NSRP | National Shipbuilding Research Program

Technology Transfer and Implementation Guide

MISSION

- ❖ Manage and focus national shipbuilding and ship repair research and development funding on technologies and processes that will reduce the total ownership cost of ships for the U.S. Navy, other national security customers and the commercial sector and develop and leverage best commercial and naval practices to improve the efficiency of the U.S. shipbuilding and ship repair industry.
- ❖ Provide a collaborative framework to improve shipbuilding-related technical and business processes.
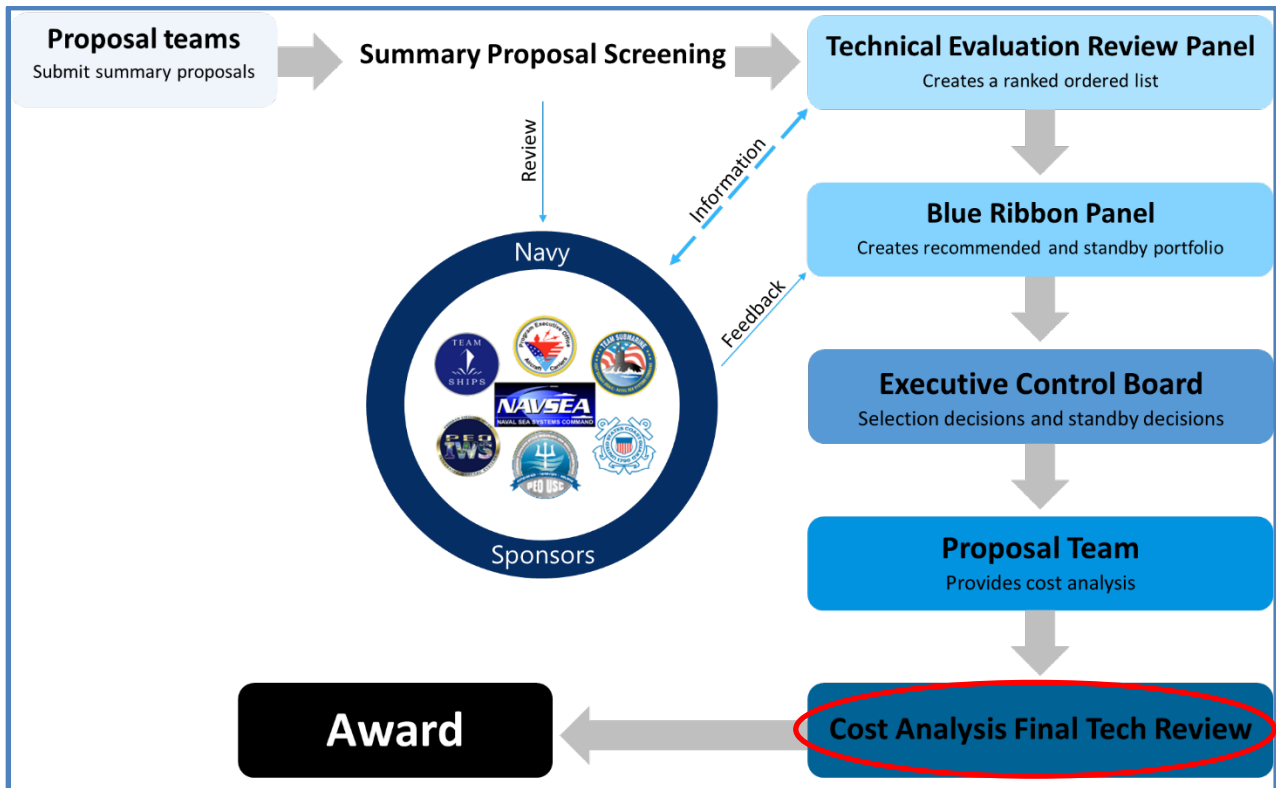
INTRODUCTION

This guide has been created to assist proposers with developing a well-defined Technology Transfer and Implementation Plan (TTIP), which is a prerequisite to contract award.

Panel Projects - Although formal, standalone Technology Transfer and Implementation Plans are not required, Panel Project teams must include a clear outline of how the technology or process being developed will be disseminated across the industry and positioned for implementation.

The objective of the TTIP is to document the criteria the project team will use to successfully:

- disseminate project information during the project lifecycle;
- facilitate adoption of the technologies and/or processes developed under the project across the industry;
- describe methods to engage industry and government stakeholders; and
- transition the final project results to the U.S. shipbuilding and ship repair industry

The TTIP must be submitted for approval *prior* to final contract award *(see diagram below)*.

FORMAT

For proper consideration, the TTIP should contain the following elements:

1. Project Name, Lead Organization, Team Members Names and Roles
2. Summary
3. Industry/Navy Benefits
4. Stakeholder Engagement
5. Technology Transfer Activities and Schedule
6. Deliverable Categorization and Distribution
7. Publishing Project Results
8. Implementation Activities

Please refer to Attachment 1 – TTIP Checklist - to ensure all relevant information is included prior to submission.

1. PROJECT NAME AND TEAM PARTICIPANTS

Include name of project and project participants (team member names and organization) along with descriptions of their respective roles.

2. SUMMARY

A brief overview of the project objectives and technology transition objectives, including the project's target audience, other secondary audiences, project results that are suitable for implementation, and circumstances that would yield successful implementation.

3. INDUSTRY AND NAVY BENEFITS

Outline of the benefits of implementing the proposed technology /process to both the shipbuilding and ship repair industry and government stakeholders (addressing design, construction and in-service communities as applicable). Key points to address:

- Breadth of applicability to the shipbuilding and ship repair industry
- Level and nature of benefit to the government and industry
- Potential for lead-time and cycle reduction
- Life of the product/technology in the marketplace (years)
- Synergy with other operations, businesses, research and programs.

4. STAKEHOLDER ENGAGEMENT

The strategy the project team will utilize for engagement with both Navy and industry stakeholders regarding technology transfer and implementation of the project, including:

- Engagement already accomplished and/or planned for communicating with Navy stakeholders (e.g., Program Executive Office, platform program manager, technical warrant holder), from project initiation through implementation;
- Engagement already accomplished and/or planned with U.S. shipyards, including any evidence of intent to implement results of a successful project; and
- Activities to facilitate likelihood of implementation across the segments of the industry – design, construction and in-service support.

5. TECHNOLOGY TRANSFER ACTIVITIES AND SCHEDULE

Description and preliminary schedule of the technology transfer activities during project execution:

- Technology transfer and implementation activities *(what)*
- Which member(s) of the project team will be responsible for each activity *(who)*
- Approximate dates associated with these activities *(when)*

Such events may include, *but are not limited to:*

- Workshops sponsored by the project team for the sole purpose of sharing project results
- Ship Production Panel Meetings and/or workshops/mini-symposia sponsored by those panels
- Professional society symposia, conferences, and meetings (e.g., ShipTech, Ship Production Symposium, Society of Naval Architects and Marine Engineers meetings, American Society of Naval Engineers meetings)
- Lectures or presentations at universities, research laboratories, company meetings, and/or government-sponsored forums.
- On-site demonstrations
- Web-based training courses
- If project material is to be utilized in education and training programs, indicate how the course material will be developed from the project technical deliverables, and how (and to whom) it will be distributed.

Project teams are encouraged to utilize NSRP Panel Meetings for project briefings and demonstrations.

6. DELIVERABLE CATEGORIZATION AND DISTRIBUTION

One of the goals of NSRP is the sharing of project results to the maximum extent practicable to the U.S. shipbuilding and ship repair industry, and other government and commercial stakeholders.

This section should include the Data Category and Distribution Statement. This is required for all project deliverables, especially those deliverables that will be disseminated outside the project team.
***Attachment 2 – Data Category and Distribution of Project Deliverables** - includes guidelines for distribution of deliverables.*

7. PUBLISHING PROJECT RESULTS

This section should include the project team's plans to publish project accomplishments and results (both interim and final) via the NSRP Program website and/or industry journals and trade publications, throughout the period of performance and beyond.

8. IMPLEMENTATION

8.1 IMPLEMENTATION ACTIVITIES

This section should include specific steps to ensure successful implementation of the final product developed during the project lifecycle:
• Identify those results that would be suitable for implementation
• Describe circumstances that would yield successful implementation, taking into account the differences between the design, construction and in-service segments of the industry
• Identify shipyards that will support implementation of the proposed technologies and/or processes and provide evidence of industry support for implementation
• Address potential commercial applications (and estimated commercialization costs) for the proposed technology and/or processes
• Include training materials that will lead shipyard workers to easily adapt to the new technology

Activities may include:
• Coaching/mentoring support services using budgeted project resources (within specified limits)
• Consulting services by key personnel
• Advance notice tours of team members' facilities for observation of demos, pilot programs, and/or "production" implementations of the technologies developed in the project
• Developing web-based training sessions

8.2   IMPLEMENTATION TRACKING

One of the Program's functions is the tracking of implementation activities for completed projects, as illustrated by the NSRP Implementation Matrix.

It is expected that once projects are completed and the technology has transitioned to industry, the project team and/or appropriate Major Initiative Team Leaders will provide relevant information on implementation activities to the Program Administrator on a periodic basis.

ATTACHMENT 1   TECHNOLOGY TRANSFER AND IMPLEMENTATION PLAN CHECKLIST

Technology Transfer – has the project team:	Yes	N/A
Provided an overview of the technology transfer and implementation plan?		
Established the target audience?		
Identified project benefits to and support from Navy and industry?		
Identified technology transfer activities and preliminary schedule?		
Included major deliverables and intended distribution?		
Provided methods for publishing and disseminating project results?		
Implementation – has the project team:	**Yes**	**N/A**
Identified the major results of the project that are suitable for implementation?		
Described circumstances that would yield successful implementation?		
Focused on the target organizations that will most likely use the proposed technologies and/or processes?		
Focused on the target industry segments that will most likely use the proposed technologies and/or processes?		
Reported any support for the proposed R&D effort, as well as any stated intent to implement successful project results, received from government or industry stakeholders?		
Addressed potential commercial applications (and estimated commercialization costs) for the proposed technology and/or processes? (If applicable)		
Included training materials or processes to assist with the adoption of new technology? (If applicable)		
Agreed to respond to periodic requests for updates to the NSRP Implementation Matrix after project completion?		

Each deliverable must be marked with a data category and distribution statement to denote the extent of its availability for distribution, release, and disclosure.

Data Categories

Category A and B Data delivered to the government shall be marked either Limited, Restricted, or Government Purpose Rights, as appropriate, in accordance with the marking procedures of DFARS 252.227-7013(f) and 252.227-7014(f). It is not anticipated that any Category A data will be delivered to the government during the execution of NSRP projects. The government and NSRP shall have unlimited rights for all unmarked data. It is the intent of the NSRP ASE Program and one of NSRP ASE's Program goals to disseminate as much of the Category B data to the shipbuilding industry as possible; therefore, the NSRP ASE Program shall have unlimited rights to Category B data for the purposes of disseminating the information throughout the shipbuilding industry.

Categories for marking deliverables:
• **Category A** – Data developed and paid for totally by private funds, and is data to which the recipient or project participant retains all rights.
• **Category B** – Data developed partially with funding from project participants that was not charged to a government contract and partially with government funding.

Distribution Statements

Key terms to remember when marking deliverables for distribution:
• **U.S. shipbuilding and repair industry** - includes commercial and government shipyards, suppliers, subcontractors, designers, and government agencies of the U.S.
• **U.S. shipyards** – includes U.S. commercial and government shipyards.
• **NSRP Program Representatives** - includes the ATI NSRP Program Office, the Program Technical Representative (PTR), and the Navy's NSRP Program Office.

Examples of deliverable statements:

All deliverables, notwithstanding the limitations described below, are made available to NSRP Program Representatives, as defined above.

✓ **Unlimited/Approved for Public Release**:   includes anyone in the public domain (including foreign)

✓ **U.S. Shipbuilding and Repair Industry:** includes U.S. commercial and government shipyards, suppliers, subcontractors, designers, and government agencies.

✓ **U.S. shipyards:** includes U. S. shipyards only.

✓ **Project participants**: includes project participants only; intended for use on interim reports, partial project results and other information not suitable for publishing.

✓ **Proprietary:** includes the proprietor organization only; if deliverables are proprietary or if there are other considerations that could restrict distribution, justification for the restriction is required.

✓ **ITAR/EAR:** For information restricted under the International Traffic in Arms Regulations or the Export Administration Regulations, a warning such as the following should be used:

   WARNING: This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et. seq.) or the Export Administration Act of 1979, as amended (Title 50, U.S.C., App. 2401 et. seq.). Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DOD Directive 5230.25

   Refer to the distribution matrix below to identify distribution groups:

Distribution	ATI NSRP Program Office	PTR	Navy NSRP Program Office	Executive Control Board	U.S. Ship-yards	Other Relevant U.S. Industry Reps	Anyone (including foreign)
Unlimited	x	x	x	x	x	x	x
U.S. Shipbuilding and Repair Industry	x	x	x	x	x	x	
U.S. Shipyards	x	x	x	x	x		
Project Participants	x	x	x				
Proprietary	x	x	x				