

Note: November 2022.

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COMDTINST 5402.4
19 MAY 2015

COMMANDANT INSTRUCTION 5402.4

Subj: DEPUTY COMMANDANT FOR MISSION SUPPORT (DCMS) ENGINEERING
TECHNICAL AUTHORITY (ETA) POLICY

- Ref: (a) 14 U.S.C. § 565
 (b) Coast Guard Organization Manual, COMDTINST M5400.7 (series)
 (c) Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10 (series)
 (d) Non-Major Acquisition Process (NMAP) Manual, COMDTINST M5000.11 (series)
 (e) Command, Control, Communications, Computers And Information Technology (C4&IT) System Development Life Cycle (SDLC) Policy, COMDTINST 5230.66 (series)
 (f) Coast Guard Configuration Management Manual, COMDTINST 4130.6 (series)
 (g) Office of Federal Procurement Policy (OFPP) Letter 11-01

1. **PURPOSE.** This Instruction unifies the preexisting engineering-related Technical Authority delegations to Commandants (CG-1), (CG-4), and (CG-6) within the Coast Guard. It establishes a single Engineering Technical Authority (ETA) policy for DCMS directorates and prescribes actions to support program management and sponsors in the systems engineering process. This includes influencing development of system requirements and the planning, design, construction, maintenance, logistics, and environmental support necessary for the proper life cycle management of Coast Guard materiel systems. This policy and accompanying Enclosures directs those making decisions on behalf of a designated ETA to be qualified, warranted, empowered, and entrusted to support program management and system sponsors by providing engineering expertise and technical guidance. It provides sufficient checks and balances to minimize conflict-of-interest situations that could result from consolidating the establishment and enforcement of both technical standards and program management within a single entity, and meets the requirements of reference (a).

Distribution-SDL No.165

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NON-STANDARD DISTRIBUTION: CG-094, CG-DCMS, CG-DCMS-8, CG-DCMS-5, CG-1, CG-4, CG-6, CG-7, CG-8, CG-9

2. ACTION. Area, district, and sector commanders; commanding officers of logistics and service centers; commanding officers of headquarters units; assistant commandants for directorates; commanding officers of bases; Judge Advocate General; and special staff elements at Headquarters shall comply with the provisions of this Instruction. Internet release is authorized.
3. DIRECTIVES AFFECTED. CG-4 Technical Authority, COMDTINST 4700.4; CG-1 Technical Authority, COMDTINST 4700.5; and CG-6 Technical Authority, COMDTINST 5230.79 are cancelled.
4. BACKGROUND. DCMS is responsible for all facets of life cycle management for Coast Guard assets and systems from acquisition through sustainment to disposition. Reference (a), paragraphs (a) and (a-2), state, in part that, "...for an acquisition of a capability or an asset with an expected service life of 10 or more years and with a total acquisition cost that is equal to or exceeds \$10,000,000 awarded or issued by the Coast Guard after the date of enactment of the Coast Guard Authorization Act of 2010... the Commandant shall maintain the authority to establish, approve, and maintain technical requirements." Furthermore, paragraph (d) states that, "The Commandant shall maintain or designate the technical authority to establish, approve, and maintain technical requirements. Any such designation shall be made in writing and may not be delegated to the authority of the Chief Acquisition Officer established by section 56 of this title." Following the enactment of reference (a) and in alignment with references (b-e), DCMS determined that a common policy with standard definitions, roles, and responsibilities for the implementation of ETA was needed for major and non-major acquisitions as well as sustainment of Coast Guard systems.
5. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is intended to provide operational guidance for Coast Guard personnel and is not intended to nor does it impose legally-binding requirements on any party outside the Coast Guard.
6. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.
 - a. The development of this directive and the general policies contained within it have been thoroughly reviewed by the originating office and are categorically excluded under current USCG categorical exclusion (CE) #33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).
 - b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this Instruction must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Council on Environmental Policy NEPA regulations at 40 CFR Parts 1500-1508, DHS and Coast Guard NEPA policy, and compliance with all other applicable environmental laws and regulations.

7. **DISTRIBUTION**. No paper distribution will be made of this Instruction. An electronic version will be located on the following Commandant (CG-612) web sites. Internet: <http://www.uscg.mil/directives/>, and CGPortal: <https://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx>.
8. **RECORDS MANAGEMENT CONSIDERATIONS**. This Instruction has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.
9. **DEFINITIONS**. “Technical Authority” is a term that has been applied to many Coast Guard organizations based on their expert standing, authority, and organizational responsibilities. Reference (b) states that “Technical Authority is about governance of a specific enterprise business line responsibility.” Examples include the Chief Financial Officer (CFO) technical authority over budget, finance and internal controls; the Head of Contracting (HCA) technical authority over contracting; or Commandant (CG-4) technical authority over real property management. In contrast, this Instruction applies the term very specifically within a well-defined systems-engineering context. The following definitions apply to the functions that enable the execution of ETA under this policy.
 - a. **Engineering Technical Authority**: ETA is the authority, responsibility, and accountability to establish or assert engineering technical standards, tools, processes, and best practices; monitor compliance with or use of them; and certify conformance with statute, policy, requirements, architectures, and standards. The execution of ETA is a process that establishes and assures adherence to engineering technical standards and policy providing a range of technically acceptable alternatives with corresponding risk and value assessments. For major and non-major acquisitions, ETA shall be conducted in accordance with references (c-e).
 - b. **Program Management**:
 - (1) **In acquisition**: Program Management manages the cost, schedule, and performance of systems engineering efforts related to Coast Guard mission sets, mission support services, capabilities, assets, or systems. This involves acting on the government’s behalf in matters relating to the acquisition of an asset, system, or capability. Those performing this function liaise with the appropriate ETA organizations to ensure that established technical policies, standards, guidelines, architectures, and best practices are followed. This function is normally performed by the Acquisition Program Manager.
 - (2) **In sustainment**: Program Management provides total logistics and engineering support for Coast Guard assets, systems, and capabilities. This involves managing the cost, schedule, and performance of an asset, system, or capability in support of the cognizant operational commander. Those performing this function liaise with the appropriate ETA organizations to ensure that established technical policies, standards, guidelines, architectures, and best practices are followed. This function is normally performed by the Product Line Manager, Asset Manager, or System Support Agent.

- c. System Sponsorship: System Sponsorship involves defining and validating functional requirements for missions, assets, and systems and presents the current and projected operations, and operational requirements. System Sponsorship involves defining system capabilities, managing and validating requirements, and justifying the resources needed for the mission, asset, or system. This function is further described in references (c-e).

10. POLICY GUIDELINES. The following outlines the execution of DCMS ETA.

- a. The DCMS shall provide oversight and stewardship of ETA execution. Working through the DCMS Assistant Commandants, the Deputy Commandant will:
 - (1) Ensure common policies for ETA and its application to systems engineering, risk determination and management, test and evaluation, and certification.
 - (2) Ensure effective ETA interfaces with Program Management and System Sponsorship.
 - (3) Maintain this Instruction with support from Commandant (DCMS-5). Commandant (DCMS-5) will also be responsible for maintaining and promulgating a master list of ETA representatives, Technical Domains, and Warranted Technical Areas (WTAs).
- b. In accordance with reference (a), the Commandant designates Commandants (CG-1), (CG-4), and (CG-6) as WOs with the authority to execute ETA in their Technical Domains as defined in Enclosure 2. Technical Domains include broad engineering disciplines that span across assets and platforms.
- c. ETA representatives are Warranting Officers (WOs), Deputy Warranting Officers (DWOs), Technical Warrant Holders (TWHs), Lead Engineers, Engineers, and Certification Agents (CAs). Enclosure (1) defines associated responsibilities for these roles.
- d. DWOs are responsible for Technical Domains. DWOs shall nominate and WO shall formally warrant qualified individuals as TWHs for a specific WTA in accordance with Enclosure (5). WTAs are a subset of a Technical Domains (e.g., Human Factors Engineering, Ship Structures, Electronic Navigation Sensors) that are defined and established in accordance with Enclosure (3).
- e. The warrant of a TWH shall not encroach on or subjugate the warrant of another. However, an individual may be TWH for more than one WTA.
- f. Program Management shall:
 - (1) Liaise with the cognizant ETA representatives to ensure compliance with technical policy requirements, architectures, and standards.
 - (2) Select specific technical solutions from technically acceptable alternatives approved by cognizant TWHs when application of established technical standards is not practical due to cost, schedule, or performance. In doing so, Program Management implements the recommended risk mitigation strategy of the selected alternative and accepts any residual risk.

- (3) Obtain recommendations for approval of engineering change proposals, deviations, and waivers from the cognizant ETA representatives and Configuration Control Boards in accordance with reference (f).
 - (4) Subject to prioritization and availability of funds, resource requested engineering efforts directly supporting their programs.
- g. The ETA structure may not necessarily align with an existing organizational chain of command. ETA structures should ensure expeditious and agile engineering engagement. TWHs shall report ETA-related issues to their DWO and WO. ETA warrants shall not circumvent a TWH's responsibilities to their organizational chain of command.
- h. Role of Force Readiness Command (FORCECOM):
- (1) FORCECOM is the Coast Guard's training subject matter expert (SME), and is responsible and accountable for all Coast Guard training and most education. In the context of reference (b), FORCECOM is the technical authority for training. FORCECOM promulgates policy, directs standard operating procedures, and provides performance support and training SMEs for individual, team, and unit readiness. FORCECOM ensures timely and high quality operational and support training that achieves the maximum effect on workforce readiness and mission execution.
 - (2) For the purposes of this Instruction, FORCECOM will be the SME for training with Commandant (CG-1) as Human Systems Integration (HSI) ETA.
 - (3) Therefore, as HSI WO, Commandant (CG-1) shall consult with FORCECOM in the selection of a qualified, FORCECOM designated, individual as TWH for Training. This will maintain clear policy and practice links from FORCECOM to the systems engineering process, and support the transition from the acquisition to sustainment phases of a system's life cycle. The Commandant (CG-1) DWO for HSI will integrate the FORCECOM TWH and other HSI-domain TWHs to ensure a properly balanced human engineering solution. While the Commandant (CG-1) DWO for HSI may represent the training WTA with lead engineers to project managers, the Commandant (CG-1) DWO shall consult with and include in all acquisition decision events and clearances for all relevant MSAM documentation FORCECOM and its Training TWH.
- i. ETA shall not be delegated to the authority of the Chief Acquisition Officer.
- j. To the greatest extent possible, ETA and Program Management decisions should not be the responsibility of a single individual.
- k. In accordance with reference (g), ETA is an inherently governmental authority. The Coast Guard routinely collaborates with and receives technical support from various external organizations including other government agencies and departments, non-government organizations, and academia. While these organizations form part of the ETA support network, the Coast Guard retains all ETA as described in this Instruction.

11. TECHNICAL DECISION MAKING, COMMUNICATION, AND CONFLICT RESOLUTION.

A key component of ETA is making technical decisions regarding engineering standards and designs. Conflicts involving technical matters will inevitably arise, both within and among ETA, Program Management, and System Sponsor representatives. The ETA, System Sponsor, and Program Management representatives shall communicate and resolve technical conflicts at the lowest level practical. Technical conflicts that cannot be resolved in a timely manner shall be elevated using the ETA and Program Management hierarchies. The appropriate ETAs shall formally document technical conflicts and resolutions. Enclosure (4) provides specifics regarding technical decision-making requirements, communication within the ETA structure, and conflict resolution.

12. TECHNICAL PROCESSES, STANDARDS, AND CERTIFICATIONS. Technical processes, standards, and associated certifications are an essential aspect of ETA. They provide documented methods and objective evidence to ensure compliance with technical standards. The associated TWH shall approve each technical process and, together with the DWO, shall:

- a. Publish appropriate documentation that defines the technical process, standard, or certification.
- b. Ensure the continued relevance of the technical process, standard, or certification.
- c. Ensure appropriate training and qualifications are in place for personnel to carry out the process, standard, or certification.

13. FORMS/REPORTS. None.

14. REQUEST FOR CHANGES. The Mission Support Integration Office (DCMS-5) shall be responsible for coordinating revisions to this Instruction. Submit recommended changes via the chain of command to Commandant (DCMS-5).

Paul. F. Zukunft, /s/
Admiral, U.S. Coast Guard
Commandant

- Encl:
- (1) Engineering Technical Authority Roles and Responsibilities
 - (2) Technical Domains
 - (3) Guidance and Procedure for Defining Warranted Technical Areas
 - (4) Engineering Technical Authority Communication, Conflict Resolution, and Technical Decision Making
 - (5) Qualification and Appointment of Technical Warrant Holders
 - (6) Engineering Technical Authority Annual Assessments

ENGINEERING TECHNICAL AUTHORITY ROLES AND RESPONSIBILITIES

1. **BACKGROUND.** This Enclosure defines specific responsibilities for the different roles in the Engineering Technical Authority (ETA) structure. Figure 1 depicts the hierarchy of the ETA structure.

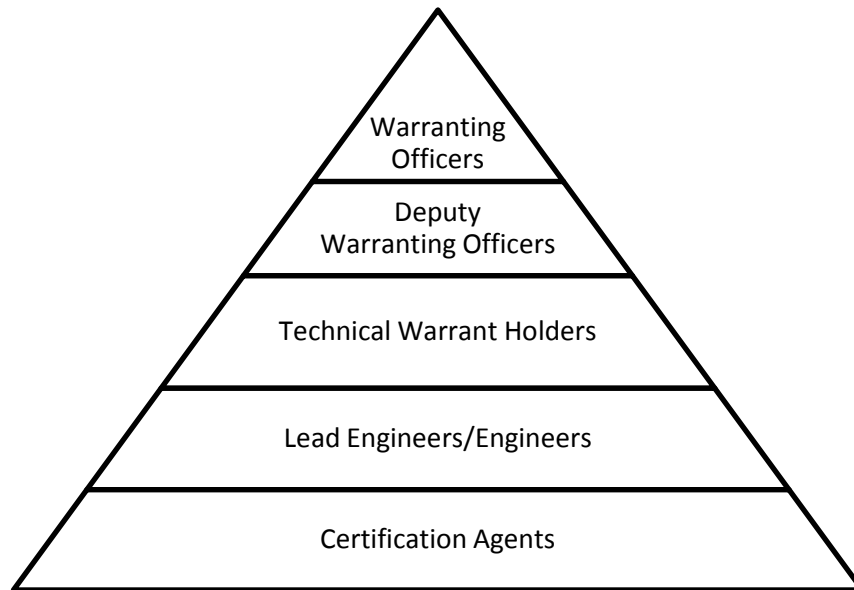


Figure 1. ETA Structure

2. **WARRANTING OFFICER.** Commandants (CG-1), (CG-4), and (CG-6) are the Warranting Officers (WOs) for their technical domains. The WOs shall:
 - a. Ensure ETA supports Program Management in providing engineering expertise and technical guidance throughout system life cycles.
 - b. Designate Deputy Warranting Officers (DWOs) and appoint Technical Warrant Holders (TWHs) in writing.
 - c. Resolve technical disagreements that their DWOs cannot resolve.
 - d. Maintain a record of all technical processes, standards, and certifications within their domain.
 - e. Partner with other WOs to ensure effective alignment.
3. **DEPUTY WARRANTING OFFICERS.** To ensure the integrity of the Coast Guard ETA Program, DWOs shall maintain the necessary expertise within their respective technical domains by nominating individuals proven qualified to serve as TWHs.
 - a. Within their technical domains DWOs shall:
 - (1) Provide leadership and be responsible and accountable for specific technical domains and associated decisions within their technical domain, as designated by the WO.

- (2) Provide written technical policy determinations.
 - (3) Review and nominate TWHs based on qualifications in accordance with Enclosure (5).
 - (4) Ensure that subordinate TWHs maintain required qualifications.
 - (5) Ensure that subordinate TWHs establish technical policy, standards, tools, requirements, processes, and certification requirements in accordance with higher authority policy. This includes any standards maintained by external organizations on behalf of the Coast Guard that address systems engineering concerns within their technical domain.
 - (6) Coordinate across the Deputy Commandant for Mission Support (DCMS) organization to determine the scope of their WTAs.
 - (7) Establish and publish guidance via instructions and process guides.
 - (8) Develop and document the WTA-specific supplemental qualification criteria for each TWH building on the basic qualifications defined in Enclosure (5).
 - (9) Retain responsibility for all WTAs within their technical domain in the absence of an appointed TWH.
 - (10) Maintain an archive of subordinate TWH designation letters, supporting documentation, and all associated correspondence, and forward a copy of designation letters to Commandant (DCMS-5).
 - (11) Monitor the availability of financial and personnel resources necessary for subordinate TWHs to execute their responsibilities.
 - (12) Submit proposals to their cognizant WO to support the development and the necessary activities of the TWHs within their WTAs.
 - (13) In concert with subordinate TWHs and their organizational chains of command, develop, and maintain technically proficient ETA representatives.
 - (14) Closely monitor adherence to domain-related instructions and guidance and promptly execute corrective measures.
 - (15) Conduct annual ETA assessments in accordance with Enclosure (6).
 - (16) Resolve technical disagreements within their specific technical domain that TWHs cannot resolve.
 - (17) Recommend to the WO any necessary deletions, additions, or modifications to domain-related WTAs.
4. TECHNICAL WARRANT HOLDER. TWHs are technical experts in their WTAs and lead WTA-related technical efforts throughout the Coast Guard, independent of organizational boundaries. TWHs shall be government civilian or military employees warranted with consideration by their WO

for both the position they hold and their personal level of qualification. ETA warrants do not circumvent a TWH's responsibilities to their organizational chain of command. However, it does provide them with the authority and accountability to access the DWO and WO directly without fear of administrative repercussions in issues affecting their WTA. WOs shall designate TWHs in writing as specified in this Instruction. Designation as TWH is based on an individual's skills and qualifications. The TWH role is, therefore, not part of a position description for civilian personnel. Within the WTAs defined by their warrants, TWHs shall:

- a. Provide safe, reliable, effective, affordable, integrated, and timely engineering expertise and technical guidance in support of the needs and requirements of Coast Guard systems.
- b. Establish or adopt and maintain technical policy, standards, tools, requirements, processes, and certification requirements in accordance with higher authority policy. This includes any standards maintained by external organizations on behalf of the Coast Guard.
- c. Provide engineering expertise and technical guidance (including response to urgent technical issues) to stakeholders (e.g., acquisition program managers, project managers, product line managers, ship design managers, field units, logistics centers, service centers, operational partners, configuration control boards).
- d. When established standards are not feasible, the TWH shall identify and approve a range of technically acceptable options and associated technical, programmatic, and safety risks.
- e. Inform both the organizational chain of command and the ETA hierarchy of significant engineering and ETA issues, including technical disagreements that cannot be resolved at the TWH or lower levels.
- f. Where decisions deviate from established technical standards, processes, policy, or requirements, formally document, via memorandum, the TWH's concurrence or non-concurrence decision.
- g. Designate responsible organizations, commands, or individuals in writing, where appropriate, as Certification Agents to evaluate products against established standards to obtain certification.
- h. Unless otherwise specified by the WO or DWO, obtain all qualifications defined in Enclosure (5) and maintain qualifications while assigned as TWH.
- i. Provide leadership and be accountable for all engineering and technical decision making within the WTA.
- j. Interface with other TWHs to ensure consistency in selection, interpretation, and implementation of technical requirements and policies.
- k. Designate technically competent personnel to act as their representative on an Integrated Product Team (IPT), other working groups, or to provide services as appropriate. Services may include but are not limited to: analysis, development of requirements, development of design alternatives, investigation, risk assessment and mitigation, and in-service support to program managers and sponsors.

- l. Establish and maintain a network of lead engineers and other engineering support to represent or otherwise support the TWH as necessary.
 - m. Assist DWOs in maintaining the technical competency, expertise, and infrastructure in their WTAs. Create and maintain partnerships with external organizations that will increase the depth of knowledge within the ETA structure (Figure 1).
 - n. Identifying resources needed to properly execute, steward, and sustain ETA to include identification of critical risks and prioritized options.
 - o. Capture and implement lessons learned and best practices.
5. **LEAD ENGINEERS AND ENGINEERS.** Lead engineers, engineers, and other technical specialists within the Coast Guard provide key support to TWHs and other ETA representatives. As tasked by the TWHs they shall provide services such as analysis, technical advice to an IPT, development of design alternatives, investigation, risk assessment, and risk mitigation. They can also represent a TWH on an IPT or other working group.
6. **CERTIFICATION AGENT.** The TWH may designate appropriate Certification Agents (CAs) to evaluate and make recommendations on the certification of specific products, processes, and systems within a WTA. This designation shall be in writing via memorandum. CAs shall evaluate the product, process, or system against the standards established by the cognizant TWH to ensure they are compliant. If they are not compliant or if the CA is unsure or unclear of the standard, the CA shall immediately defer to the TWH for clarification or decision. CAs can be government, public, or private organizations, commands, or individuals with the requisite subject matter expertise to evaluate a product against applicable standards. While CAs provide certification of a product, process, or system, the appropriate TWH is ultimately responsible to ensure the certification meets all Coast Guard requirements. Within the WTA aspects designated by the TWH, CAs shall:
- a. Evaluate products, processes, and systems against standards established by the TWH.
 - b. Make formal recommendations to the TWHs in a timely manner for the certification of evaluated products and systems.
 - c. Maintain the required qualifications, training, and certifications if so designated by their TWHs.

TECHNICAL DOMAINS

1. **BACKGROUND.** Technical domains define the scope of each Engineering Technical Authority (ETA) Warranting Officer (WO) and Deputy Warranting Officer (DWO). Technical domains represent broad engineering disciplines that span across assets and platforms (e.g., Naval Engineering, Human Systems Integration).
2. **COMMANDANT (CG-1) SCOPE.** The Assistant Commandant for Human Resources (CG-1) exercises ETA and is the WO for Human Systems Integration (HSI). HSI addresses the “human” component of the systems engineering process to ensure systems are designed, produced, supported, fielded, and modernized through a complete and careful integration of the human component. This includes human factors engineering (HFE), manpower, personnel, performance support and training, occupational health and system safety, habitability, and personnel survivability design elements to be incorporated into the life cycle development and management of Coast Guard systems. The DWO technical domains for Commandant (CG-1) are as follows:

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| Commandant (CG-1B3) | HSI as it applies to all Coast Guard systems |
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3. **COMMANDANT (CG-4) SCOPE.** The Assistant Commandant for Engineering and Logistics (CG-4) exercises ETA and is the WO for aeronautical, civil, and naval engineering; energy and environmental management; and logistics for all Coast Guard systems. The DWO technical domains for Commandant (CG-4) are as follows:

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| Commandant (CG-41) | Aircraft, aeronautical weapons systems and associated subsystems, support equipment, components and parts, and systems integration of those platforms |
| Commandant (CG-43) | Shore facilities, shore utilities/infrastructure, fixed and floating aids to navigation, and marine environmental response equipment, and associated subsystems and support equipment, including vehicles and systems integration of those assets |
| Commandant (CG-44) | Configuration management, integrated logistics support, supply support, maintenance planning and management, technical data, and logistics information technology applications |
| Commandant (CG-45) | Cutters, boats, shipboard weapon systems and associated subsystems, support equipment, components and parts, and systems integration of those platforms |
| Commandant (CG-46) | Energy management, sustainability, and reliability |
| Commandant (CG-47) | Overall environmental management, including: planning, compliance, and remediation |

4. **COMMANDANT (CG-6) SCOPE.** The Assistant Commandant for Command, Control, Communications, Computer, and Information Technology (C4IT) exercises ETA and is the WO for all C4IT development, operation, and maintenance in the Coast Guard regardless of system. C4IT systems include any enterprise equipment or interconnected system or subsystem of hardware and software, or any national security system that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or

reception of data, voice, video, or information. The DWO technical domains for Commandant (CG-6) are as follows:

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| Commandant (CG-61) | Information Management |
| Commandant (CG-63) | Enterprise Application Management |
| Commandant (CG-64) | Enterprise Infrastructure Management including the design, development, acquisition, maintenance, and enhancement of C4IT infrastructure systems and services, integrated Command and Control (C2) systems, and Navy Type/Navy Owned (NTNO) C4IT systems |
| Commandant (CG-65) | System Security, Information Assurance and Spectrum Management |
| Commandant (CG-66) | Enterprise Architecture and Governance |

5. ADDITIONAL TECHNICAL DOMAINS. WOs may appoint DWOs for additional technical domains as required.

GUIDANCE AND PROCEDURE FOR DEFINING WARRANTED TECHNICAL AREAS

1. **BACKGROUND.** This Enclosure provides the procedure for defining Warranted Technical Areas (WTAs). This procedure applies to establishing a new WTA, changing the scope of an existing WTA, changing alignment of the WTA to a different Deputy Warranting Officer (DWO), or deleting a WTA. Use this procedure for significant changes in a TWH's alignment within the ETA structure. This procedure's execution can be concurrent with TWH appointments.
2. **GUIDANCE.** DWOs are responsible for defining the scope of WTAs within their respective technical domains. There should be TWH ownership, accountable to the DWO and WO, of all engineering and technical standards, tools, processes, and critical technologies for all WTAs. To avoid duplication, the DWO shall provide a clear definition of scope for each WTA. DWOs shall determine the scope of WTAs carefully to avoid too broad or too narrow of a scope. Specifically:
 - a. The scope should be broad enough to justify assigning an individual with sufficient experience, maturity, and seniority to have the needed ETA competencies to be the authoritative source of information for the WTA, and be able to effectively communicate with senior DCMS leadership (Commandants (CG-1), (CG-4), and (CG-6)), including DCMS.
 - b. The scope should be narrow enough to ensure effective oversight and stewardship of the WTA, including timely engagement by the TWH in emergent technical issues and new technologies, and engagement with the TWH's support network.
 - c. The scope should normally result in the assignment of a GS-14/15 or military equivalent as TWH to perform functions directly related to the WTA and managing the associated support network.
3. **PROCEDURE.** To establish a new WTA, change the scope of an existing WTA, change alignment of the WTA to a different DWO, or delete a WTA, the cognizant DWO submits proposals to DCMS for approval via the respective WO and Commandant (DCMS-5). The WO prepares the final WTA definition letters for DCMS signature and ensures proper coordination amongst DCMS Assistant Commandants prior to signature. The DWO can request modifications to existing WTA definitions concurrently with the nomination and appointment of a TWH. Figure 1 describes this process in a flow diagram. Proposals shall include:
 - a. **Scope of the WTA:** To avoid duplication, clearly define the scope for each WTA in an enclosure in the final definition letter and attached to the warrant. Try to keep scope statement enclosures to one page. Define the scope in specific terms and in only enough detail to distinguish the WTA from other WTAs. A sample scope statement that the DWO can tailor is included at the end of this Enclosure. The proposed enclosure should not be a list of responsibilities. The scope statement enclosure shall:
 - (1) Reference higher tier governing documents (e.g., USCG, DHS, DoD) which are specific to the WTA (but not those that apply to many WTAs) to show alignment to those requirements, enhance understanding, and assist in implementation.
 - (2) Include significant interfaces outside the DCMS community or USCG where the TWH is the primary technical interface.

- (3) Describe the technical standards for which the WTA is responsible by specifically articulating broadly used standards (e.g., MIL-STD-278) and describing in more general terms groups of similar technical standards (e.g., ferrous metal specifications). This can include national standards (e.g., American Society for Testing and Materials (ASTM) or American Society of Mechanical Engineers (ASME)).
 - (4) Identify certification requirements defined by those standards and indicate any applicability of those requirements to other WTAs.
 - (5) Justification: The proposal shall provide a justification statement that articulates WTA requirements and boundaries. When applicable, the scope statement can cite higher authority (e.g., DHS, USCG, DoD) governance documents. The justification for changing WTA definitions should normally include but not be limited to:
 - (a) A clear explanation of the need for a WTA to manage technical risk for DCMS.
 - (b) The programs, organizations, and activities that currently have or will have responsibilities related to the WTA, and its relationship to other WTAs.
 - (c) The organizational alignment of the WTA's proposed TWH. This should include a discussion of the resident expertise and alignment of the activity and technical area with the rest of the engineering community. The organizational alignment of the TWH should facilitate continuous and effective WTA oversight.
 - (6) Location: Include in the proposal the organizational location and alignment for the proposed ETA warrant.
 - (7) Interfacing WTAs: The proposal shall include a statement addressing whether the proposed WTA affects the scope of other WTAs. If the proposal impacts the definition of other WTAs, it shall provide recommendations to address those impacts.
- b. Coordination:
- (1) Prior to submitting a request to their WO, DWOs shall ensure that there is agreement among the stakeholders who are affected including the chain of command, sponsor, and ETA structure.
 - (2) Each WO shall review proposed WTA definition proposals submitted by subordinate DWOs to ensure they are clear and consistent with DCMS definitions of WTAs. Before submitting the completed package to DCMS for signature, WOs prepare the final WTA definition letter in collaboration with all critical stakeholders, including, as appropriate:
 - (a) Applicable DCO Program Sponsor
 - (b) Applicable DCMS Program Management
 - (c) Interfacing DWOs

- (d) DCMS Assistant Commandants
- (e) DCMS Logistics and Service Centers
- c. Approval: DCMS approves changes to WTA definitions.
- d. Actions: All DWOs shall:
 - (1) Validate the definitions of WTAs in their domains and submit proposed scope statement changes to respective WOs no later than 120 days from this policy's issue date. This includes obtaining concurrence from interfacing DWOs on the proposed scope statements.
 - (2) Submit future changes to WTA definitions in accordance with the guidance herein.

Flow Diagram for Determining Warranted Technical Areas

This flow chart provides the process for determining WTAs. DWOs have the flexibility to develop and tailor their change control processes for WTAs following the guidance in reference (f).

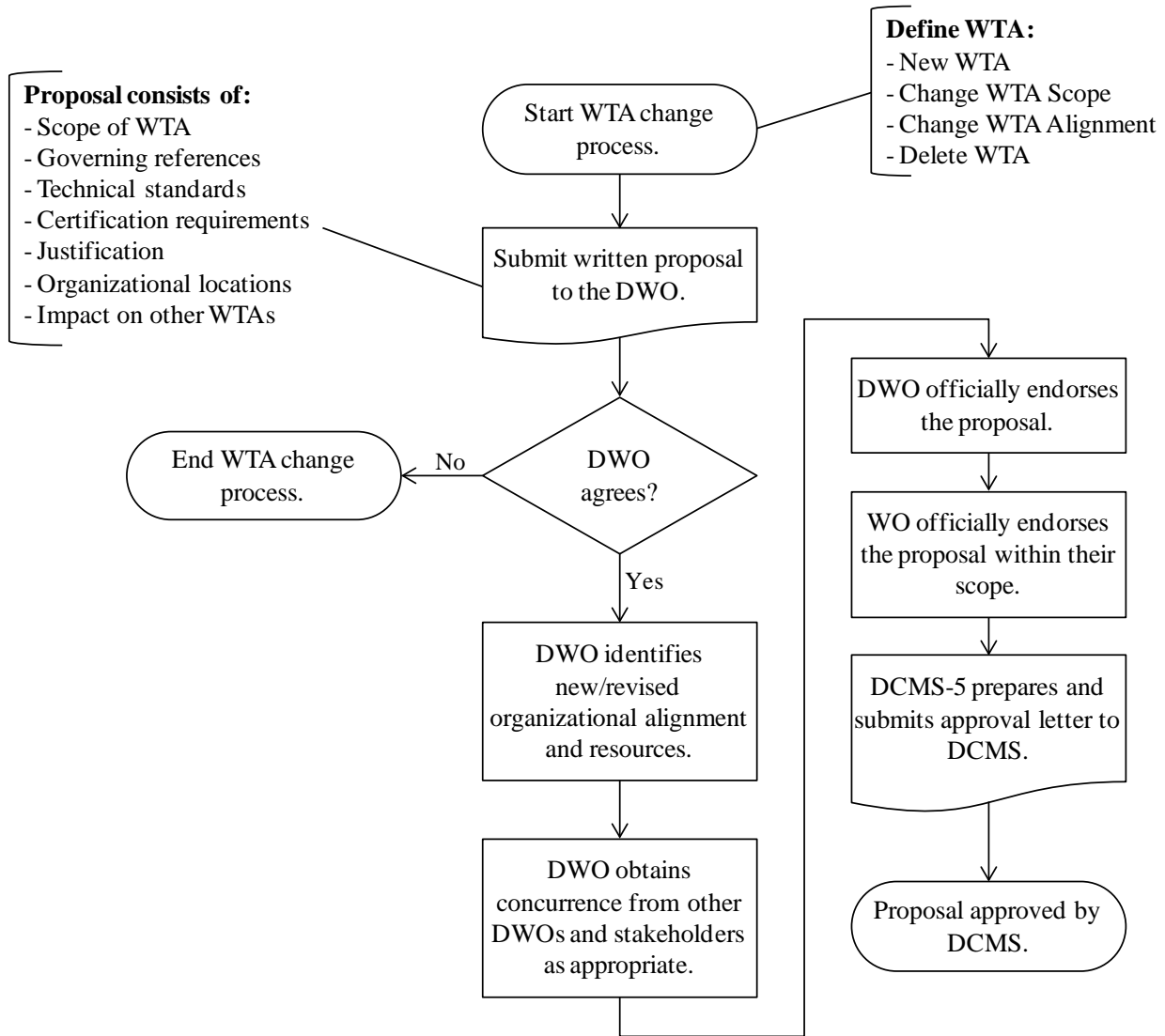


Figure 1

Sample Scope Statement

*Technical Authority Warrant Scope:
Structural Integrity - Surface*

The scope of this warrant includes:

- (a) Ship structures, including new technologies, requirements and practices for design, construction, overhaul, and life cycle maintenance.
- (b) Certification of ship structure for new designs, major modifications, and in-service life cycle maintenance issues for all cutters. Ship structure includes the hull girder and topside structure (i.e., superstructure, deckhouse, and masts).

Deputy Warranting Officer: CG-45

ENGINEERING TECHNICAL AUTHORITY COMMUNICATION, CONFLICT RESOLUTION,
AND TECHNICAL DECISION MAKING

1. BACKGROUND. Conflicts involving technical matters (hereinafter referred to as “Technical Conflicts”) will inevitably arise, both within and among Engineering Technical Authority (ETA), Program Management, and System Sponsorship. This Enclosure provides specifics regarding communication, conflict resolution, and technical decision-making requirements.
2. COMMUNICATION. Communication throughout the ETA structure ensures that all levels are properly aware of issues, policies, and decisions. Communication of significant events, issues, or technical disputes flow up the chain of command. Significant events and issues are those that affect safety, cause significant physical damage, delay deployment, incur substantial cost increase, or involve severe personnel injury. The Technical Warrant Holder (TWH) shall establish lines of communication with Program Managers and System Sponsors.
3. CONFLICT RESOLUTION. If technical conflicts cannot be resolved at a given level they shall be elevated to the next level in the hierarchy for adjudication and resolution. Resolutions shall be formally documented via memorandum.
 - a. Conflicts and issues between TWHs under the same WO will be resolved by the DWO within that ETA.
 - b. Conflicts and issues between TWHs under different WOs will be resolved by the respective DWOs.
 - c. Conflicts and issues between DWOs will be resolved by their respective WOs.
 - d. Conflicts and issues for major systems acquisitions will be guided by the processes in reference (c).
4. TECHINCAL DECISION MAKING. DWOs or TWHs shall document technical decisions involving the interpretation of defined standards and agreements in a memorandum. These memorandums serve as supporting documentation to the TWHs and Program Management. They help ensure all stakeholders are aware of the rationale behind DWO/TWH recommendations or concurrence regarding design and other technical-related options, alternatives, and courses of action. These memorandums are also support development and documentation of the broader program/project management technical decisions. At a minimum, each memorandum shall consist of a brief statement that includes background information; a description of the technical issue, options, or solutions considered; recommendations or decisions; and supporting rationale for the recommendation or decision. It should be concise and provide a clear description of the issues and agreements. The appropriate DWO or TWH shall draft these memorandums, address them to Program Management, and copy all other appropriate TWHs.

QUALIFICATION AND APPOINTMENT OF TECHNICAL WARRANT HOLDERS

1. **BACKGROUND.** This Enclosure establishes the responsibilities and requirements for Technical Warrant Holder (TWH) qualification and training. These responsibilities and requirements apply throughout the Deputy Commandant for Mission Support (DCMS) organization for all employees who perform TWH responsibilities unless specifically exempted in writing by the Warranting Officer (WO) or Deputy Warranting Officer (DWO).
2. **RESPONSIBILITIES.** The following responsibilities apply to the qualification and appointment of TWHs:
 - a. The relevant DWO nominates, and the WO appoints the TWH. In coordination with his or her supervisor, the TWH is then responsible for monitoring policy execution within his or her Warranted Technical Area (WTA). DWOs are responsible for ensuring that qualification applications and documentation of TWHs continuous learning activities are accurate and available for audit purposes.
 - b. The appropriate WOs representative to the Acquisition Workforce Certification Board is responsible for annually ensuring the applicable requirements in accordance with paragraph 4 below continue to meet the needs of their technical domains.
3. **REQUIREMENT.** TWHs must meet the minimum qualifications and standards specified in this Enclosure. TWHs must be subject matter experts in the WTA for which they are to be responsible. The DWO may establish additional qualifications and continuous learning activities required for TWHs within their WTAs. This additional qualification shall be formally documented via a memorandum to the WO. The DWO shall maintain and update documentation regarding TWH requirements and ensure it is available for audit purposes.
4. **QUALIFICATION.** Prior to appointment, TWHs must, at a minimum, meet the Systems Engineering (SE) Level 1 training requirements specified in DHS Directive 064-04-006. DWOs may waive this requirement for a period of up to one (1) year. Waivers can enable newly assigned personnel to complete the qualifications or address extenuating circumstances where an incumbent TWH is unavailable to execute the responsibilities of their warrant (e.g., travel, leave, reassignment).
5. **APPOINTMENT.** The DWOs shall nominate TWHs within their technical domain for WO approval. The WO appoints TWHs via memorandum routed to the TWH through the DWO. Both nomination and appointment should be made in consultation with the TWH's administrative chain of command. The memorandum shall at a minimum define the WTA, the role and responsibilities as TWH within the domain, recurrent training requirements, and the duration of the assignment. DWOs shall provide a copy of each appointment to Commandant (DCMS-5). Appointments shall be reviewed upon reassignment of a TWH.

ENGINEERING TECHNICAL AUTHORITY ANNUAL ASSESSMENTS

1. BACKGROUND. Annual Assessments provide the Warranting Officer (WO) with the information needed to ensure that their technical domains are being managed in accordance with this Instruction. This assessment helps determine whether the DWOs have the necessary resources needed to properly execute, steward, and sustain ETA.
2. REQUIREMENT. DWOs shall conduct an annual assessment, which shall include the following, at a minimum:
 - a. A review of overall robustness and effectiveness of the technical domains.
 - b. A summary of major initiatives in the technical domain to improve ETA execution.
 - c. Prioritized issues, risks, and gaps with mitigation plans.
 - d. A schedule for Technical Warrant Holder (TWH) annual qualification reviews.
3. TWH RESPONSIBILITIES. The TWH is responsible for submitting to the DWO the following in support of the annual assessment:
 - a. Specific discussion of positive and negative consequences of notable decisions and recommendations, with particular attention on lessons learned.
 - b. An analysis of strengths, weaknesses, opportunities, and threats to their WTA.
 - c. Improvement plans for any issues, risks, or gaps identified within their WTA.
 - d. Current TWH qualifications.