quantitative details of the proposed technology and a better understanding of how the technology will be transitioned to the fleet. Knowing the potential Phase III funding sources, identifying the military uses and defining a planned path for transitioning this technology into a military application will be used to evaluate your Phase II proposal under the “Potential to Commercialize” criteria. The plan should address technology development activities, potential sponsors or interested parties, and how you plan to engage these parties during your Phase II project. The section on the technology insertion strategy and partnering are critical to the success of this plan.

The text below provides a template. Some sections will not be appropriate for your proposal. Most of the information gathering required to complete this plan should be done by the small business. If you need help in addressing some of these questions, it is recommended that you contact your technical monitor.

**Format:** Provide a cover page, non-proprietary quad chart, 5-10 page narrative plus attachments as follows:

#### *Cover page:*

- Firm name and address
- Topic number, proposal title
- Principal investigator and corporate official (with phone number and e-mail)
- Phase I contract number, name of Government Technical Monitor
- Phase I SYSCOM Sponsor (ONR, NAVSEA, NAVAIR, SPAWAR, MARCOR, or SSP)
- Phase I Acquisition Sponsor (if one was identified)
- If this is an STTR—include the research institution you plan to use in Phase II
- Indicate whether or not you have entered into a cost type Government contract and been audited by DCAA. If so, when, what office, and if possible provide the name and number of your DCAA contact.

**Quad Chart** – provide a non-proprietary quad chart appropriate for public release. The Navy Tap website has a Quad Chart creation kit at: <http://www.dawnbreaker.com/quad/index.php>

#### *5-10 Page Narrative:*

1. **Product/Technology Description** (one to two pages) – Briefly describe the proposed Phase II project and objectives and the product or service expected to result from a Phase II effort. Include:
  - Summary of Phase I work/results
  - Potential benefits of proposed technology
  - Potential issues and risks (cost, schedule, technical, manufacturability, etc.)
  - Summary of proposed Phase II work
2. **DoD Customer Identification and Need** (one to two pages) – Identify the customer and the requirements for this technology. Address the following questions:

- Who is the Navy customer(s) for this project? Provide specific Navy/DoD platforms or programs and include points of contact if you have them.
  - What are the Navy-defined needs being addressed and the quantified operational gaps?
  - What approach does the Navy currently use to address this need and what benefit does your technology have over other approaches?
  - What types of tests and demonstrations will be required before the technology will be approved for use on these platforms or programs?
3. ***Technology Insertion Strategy and Partnering*** (one to two pages) – Describe the resources required for transitioning the technology into the DoD and where you think the resources will come from. Include the financial, personnel, and facility requirements to manufacture and test the product/technology prototype and the requirements to achieve full-scale production. Describe the approach that you will take to obtain (non SBIR/STTR) funding to move your technology through subsequent Technology Readiness Levels (TRL) (see figure (1)) and to achieve technology insertion. Indicate the role you would ideally like to play in the transition of this technology to the fleet. Take a realistic look at whether or not the new product fits within the company product line and experience. Address the following questions:
- How much money will you need to bring the technology to market, and how will you raise that money?
  - How much will the product/technology cost to manufacture?
  - Do you have the capability to implement a plan that will not only complete the development and testing of the product, but also addresses the full scale manufacturing and distribution of the product?
  - Will you manufacture the product or technology, license it, partner with another company or subcontract the work?
  - If you partner with another company—who, how, and when will the partners participate in this effort? Indicate if you have had previous experience with these potential partners.
  - Clarify why the approach selected will be beneficial to the Navy and/or prime contractor.
4. ***Business Analysis/Marketing*** (one to two pages)– Briefly describe marketing tasks to be performed and milestones scheduled during the Phase II performance period.
- ***DoD Applications*** – Identify key DoD components who have been and/or will be informed of progress in these efforts. Address the following questions:
    - What is the first product, platform or system that this technology will go into?
    - What is your estimate of the market size?
    - Does your company contain marketing expertise and, if not, how do you intend to bring that expertise into the company?
    - Who are your competitors, and what is your price and/or quality advantage over your competitors?
  - ***Non-DoD applications*** – Identifying potential sales to the private sector would help offset the initial research and development costs and required investment in plant and equipment, materials and other items necessary to produce the product. Without these

additional production quantities, the volume required by the sponsor may not be large enough and/or the program long enough to allow the small business to manufacture it economically. Small quantities may have to be priced out of the reach of the government sponsor if there is no private sector market for the product.

5. **Intellectual Property Strategy** (half to one page)– Describe your approach for protecting the intellectual property developed during Phase II, including protection of SBIR/STTR data rights. Include (if appropriate) patent, copyright, trademark and trade secret protection. Cite name of counsel.
  
6. **Company History** (half to one page) – Provide a brief overview of your company’s history, core competencies, and experience with commercialization and/or transition of technology to DoD. Indicate the number of employees in your firm, their skill base, and your organizational structure. If partnering is not anticipated, indicate why your company would be a credible supplier to the Navy. Describe your experience to date with being a supplier of products/services to any market and as appropriate, indicate the cumulative revenues that have resulted from product sales.

**Attachments** — Attach letters of endorsement from within the DoD or private sector which discuss the direct benefit of the technology to them and/or their intent of follow-on funding either during Phase II or under a Phase III award. Letters of endorsement are strongly encouraged and provide validation of interest by others. If any matching dollars will be applied to the Phase II effort, please provide information from those parties.

Technology Readiness Level (TRL)	Description
<b>1</b> Basic principles observed and reported	Lowest Level of Technology Readiness. Scientific research begins to be translated into applied research and development. Examples might include paper studies of a technology's basics properties.
<b>2</b> Technology concept and/or application formulation	Invention begins. Once basic principles are observed, practical applications can be invented. Applications are speculative and there is no proof on detailed analysis to support the assumptions. Examples include components that are not yet integrated or representative.
<b>3</b> Analytical and experimental critical functions and/or characteristic proof of concept	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
<b>4</b> Component and/or breadboard validation in laboratory environment	Basic technological components are integrated to establish that they will work together. This is relatively "low fidelity" compared to the eventual system. Examples include integration of "ad hoc" hardware in the laboratory.
<b>5</b> Component and/or breadboard validation in relevant environment	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so that it can be tested in a simulated environment. Examples include "high fidelity" laboratory integrations of components.
<b>6</b> System/subsystem model or prototype demonstration in a relevant environment	Representative model or prototype system, which is well beyond that of TRL 5, is tested in a relevant environment. Represents a major step up in technology's demonstrated readiness. Examples include testing a prototype in a high fidelity laboratory environment, or in a simulated operation environment.
<b>7</b> System prototype demonstration in an operational environment	Prototype near, or at, planned operational system. Represents a major step up from TRL 6, requiring demonstration of an actual system prototype in an operational environment, such as an aircraft, vehicle, or space. Examples include testing the prototype in a test bed aircraft.
<b>8</b> Actual system completed and "flight qualified" through test and demonstration	Technology has been proven to work in its final form and under expected conditions. In almost all cases, TRL represents the end of true system development. Examples include developmental test and evaluation of the system in its intended weapon system to determine if it meets design specifications.
<b>9</b> Actual system "flight proven" through successful mission operations	Actual application of the technology in its final form and under mission conditions, such as those encountered in operational test and evaluation. In almost all cases, this is the end of the last "bug fixing" aspects of system development. Examples include using the system under operation mission conditions.

Figure 1. Navy Technical Readiness Levels