Centers for Medicare & Medicaid Services
Office of Information Services

CMS Policy for Change Management

Version 1.0

August 14, 2013

Record of Changes

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1. Introduction

The purpose of this policy is to ensure that any changes to Centers for Medicare & Medicaid Services (CMS) applications, systems, hardware, operating environments, and related specifications, user manuals, and maintenance manuals are managed through an established process. This policy establishes the guiding principles, direction, and expectations for planning and performing change management (CM) at CMS. This policy mandates that changes to all controlled information technology (IT) products are made in accordance with this policy. The implementation of this policy is intended to mitigate the risks associated with unauthorized or uncoordinated changes to CMS assets.

CMS expects that the implementation of this policy will be tailored or scaled to accommodate both large and small projects/systems in order to plan and apply the appropriate level of CM rigor that is necessary to protect CMS assets.

1.1 Scope

This CM policy applies to IT system changes and the business changes that impact IT assets. This document is a companion to the *CMS Policy for Configuration Management* and applies to all CMS IT environments (e.g., mainframe or client/server), all automated systems, software applications and products, supporting hardware and software infrastructure (e.g., equipment, networks, and operating systems), and associated documentation.

This policy applies equally to all CMS operational IT systems as well as those under development. Typically, a change control board (CCB) manages systems under development, specifically established as part of the contract/project management for the project. There must also be a CCB in place for operational systems. The policy is applicable to the CMS centers and offices, all subordinate offices, projects, components, acquisitions, contracts, contractors, subcontractors, suppliers, as well as all agreements with partner/stakeholder organizations.

1.2 Change Management Overview

CM is the process that controls the lifecycle of all changes, enabling beneficial changes with minimal disruption to CMS business operations and IT services. The goals of the *CMS Policy for Change Management* include the following:

- Establish and enforce a standard process for planning, approving, implementing, and communicating changes to all CMS applications, systems, hardware, and environments and related assets
- Establish clearly defined best practice processes to ensure compliance with legal or regulatory requirements
- Prevent or minimize risks that can occur as a result of unauthorized or uncoordinated changes

The CM approach is scalable from a small project/system with few staff to large projects/systems with many staff, contractors, and stakeholders. CMS assets and changes to them can be appropriately controlled and managed by tailoring or scaling to the correct change management rigor for the specific application, project, or system.

Projects and systems should use appropriately scaled formal methods, including chartered CCBs, point of contact (POC) lists, and formal processes and procedures, as described in this policy.

2. Operational Policy

Each CMS project, application, system, operating environment, and related asset must institute systematic and measurable CM processes and procedures to ensure that proposed changes are properly identified, prioritized, documented, coordinated, reviewed, approved, rejected or deferred, communicated, and implemented, and that the risk associated with making the proposed changes is properly managed and mitigated.

2.1 Scaled Implementation

Implementation of this policy shall be scaled to the appropriate level of rigor necessary to develop, operate, and maintain CMS projects and systems. The implementation shall be adequate and sufficient to appropriately control and protect CMS assets from unauthorized or uncoordinated changes in accordance with this policy.

2.2 Change Control Boards

CMS projects and systems may elect to use formal CCBs as the CM forum for establishing baselines and approving/disapproving subsequent changes to those baselines. A CCB may exist at the project or system level with charters, operating procedures, processes, and plans that are developed, implemented, monitored, improved, communicated, and maintained.

CCBs approve changes to baselines in accordance with CMS policies, plans, guidance, processes, and procedures. CCBs are responsible for ensuring that CRs are processed, communicated, evaluated, and implemented in a timely manner. Responsibilities of CCBs include:

- Evaluating the scope, applicability, and effect of proposed changes
- Soliciting comments on CRs from all stakeholders that could be impacted by the approval of the change
- Assessing impacts to costs, schedules, or compliance with requirements
- Approving or rejecting the CR based on risk, defined strategic initiatives, program business objectives, and budgetary parameters
- Delegation of a CR to a chartered lower-level CCB with appropriate authority (if applicable)

- Escalation of a CR beyond its scope of authority to a higher-level CCB (if applicable)

A change approval authority shall be designated in the project charter, which shall authorize the operation of a CCB. Each CCB charter shall authorize a tailored change approval authority to govern the baselines under its control. Operations and maintenance (O&M) change management shall be handled in a similar manner.

2.3 Communication of Changes

Formal proactive communication and coordination are key CM success factors. Communication and coordination are supported by:

- Defining a CM communication plan
- Maintaining a POC list
- Engaging stakeholders in CR impact assessments
- Reporting CR status horizontally, as well as vertically

The communication threads are horizontal across CCBs and vertical from lower-level CCBs up to higher-level CCBs, when applicable. Both vertical and horizontal communications are required to effectively manage cross-organizational, cross-project, and interagency dependencies and agreements; multiple environments/platforms; and technical refreshes. Not all applications have multiple layers of CCBs.

It is important to engage related (interfacing) systems and business processes in the CM process. A representative from an external CCB or from an interfacing organization shall be on the POC list and may attend a CCB meeting to present or be notified of a CR, such as a change to an interface control document (ICD). The CCB maintains the POC list to support this need.

CMS CCBs shall practice proactive communications to support internal and external interfaces; these communications may be in the form of an ICD, data use agreement (DUA), computer match agreement (CMA), and/or interagency agreement (IAA). The POC list shall include representatives from interfacing organizations, where applicable.

3. Applicable Laws/Guidance

Current approved versions of the following laws, guidance, sources of authority, and other reference documents should be applied to the implementation of this policy and associated processes and procedures:

- Clinger-Cohen Act of 1996, Division E, National Defense Authorization Act for Fiscal Year 1996 (P.L. 104-106), February 10, 1996
- Federal Information Security Management Act of 2002 (FISMA) (P.L. 107-347)
- *Department of Health and Human Services (HHS) Information Resource Management Guidelines for Capital Planning and Investment Control*, HHS-IRM-2000-0001-GD, January 8, 2001, (especially Guideline A: Model Process, 3.4. Configuration Management and Guideline G: The Capability Maturity Model)

- *CMS Information Security (IS) Acceptable Risk Safeguards (ARS) including CMS Minimum Security Requirements (CMSR)* Appendix A: CMSR High Impact Level Data – FINAL Version 1.5 - Document Number: CMS-CIO-STD-SEC01-1.5 – dated July 31, 2012
- CMS Expedited Life Cycle (XLC) Framework
- CMS Technical Reference Architecture, Version 3.0, Centers for Medicare & Medicaid Services, February 12, 2013, and applicable Supplements
- Software Engineering Institute (SEI®) CMMI®
- Institute of Electrical and Electronics Engineers (IEEE) standard 729-1983 for CM
- American National Standards Institute/Electronic Industries Alliance (ANSI/EIA) 649 – National Consensus Standard for CM
- Information Technology Infrastructure Library (ITIL) Framework
- International Organization for Standardization/ International Electrotechnical Commission (ISO/IEC) 12207 Standard for Software Life Cycle Processes
- Project Management Institute (PMI®) Project Management Body of Knowledge (PMBOK®) Guide

4. Reference Documents

Refer to the specific document when more information is needed:

- CMS Policy for Configuration Management
- CMS Expedited Life Cycle (XLC) Framework
- CMS Change Control Board Charters
- CMS Change Management Plan Template

5. Effective Dates/Implementation

This operational policy becomes effective on the date that the CMS Chief Information Officer (CIO) signs it and remains in effect until officially superseded or cancelled by the CIO.

6. Approval

/s/

Tony Trenkle
CMS Chief Information Officer and Director,
Office of Information Services

August 14, 2013

Date

Appendix A. Glossary

Automated System	A configuration of hardware and software infrastructure, applications, and associated documentation—either custom-designed or commercial off-the-shelf (COTS) software or a combination thereof—that automates the activities of collecting and/or accessing data or information and performing logical computations in support of CMS processes. (CMS Policy for Configuration Management, April 2012, Document Number: CMS-CIO-POL-MGT01-01)
Baseline	(1) A specification or product that has been formally reviewed and agreed upon that thereafter serves as the basis for further development and that can be changed only through formal change management procedures. (2) A document or a set of such documents formally designated and fixed at a specific time during the lifecycle of a configuration item. (3) Any agreement or result designated and fixed at a given time from which changes require justification and approval. (IEEE Std. 610-12-1990) A baseline is configuration identification formally designated and applicable at a specific point in the lifecycle of a configuration item. (CMS Policy for Configuration Management)
Change Approval Authority	The designated organization, person, or CCB responsible for approving or disapproving a CR and committing the resources necessary to implement the change
Change Control Board (CCB)	A group of people responsible for evaluating and approving or disapproving proposed changes to configuration items and for ensuring implementation of approved changes (IEEE Std. 610-12-1990) The designated organization that determines the status of a CR and resolves conflicts resulting from a CR impact analysis or authority issues that occur at or among its subordinate CCBs.
Change Control Board Charter	A document that defines the purpose, objectives, authority, membership, and responsibilities of an established CCB (CMS Policy for Configuration Management)
Change Management	Judicious use of means to effect a change or proposed change on a product or service (CMMI-DEV and CMMI-SVC, V1.3)
Change Request (CR)	A formal document used to request a modification to specified software components, hardware, or documents that is managed through an established change management process. A CR may be initiated any time after a baseline has been established (CMS Change Management Plan)

Configuration	The functional and physical characteristics of hardware or software as set forth in technical documentation or achieved in a product (IEEE Std. 610-12-1990)
Configuration Management	A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item, control changes to those characteristics, record and report change processing and implementation status, and verify compliance with specified requirements (IEEE Std. 610-12-1990)
eXpedited Life Cycle (XLC)	The eXpedited Life Cycle (XLC) is CMS's systems development lifecycle framework to guide and coordinate IT projects
Interface Control Document (ICD)	This XLC artifact describes the relationship between a source system and a target system (CMS Expedited Life Cycle Process: Detailed Description, Version 2.10, August 10, 2012)
IT Project	A temporary endeavor undertaken to create a unique IT product, service, or result (e.g., an automated system) (CMS Policy for Configuration Management)
POC Review	Prior to final issuance, CRs are formally communicated vertically and horizontally throughout the enterprise for review and evaluation. This review period is referred to as the "Point of Contact (POC) Review Process" or "POC Review." The CCB shall maintain a POC list for this purpose. The POCs shall review and assess the impact of each CR.

Appendix B. Acronyms

ANSI/EIA	American National Standards Institute/Electronic Industries Alliance
CCB	Change Control Board
CIO	Chief Information Officer
CM	Change Management
CMA	Computer Match Agreement
CMMI ®	Capability Maturity Model Integration
CMS	Centers for Medicare & Medicaid Services
CMSR	CMS Minimum Security Requirements
COTS	Commercial Off-the-Shelf
CR	Change Request
DUA	Data Use Agreement
FISMA	Federal Information Security Management Act of 2002
HHS	Department of Health and Human Services
IAA	Interagency Agreement
ICD	Interface Control Document
IEEE	Institute of Electrical and Electronics Engineers
ISO/IEC	International Organization for Standardization / International Electrotechnical Commission
IT	Information Technology
ITIL	Information Technology Infrastructure Library
O&M	Operations and Maintenance
OIS	Office of Information Services
PMBOK ®	Project Management Body of Knowledge
PMI ®	Project Management Institute
PMP	Project Management Plan

POC	Point of Contact
TRA	Technical Reference Architecture
XLC	Expedited Life Cycle