NOAA/NESDIS

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CONFIGURATION MANAGEMENT PROCEDURAL REQUIREMENTS

March 01, 2019

COMPLIANCE IS MANDATORY

Prepared by:
U.S. Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Environmental Satellite, Data, and Information Service (NESDIS)

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Prepared by:

Dan St. Jean **Date:** 14 May 2019
Deputy Director, Office of System Architecture and Advanced Planning

Approved by:

Karen St. Germain **Date:** May 14, 2019
Director, Office of System Architecture and Advanced Planning

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PREFACE

P.1 PURPOSE

The purpose of this Procedural Requirements (PR) document is to establish common requirements to plan, develop, implement, and maintain Configuration Management (CM) across the National Environmental Satellite Data and Information Service (NESDIS) projects.

P.2 APPLICABILITY

a. This PR applies to all NESDIS Offices (as defined in Appendix A). This PR applies to NESDIS employees and NESDIS support contractors that support NESDIS technical work. This PR applies to other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

b. The requirements enumerated in this document are applicable to all projects and programs (as defined in Appendix A). For existing projects, the Director of the Office of Systems Architecture and Advanced Planning (OSAAP) may grant requests for variance allowing continuation of current practices that do not comply with this PR.

c. National Oceanic and Atmospheric Administration (NOAA) collaborates with many domestic and international partners to fulfill its mission. With OSAAP's concurrence and mutual agreement, NESDIS Offices may tailor the requirements of this PR or follow the partner's CM approach.

d. In this PR, all mandatory actions (i.e. requirements) are identified by the symbol "[REQ]" to unambiguously define all requirements. They are also captured in the Requirements Matrix in Appendix C. The Requirements Matrix takes precedence if there are any discrepancies between the narrative and the Matrix with respect to identifying requirements. The terms "shall" and "must" are not used to specify mandatory actions because they can be interpreted as legally binding terminology, which removes all agency discretion and can create a potential liability problem for NOAA/NESDIS.

P.3 AUTHORITY

NESDIS-PD-1110.1, NESDIS Systems Engineering and Program Management Policy.

P.4 APPLICABLE DOCUMENTS

1. NESDIS-PR-1300.1, NESDIS Systems Engineering Procedural Requirements.

Chapter 1. Introduction

a. This Configuration Management Procedural Requirements (CMPR) document establishes common requirements to plan, develop, implement, and maintain NESDIS projects of varying scope and size.

b. Configuration Management is a technical and management process applying appropriate resources, processes, and tools to establish and maintain consistency between the product requirements, the product, and associated product configuration information. The term "product" includes documents, facilities, firmware, hardware, software, tools, materials, processes, services, and systems

c. A disciplined CM process ensures that:

(1) the product definition information and changes to that information are identified, approved, verified, and recorded in sufficient detail to produce and support the product throughout its life cycle;

(2) the product conforms to the specified requirements.

e. The CM processes result in accurate configuration information to facilitate product interchangeability and consistent reproducibility, and thus contribute to reduction of technical risks as well as continuous, safe and effective product development, production, utilization, support and retirement.

f. The requirements established in this PR may be tailored using the guidelines provided in Section 3.4.

g. Figures within this PR are intended to be notional, not prescriptive.

h. This NESDIS PR focuses on configuration management procedural requirements. It flows down from NESDIS-PD-1110.1, NESDIS Systems Engineering and Program/Project Management Policy, as shown in Figure 1.

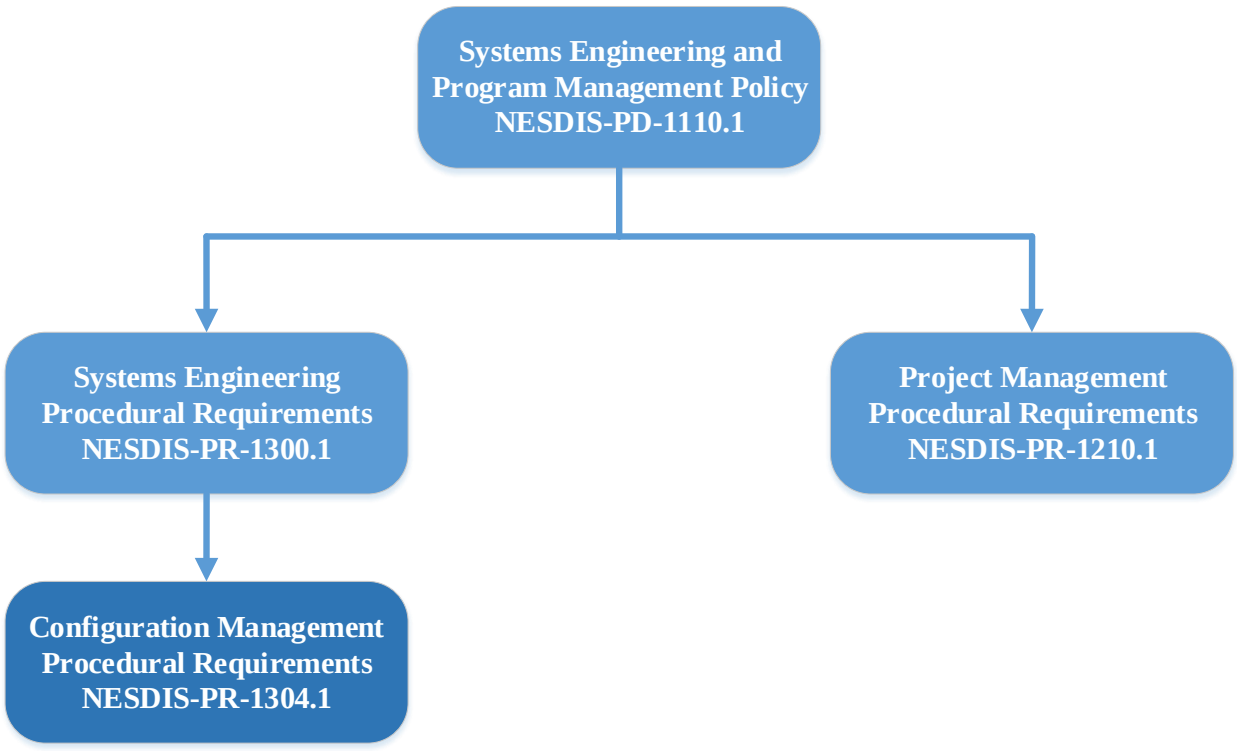

Figure 1. Hierarchy of Related Documents

Chapter 2. Roles and Responsibilities

2.1 Office of System Architecture and Advanced Planning

a. [REQ-001] OSAAP ensures compliance with this PR.
OSAAP will review and approve the Configuration Management Plans (CMPs) for all projects that do not execute solely within a single NESDIS Office, or meet the following criteria per DOC Policy:
- Does the project require special management attention because of its importance to NESDIS' mission or functions?
- Does the project have significant policy implications?
- Does the project have external visibility?
- Does the project have high development, operating, or maintenance costs?
- Does the project have unusual funding mechanism?
- Is the project defined as major by DOC capital planning and investment control process?

2.2 NESDIS Office Directors

a. [REQ-002] NESDIS Office Directors establish policies, processes, and procedures within their Office to execute the requirements of this PR.

2.3 Project Manager

a. [REQ-003] The Project Manager allocates adequate resources to meet the requirements of this PR commensurate with the scope, size, and complexity of the project.

Chapter 3. Configuration Management Procedural Requirements

3.1 Configuration Management Definitions

a. **Configuration change:** An alteration to a product and/or product configuration information.

b. **Configuration Management:** The process by which NESDIS will establish and maintain consistency between the product and the information about the product. Some examples of information about the product include requirements, design, and operational information.

c. **Configuration Management Plan (CMP):** A document that describes the description, definition, and processes of how CM is accomplished and how consistency between the product definition, the product's configuration and the CM records is achieved and maintained throughout the applicable phases of the product's life cycle or the duration of the contract.

d. **Configuration Item (CI):** Any product, as defined in Chapter 1, depending upon the intended level of baseline control.

e. **Configuration Control Board (CCB):** A panel of personnel with managerial decision-making authority and technical subject matter expertise, convened to assess proposed or realized changes to the system, subsystem or other baselined configuration-controlled item. The CCB will assess the impact of the change on the system, make a decision of whether or not to implement a proposed change, and take steps to ensure the change is applied and flowed correctly throughout the system with baselined documents and other items updated accordingly.

f. **Configuration Baseline:** Configuration of a product, at a specific point in time, which serves as a basis for defining change, for conducting verifications, and for other management activities.

g. **Variance:** A departure from approved product definition information, for a limited amount of time or for a specified effectivity, that does not require revision of approved product definition information.

3.2 Configuration Management Process

The CM process described in this section is based on the CM functions and principles described in the Configuration Management Standard EIA649B developed by SAE International. For information systems projects, this CM process needs to be complemented by the security-focused information system CM process developed by the Office of Assistant Chief Information Officer for Satellites (ACIO-S), described in the NESDIS Configuration Management Planning Policy and Procedures document (hereafter referred to as the ACIO-S SecCM Policy).

3.2.1 Configuration Management Process Description

Figure 2 shows the main functions of the configuration management process.

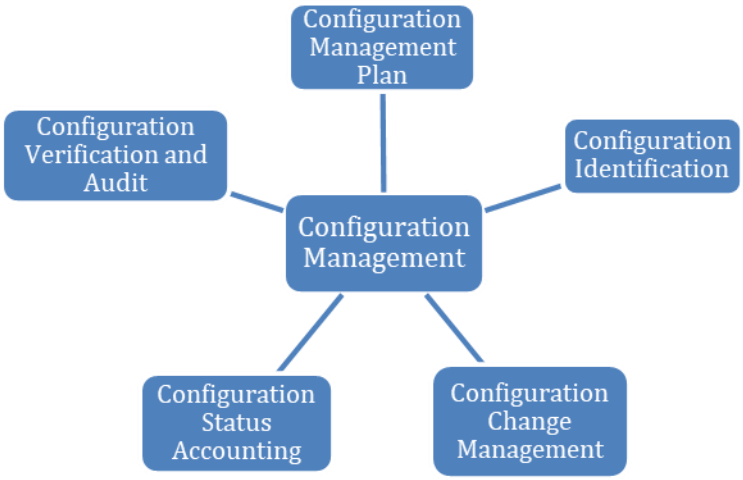

Figure 2. Configuration Management Functions

1. **CM Planning and Management**: CM planning and management function is concerned with planning for all other CM functions such as how the configuration of a product is defined, how a configuration under control is changed, how configuration changes are tracked, and how the successful implementation of the CM process is verified. Comprehensive CM planning and management includes the following:
   - Developing a Configuration Management Plan (Section 3.3)
   - Implementing and applying appropriate policies and procedures for effective configuration management
   - Establishing the CM roles/responsibilities and a Configuration Control Board (CCB)
   - Selecting CM tools
   - Providing CM training
   - Establishing CM performance metrics to enable continuous improvement

2. **Configuration Identification:** The configuration identification function helps uniquely identify and label all items to support traceability and change management. Typically, top-level products, the components that make up the top-level products, and the interfaces that need to be uniquely managed and controlled are considered Configuration Items (CIs). This function includes the following:
   - Selecting appropriate Configuration Items (CIs). Typical CIs include hardware, software, documents, etc.
   - Identifying the configuration information for the CIs. Typical configuration information includes a unique identifier for each configuration item, relationships between configuration items, and configuration baselines.
   - Defining, documenting, and baselining the product configuration. Normally, four baselines shown in Table 1 are controlled. For smaller projects, these baselines can be tailored (see

section 3.4).

Table 1: Configuration Baselines

Functional Baseline	The functional baseline is the approved configuration documentation that describes a system's or top-level CI's performance requirements (functional, interoperability, and interface characteristics) and the verification required to demonstrate the achievement of those specified characteristics.
Allocated Baseline	The allocated baseline is the approved performance-oriented configuration documentation for a CI to be developed that describes the functional and interface characteristics that are allocated from a higher-level requirements document or a CI and the verification required to demonstrate achievement of those specified characteristics. The allocated baseline extends the top-level performance requirements of the functional baseline to sufficient detail for initiating development of a CI. The allocated baseline is usually controlled by the design organization (NESDIS Office or Program Office) until all design requirements have been verified. The allocated baseline is typically established at the successful completion of the Preliminary Design Review (PDR).
Product Baseline	The product baseline is the approved technical documentation that describes the configuration of a CI during the production, fielding/deployment, and operational support phases of its life cycle. The established product baseline is controlled as described in the configuration management plan that was developed during formation of the project or program. The product baseline is typically established at the completion of the Critical Design Review (CDR).
As-Deployed Baseline	The as-deployed baseline occurs at the Operational Readiness Review (ORR). At this point, the design is considered functional. The system must have completed all testing per documented Verification and Validation Plans to declare it ready to support the operations and maintenance phase. Each baseline may have multiple builds, therefore each build has its own ORR.

3. **Configuration Change Management:** Configuration change management is a process to manage changes to and variances from approved configuration baselines using a systematic process. The Configuration Change Management process includes the following:
   - Identifying and classifying the need for a change or a variance. The classification of a requested change (please refer to Table 2) determines the appropriate level of review and the applicable change review authority.
   - Defining and documenting impacts of the proposed change or variance
   - Evaluating the proposed change or variance and coordinating it through the approval or disapproval decision
   - Incorporating the change in the product and its related product configuration information
   - Verifying that the change has been incorporated and that the product is consistent with the product configuration information

- Capturing change and variance information for the product in the configuration status accounting system
- Completing any required follow-up study to identify and correct conditions that led to a need for a variance

Table 2: Classification of requested changes

Major change	A "major" change is a change to the baseline configuration documentation that has significant impact to the baseline specification, cost, safety, or compatibility with interfacing products, The changes require extensive testing for system revalidation. They require significant document updates and retraining of personnel. The changes have significant impact on cost, schedule and performance.
Minor change	A "minor" change corrects or modifies configuration documentation or processes without impact to the interchangeability of products or system elements in the system structure. The changes require minor retesting and have minor impact on schedule, cost, performance and document and training.

Note: A request for variance (also called a deviation or waiver) is used to manage a temporary departure from the specified baseline requirements. This does not require change to the configuration definition information because it is an authorized exception to the configuration information. A request for variance should be evaluated to determine the appropriate level of approval required for authorizing the departure and for directing the action to be taken to prevent recurrence.

4. **Configuration Status Accounting:** Configuration Status Accounting (CSA) is the recording and reporting of configuration information necessary to manage the CIs effectively. It provides the configuration of every CI at any time during the system life cycle. It provides attached verification results to each configuration change as evidence as to how the change was verified. It also provides a complete history of all changes to CIs. CSA ensures that:
   - Current and historical configuration information is maintained as the CI evolves through all phases of its life cycle
   - Accurate information concerning status of proposed changes, variations, and waivers, change decisions and associated documents is available from initiation to implementation and verification
   - Status and final disposition of identified discrepancies and identified actions during each configuration audit is available
   - The configuration information is accessible for analysis, reporting, and capture of metrics to improve the CM process

5. **Configuration Verification and Audit:** Configuration audits are performed to confirm that the configured product is accurate and complete. As shown in Table 3, the configuration audit is typically divided into Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA). The Configuration verification and audit function helps ensure that the documented CM processes are being followed to establish the configuration baseline and to control changes to the configuration baseline. It also helps evaluate whether the CM processes are effective or need improvements. This is accomplished by:
   - Inspecting documents, products, and records
   - Reviewing procedures, processes, and systems of operations to verify that the product has achieved its required performance requirements and functional attributes; and
   - Verifying that the product's requirements and design are documented.

Table 3: Types of configuration audits

Functional Configuration Audit (FCA):	The FCA examines the functional characteristics of the configured product and verifies that the product has met, via test results, the requirements specified in its functional baseline documentation approved at the PDR and CDR. FCAs will be conducted on all products (as defined in Chapter 1), and will precede the PCA of the configured product.
Physical Configuration Audit (PCA):	The PCA (also known as a configuration inspection) examines the physical configuration of the configured product and verifies that the product corresponds to the build-to (or code-to) product baseline documentation previously approved at the CDR. PCAs will be conducted on both hardware and software configured products.

3.2.2 Configuration Management Process Requirements

(1) [REQ-004] Implement a comprehensive CM process that incorporates the CM functions described in this PR.
(2) [REQ-005] Develop a CMP that defines how the CM functions will be implemented in accordance with the CM process described in this PR.
(3) [REQ-006] Provide configuration documentation to support technical reviews described in the program/project Systems Engineering Plan (SEP).
(4) [REQ-007] Generate a list of appropriate CIs and the configuration information for the CIs.
(5) [REQ-008] Establish configuration baselines and generate the configuration information that defines the configuration baselines.
(6) [REQ-009] Apply configuration control to CIs, associated configuration information, and the established configuration baselines.
(7) [REQ-010] Define a Configuration Change Management (CCM) process to support changes and variances to the configuration baselines.
(8) [REQ-011] Establish CCB(s) to review, evaluate, and approve proposed change requests and variance requests.

(9) [REQ-012] Establish a CSA function that provides accounting of configuration information for each CI, configuration baselines, changes to configuration baselines, and status of in-process changes.
(10) [REQ-013] Perform configuration audits to verify that the appropriate configuration baselines have been established and the CM processes are in place to maintain traceability and consistency between the CIs and their configuration information.
(11) [REQ-014] Conduct and/or participate in FCAs and PCAs.
(12) [REQ-015] Prepare a configuration audit report after each configuration audit.

3.3 Configuration Management Plan (CMP)

a. The CMP is a document that describes the description, definition, and processes of how CM is accomplished.
b. It also describes how consistency between the product definition, the product's configuration and the CM records is achieved and maintained throughout the applicable phases of the product's life cycle.
c. CMP provides the basis for implementing CM and communicating what will be done and by whom, when, where, how, and why it is being done. In addition, the CMP identifies the roles and responsibility interfaces of CM, as well as how those interfaces will be managed.
d. The CMP is a tailorable document that captures current and evolving configuration management strategy, and its relationship with the overall project management effort throughout the life cycle of the system.
e. The CMP may be a separate document (if the project is of sufficient size or complexity) or part of other project planning documents such as the Project Plan or the SEP.
f. The CMP is baselined at the System Requirements Review (SRR) and updated up to the Preliminary Design Review (PDR).
g. A Configuration Management Plan outline is provided in Appendix D.
h. In addition to the project-level CMP, information systems projects may have a need to develop a security-focused CMP in accordance with the ACIO-S SecCM Policy.

3.3.1 Configuration Management Plan Requirements

(1) [REQ-016] Determine the appropriate level within the system structure at which CMP is to be developed, taking into account factors such as number and complexity of interfaces, operating environments, and risk factors.
(2) [REQ-017] The CMP must be consistent with higher level CMPs and the project plan.
(3) [REQ-018] Baseline the CMP per the NESDIS procedures and policies at the SRR and update until the PDR.
(4) [REQ-022] If applicable, develop an information system security specific CMP in accordance with the ACIO-S SecCM Policy.

3.4 Tailoring Guidelines

a. CM requirements tailoring is the process used to seek relief from the requirements of this PR consistent with project objectives, allowable risk, and constraints.
b. The tailoring process should occur at the beginning of a project, but may occur at any time in the project's life cycle. It results in changes to the implementation of requirements depending on the timing of the request.

c. The results of tailoring will be documented in the Requirements Matrix (Appendix C) and submitted to OSAAP along with supporting rationale.
d. The results of the tailoring will be documented in the next revision of the CMP, along with supporting rationale and documented approvals from the requirement owner.

3.4.1 Tailoring requirements:

(1) [REQ-019] Requests for tailoring are submitted through the NESDIS configuration change management process.
(2) [REQ-020] The results of tailoring are documented in the Requirements Matrix (Appendix C) and submitted to OSAAP for approval along with supporting rationale.
(3) [REQ-021] The results of the tailoring will be documented in the next revision of the CMP.

Appendix A: Glossary

Approval: Authorization by a required management official to proceed with a proposed course of action. Approvals are documented.

Baseline: An agreed-to set of requirements, designs, or documents that will have changes controlled through a formal approval and monitoring process.

Configuration Control Board: a panel of personnel with managerial decision-making authority and technical subject matter expertise, convened to assess proposed or realized changes to the system, subsystem or other baselined configuration-controlled item. The CCB will assess the impact of the change on the system, make a decision whether to implement a proposed change, and take steps to ensure the change is applied and flowed correctly throughout the system, with baselined documents and other items updated accordingly.

Customer: The organization or individual that has requested a product and will receive the product to be delivered. The customer may be an end user of the product, the acquiring agent for the end user, or the requestor of the work products from a technical effort. Each product within the system hierarchy has a customer.

Decision Authority: The individual authorized by NESDIS to make important decisions for programs and projects under their authority.

Maintenance: Activities performed to ensure the continued operations of any system that has been formally transitioned to the operational organization. Maintenance can be:

1. preventive (changes to systems to prevent errors, problems, or failures before they occur)
2. corrective (emergency or routine fixes that are needed as a result of anomalies),
3. science (calibration updates and algorithm changes necessary to ensure product quality or correct for unanticipated anomalies or artifacts)
4. limited scope adaptive (modifications that maintain current system requirements, controlled configuration, and interfaces).

NESDIS Office(s): A term used in the widest sense to include NESDIS Headquarters Offices, NESDIS Operations and Acquisitions Offices, and the National Centers for Environmental Information (NCEI). For a list of NESDIS Headquarters Offices and NESDIS Operations and Acquisitions offices, please refer to the NESDIS Organizational Chart.

Process: A set of activities used to convert inputs into desired outputs to generate expected outcomes and satisfy a purpose.

Process Requirements: Requirements on people or organizations capturing functions, capabilities, or tasks that must be performed so that the entire system can meet the stakeholder expectations.

Product: In the context of Configuration Management, the term “product” includes documents, facilities, firmware, hardware, software, tools, materials, processes, services, and systems.
Program: A strategic investment by a Mission Directorate (or mission support office) that has defined goals, objectives, architecture, funding level, and a management structure that supports one or more projects.

Project: A specific investment having defined goals, objectives, requirements, life cycle cost, a beginning, and an end. A project yields new or revised products or services that directly address

NESDIS' strategic needs. They may be performed wholly in-house; by Government, industry, or academia partnerships; or through contracts with private industry.

Requirement:

1. A statement of a function to be performed, a performance level to be achieved, or an interface to be met.
2. The agreed upon need, desire, want, capability, capacity, or demand for personnel, equipment, facilities, or other resources or services by specified quantities for specific periods of time or at a specified time. Acceptable form for a requirement statement is individually clear, correct, feasible to obtain, unambiguous in meaning, and can be validated at the level of the system structure at which stated. In pairs of requirement statements or as a set, collectively, they are not redundant, do not override one another, are adequately related with respect to terms used, and are not in conflict with one another.

Risk: In the context of mission execution, the potential for performance shortfalls, which may be realized in the future, with respect to achieving explicitly established and stated performance requirements. The performance shortfalls may be related to any one or more of the following mission execution domains: (1) safety, (2) technical, (3) cost, and (4) schedule.

System: The combination of elements that function together to produce the capability required to meet a need. The elements include all hardware, software, equipment, facilities, personnel, processes, and procedures needed for this purpose.

Systems Approach: The application of a systematic, disciplined engineering approach that is quantifiable, recursive, iterative, and repeatable for the development, operation, and maintenance of systems integrated into a whole throughout the life cycle of a project or program.

Systems Engineering Plan: The SEP identifies the roles and responsibility interfaces of the technical effort, as well as how those interfaces will be managed. The SEP is the vehicle that documents and communicates the technical approach, including the application of the common technical processes; resources to be used; and key technical tasks, activities, and events along with their metrics and success criteria.

Tailoring: The process used to seek relief from the SE PR requirements consistent with program or project objectives, allowable risk, and constraints.

Technical Team: A multidisciplinary group of individuals with appropriate domain knowledge, experience, competencies, and skills assigned to a specific technical task.

Technical Risk: Risk associated with the achievement of a technical goal, criterion, or objective. It applies to undesired consequences related to technical performance, human health and safety, mission assets, or environment.

Traceability:

1. The degree to which a relationship can be established between two or more products of the development process.
2. The identification and documentation of derivation paths and allocation or flow-down paths of work products in the work product hierarchy.
3. The degree to which each element in a software development product establishes its reason for existing.

4. Discernible association among two or more requirements, system elements, verifications or tasks.

Validation (of a product): The process of showing proof that the product accomplishes the intended purpose based on stakeholder expectations and the Concept of Operations. The process may be determined by a combination of test, analysis, demonstration, and inspection. (Answers the question, “Am I building the right product?”)

Validation (of requirements): The continuous process of ensuring that requirements are well-formed (clear and unambiguous), complete (agrees with customer and stakeholder needs and expectations), consistent (conflict free), and individually verifiable and traceable to a higher-level requirement or goal. (Answers the question, "Will I build the right product?")

Verification (of a product): Proof of compliance with requirements/specifications. Verification may be determined by test, analysis, demonstration, inspection, or a combination thereof. (Answers the question, “Did I build the product right?”)

Appendix B: List of Acronyms

CCB	Configuration Control Board
CI	Configuration Item
CM	Configuration Management
CMP	Configuration Management Plan
CMPR	Configuration Management procedural requirements
CSA	Configuration Status Accounting
FCA	Functional Configuration Audit
IEEE	Institute of Electrical and Electronics Engineers
INCOSE	International Council on Systems Engineering
NCEI	National Centers for Environmental Information
NESDIS	National Environmental Satellite, Data, and Information Service
NOAA	National Oceanic and Atmospheric Administration
NESDIS PR	NESDIS Procedural Requirements
ORR	Operations Readiness Review
OSAAP	Office of System Architecture and Advanced Planning
PCA	Physical Configuration Audit
PD	Policy Directive
PDR	Preliminary Design Review
PR	Procedural Requirements
REQ	Requirements
SE	Systems Engineering
SEP	Systems Engineering Plan
SRR	System Requirements Review
STAR	Satellite Applications and Research

Appendix C: Configuration Management Requirements Matrix

Section	REQ#	Requirement
2.1	001	OSAAP ensures compliance with this PR.
2.2	002	NESDIS Office Directors establish policies, processes, and procedures within their Office to execute the requirements of this PR.
2.3	003	The Project Manager allocates adequate resources to meet the requirements of this PR commensurate with the scope, size, and complexity of the project.
3.2	004	Implement a comprehensive CM process that incorporates the CM functions described in this PR.
3.2	005	Develop a CMP that defines how the CM functions will be implemented in accordance with the CM process described in this PR.
3.2	006	Provide configuration documentation to support technical reviews described in the program/project Systems Engineering Plan (SEP).
3.2	007	Generate a list of appropriate CIs and the configuration information for the CIs.
3.2	008	Establish configuration baselines and generate the configuration information that defines the configuration baselines.
3.2	009	Apply configuration control to CIs, associated configuration information, and the established configuration baselines.
3.2	010	Define a Configuration Change Management (CCM) process to support changes and variances to the configuration baselines.
3.2	011	Establish CCB(s) to review, evaluate, and approve proposed change requests and variance requests.
3.2	012	Establish a CSA function that provides accounting of configuration information for each CI, configuration baselines, changes to configuration baselines, and status of in-process changes.
3.2	013	Perform configuration audits to verify that the appropriate configuration baselines have been established and the CM processes are in place to maintain traceability and consistency between the CIs and their configuration information.
3.2	014	Conduct and/or participate in FCAs and PCAs.
3.2	015	Prepare a configuration audit report after each configuration audit.
3.3	016	Determine the appropriate level within the system structure at which CMP is to be developed, taking into account factors such as number and complexity of interfaces, operating environments, and risk factors.
3.3	017	The CMP must be consistent with higher level CMPs and the project plan.
3.3	018	Baseline the CMP per the NESDIS procedures and policies at the SRR and update until the PDR.
3.3	022	If applicable, develop an information system security specific CMP in accordance with the NESDIS SecCM Policy.
3.4	019	Requests for tailoring are submitted through the NESDIS configuration change management process.
3.4	020	The results of tailoring are documented in the Requirements Matrix (Appendix C) and submitted to OSAAP for approval along with supporting rationale.

3.4	021	The results of the tailoring will be documented in the next revision of the CMP.

Appendix D: Configuration Management Plan Outline

Unless required by the customer, the form and format of the CM planning documentation, whether included with other project planning or included in a stand-alone CM plan, is not critical. However, execution of Configuration Management per the planning documentation is essential to successfully maintain consistency between product requirements, product information and the product configuration.

A comprehensive CM Plan that reflects efficient application of configuration management principles and practices to the identified context and environment would normally include the following topics:

- General product definition and scope
- Description of CM activities and procedures for each major CM function
- Organization, roles, responsibilities, and resources
- Definitions of terms
- Programmatic and organizational interfaces
- Deliverables, milestones, and schedules
- Subcontract flow down requirements

The documented CM planning should be re-evaluated following any significant change affecting the context and environment. CM Planning should also be reviewed on a periodic basis to make sure that an organization's application of CM functions is current.

Appendix E: References

1. SAE International Configuration Management Standard, EIA649B.
2. NASA Systems Engineering Handbook, Rev 1, NASA/SP-2016-6105 REV 2, February 2017.
3. INCOSE Systems Engineering Handbook, INCOSE-TP-2003-002-04 2015.

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