

## Commonwealth Office of Technology Standard Process

**Standard Process Number:** COT-009

**Effective Date:** 12/11/2009

**Revision Date:** 04/27/2021

**Reviewed Date:** 06/15/2021

**Subject:** COT Process for IT Change Management

**Standard Process Statement:** This document outlines the process to be followed by Commonwealth Office of Technology (COT) personnel, contractors, and vendors when requesting, scheduling and implementing changes to the Commonwealth of Kentucky's IT infrastructure and COT-managed business applications.

**Purpose:** To establish a process by which Changes may be evaluated, approved, and implemented in a manner that mitigates risk, prevents unplanned disruptions, and promotes repeated success over time, and to ensure the roles of responsible parties are defined and documented.

**Standard Process Maintenance Responsibility:** The Change Management Branch in the Division of Governance and Strategy is responsible for maintaining this process.

### **Definition(s):**

**Category:** A classification within the ITSM system that allows Change records to be grouped by the type of technology associated with the Change being performed. The Category also helps to determine which set of Approvers has authority to approve or reject a Change.

**Change:** The addition, modification, or removal of anything that could have a direct or indirect effect on services. This includes, but is not limited to: IT hardware, operating systems, middleware, custom developed and commercial off-the-shelf (COTS) software applications, telecommunications equipment and call management systems, data center electrical and HVAC systems, and cloud or "as-a-service" solutions utilizing the Commonwealth's shared IT infrastructure.

**Change Record:** The record in the ITSM system which results from an approved Request for Change (RFC), and contains all the details of the Change throughout its lifecycle.

**Change Request:** A proposal declaring the Requester's desire to Change a Configuration Item (CI), and outlining the justification, plans, and desired schedule for implementing the Change.

**Configuration Item (CI):** The managed component that will be experiencing the Change. CIs exist in a hierarchy, with relationships and dependencies across each layer and throughout other layers. Noting the correct CI on the Change Request helps to demonstrate the overall impact of the Change.

**Daily Report and Update Meeting (DRUM):** Daily meeting to discuss and report on active Incidents and Problems, as well as proposed and in-progress Changes, and on-going projects across COT. Each Division is required to send at least one representative to present content on behalf of his/her team, participate in meeting dialog, and convey specific, pertinent details back to teammates and managers.

**Emergency Change:** A Change requested in urgent fashion outside of normal business hours in order to resolve a service outage, prevent severe degradation, or correct a known vulnerability. These Changes must be implemented immediately, and cannot be scheduled in advance or channeled through the typical approvals. They are assessed and approved solely by the Change Manager or his/her proxies.

Forward Schedule of Changes (FSC): Document noting the dates and times that approved Changes are scheduled for implementation. The FSC is referenced during the Assess phase to avoid potential conflicts or collisions, and during the Review phase to ensure Changes were implemented on the approved dates and times. The FSC provides awareness of scheduled Changes to COT staff and Agency partners outside of COT.

Impact: Addresses the scope of the Change's impact on affected Configuration Items or business functions. Impact levels are (1) High, (2) Medium or (3) Low.

ITSM System: The system of record for capturing Change Requests and managing Changes across the Change lifecycle. The tool may employ automation to orchestrate certain Tasks, regulate associated workflows, or provide notification to stakeholders.

Justification: The business need that establishes the basis of the Change.

Normal Change: A Change that follows the full Change Management lifecycle, including planning and scheduling, assessment by a Change Assignee, approval by a designated Change Approver, and implementation according to its enclosed plans and schedule, and post-implementation review (PIR).

Primary Team: A designation in the ITSM system of a Requester's organizational unit. A Requester may be a member of multiple teams, but the Primary Team is where the majority of his/her work is allocated.

Priority: Addresses the urgency of the Change Request as perceived by the affected parties. The priority levels are (1) Critical, (2) High, (3) Moderate, (4) Low.

Risk Assessment: A risk-focused survey presented to the Requester upon submission of a Change Request. The ITSM system will translate the answers to the Risk Assessment questions to automatically calculate the Risk Value, which approximates the Change's overall risk profile.

Standard/Pre-Authorized Change (SPAC): A Change that is routine, low-risk, and follows a defined set of steps. SPAC are entered in the ITSM System using Change templates, which are approved by the Change Manager at the Service Owner's suggestion. These Changes are not assessed or approved individually, but monitored for quality and accuracy using spot-checking and reporting routines.

Type: Determines which pre-defined workflow a Change Request should follow. The Change Types in use at COT are Normal Change, Emergency Change, and Standard/Pre-Authorized Change (SPAC).

## **Roles and Responsibilities:**

Requester: The individual who submits the Change Request, and is responsible for the accuracy and completeness of all information contained therein. Along with the required Implementation, Test, and Rollback plans, the Requester must complete the Risk Assessment that accompanies the Change Request. Although the Requester often serves as the Change Coordinator, the role may be delegated to another team member.

Change Manager: The Change Management process owner with oversight responsibility for all Changes, as well as all Change Management processes and procedures. The Change Manager has the authority to approve or reject Emergency Changes and proposals for Standard Pre-Authorized Changes (SPAC), and to modify, postpone, or cancel any Change Request that fails to align with the overall purpose of this process.

Change Assignee: The Change Management team member responsible for preserving the quality of the Change Record. The Change Assignee oversees the Assessment, Authorization, and Post-Implementation Review of Normal Changes, and the Post-Implementation Review of Emergency Changes.

**Change Approver:** The Service Owner or Service Owner's designee responsible for verifying Change details, ensuring alignment with short- and long-term business goals, and if approved, assuming any risks associated with a Change prior to implementation. Approvers generally serve in a COT leadership role.

**Change Coordinator:** The party responsible for overseeing implementation of an approved Change, and creating the necessary Change Tasks in the ITSM system. The Coordinator works with subject matter experts from other participating teams to enact the defined Implementation, Test, and Rollback plans according to the approved Change schedule. Although the Requester often serves as the Change Coordinator, the role may be delegated to another team member.

**Task Implementer:** An individual responsible for performing a specific Task for the planned implementation of a Change. The ordered completion of Change Tasks results in completion of the Change. Each Task Implementer is responsible for the successful completion of his/her Task as defined by the plans contained within the Change Request, according to the approved Change schedule.

## **Procedure:**

When submitting a Change Request, the Requester first selects the appropriate Change Type (see definitions):

- Normal Change
- Emergency Change
- Standard/Pre-Authorized Change (SPAC)

### **I. Normal Change**

1. During the *New* phase, the Requester enters information in the Change Request form in the ITSM system, and completes the accompanying Risk Assessment. The Requester shall provide values for all required fields:
  - i. The Short Description should be a brief summary of the Change to take place, and the Description a more detailed explanation of the same;
  - ii. On the Planning tab, provide information about the Change's Implementation Plan, Backout Plan, and Test Plan;
  - iii. On the Schedule tab, note the Planned Start Date/Time and the Planned End Date/Time; whenever possible, Change Requests that require effort by multiple teams, carry a high level of risk, or are service-wide or enterprise-wide in scope should be submitted at least 48 hours prior to the Planned Start Date/Time to allow adequate time for assessment, authorization, and assignment;
  - iv. Select the Configuration Item (CI) that will be experiencing the Change. If the CI cannot be found, the Requester may key the CI name in the "CMDB Add" field;
  - v. If the Change is related to an Incident, Problem, Service Request, or another Change, note that ticket number on the Related Records tab;
  - vi. Upon clicking Save, the Requester is prompted to complete the Risk Assessment by clicking the corresponding button at the top right of the form. The Change Request will not move forward until completion of the Risk Assessment.
2. During the *Assess* phase, the Change Request is assigned to the Change Management Team. A member of the team becomes the Change Assignee, and performs the following:
  - i. Verifies field values are accurate and complete, and notes the Change Request's Impact and Priority to ensure timely evaluation;
  - ii. To the best of his/her ability using available tools, determines whether the correct Configuration Item (CI) was selected, and checks Planned Start and End Dates against Forward Schedule of Changes (FSC) for potential conflicts;
  - iii. Reviews the Risk Assessment to ensure answers are accurate and match the other details outlined in the Change Request;

- iv. Checks that the appropriate Category was selected, making corrections as needed, and chooses the corresponding Approval Group;
  - v. If the Change Assignee determines that the Change Request bears further discussion by subject matter experts from other areas, he/she may elect to present it at the following day's Daily Report and Update Meeting (DRUM) prior to moving forward with Authorization. Selection for DRUM is at the discretion of the Change Assignee, but typically applies to Changes that meet one or more of the following conditions:
    1. Change carries a High Risk value;
    2. Impact of the Change is set to High;
    3. Change could potentially cause an outage to another, dependent IT service;
    4. Change appears to have a potential for unknown or undisclosed outcomes;
    5. Risk Assessment responses do not match the Change Description, CI selection, etc.
  - vi. After completing the assessment, including optional presentation at the DRUM, the Change Assignee advances the Change Request to the *Authorize* phase.
3. During the *Authorize* phase, the ITSM system sends a request for approval to the members of the Approval Group selected by the Change Assignee:
    - i. Approvers for each Category are pre-designated by the Service Owner;
    - ii. Each Approver in the Approval Group is notified that an approval is pending, and action by a single member of the Approval Group is adequate to approve or reject the Change;
    - iii. If an Approver rejects the Change Request, the ITSM System returns it to the Change Management Team to be re-evaluated;
    - iv. Approval of a Change Request is an indication of the Approver's assumption of any and all risks associated with the Change.
  4. Upon approval, the Change will advance to the *Scheduled* phase to await implementation, and may now be referred to as a Change Record.
    - i. The ITSM system assigns a Coordination Task to the Requester's Primary Team. If another team has responsibility for coordinating the Change activities, the Coordination Task may be reassigned to that team. The Assignee for this Task becomes the Change Coordinator.
    - ii. The Change Coordinator creates the necessary Tasks to implement the Change, and assigns to the appropriate teams. Task Assignees should accept their Tasks and add notes as work progresses; however, Tasks may not be closed while the Change is in the Scheduled phase.
    - iii. The Change Management team adds the approved Normal Change to the Forward Schedule of Changes (FSC).
  5. When the Change is ready to implement, the Change Coordinator must manually advance the ticket to the *Implement* phase (note: if implementation is attempted outside the approved date and time window indicated on the Change Record, the ITSM system will display an alert; however, the Change will be allowed to continue):
    - i. The ITSM system will automatically fill the Actual Start Date field;
    - ii. Assignees may close Tasks, providing work notes as prompted, and additional Tasks may still be created and assigned;
    - iii. When implementation is complete, the Change Coordinator shall close the Coordination Task. The Coordination Task should be the final Task to be closed.
  6. Once all Tasks are closed, the ITSM system automatically fills the Actual End Date, and moves the Change into the *Review* phase. The Change Assignee conducts a Post-Implementation Review by:
    - i. Reading compiled Change Task notes to determine the relative success of the Change;
    - ii. Noting whether the Change was implemented during the approved date/time window;
    - iii. To the best of his/her ability using available tools, checking for Incidents or Problems that may have resulted from the Change.

- iv. Adding closure notes to the Change Record, and selecting the Close Code that most accurately depicts the result of the Change:
        - a. Successful
        - b. Successful with Issues
        - c. Unsuccessful
        - d. Incomplete
        - e. Canceled
7. After completion of the PIR, the Change Assignee will advance the Change to the *Closed* phase, where the ITSM system will place it in a read-only state.

## II. Emergency Change

1. During the *New* phase, the Requester enters information in the Change Request form in the ITSM system, and completes the accompanying Risk Assessment. The Requester shall provide values for all required fields:
  - i. The Short Description should be a brief summary of the Change to take place, and the Description a more detailed explanation of the same;
  - ii. The Priority field is set to "Critical" by default;
  - iii. The Requester must select the Configuration Item (CI) that will be experiencing the Change. If the CI cannot be found, the Requester may key the CI name in the "CMDB Add" field;
  - iv. If the Change is related to an Incident, Problem, Service Request, or another Change, the Requester may note that ticket number on the Related Records tab;
  - v. For Emergency Changes, the fields on the Planning and Schedule tabs are optional. If the Change Request is being submitted during normal business hours, and the Change is being scheduled in advance, it should likely be submitted as a Normal Change.
  - vi. Upon clicking Save, the Requester is prompted to complete the Risk Assessment by clicking the corresponding button at the top right of the form. The Change Request will not move forward until completion of the Risk Assessment.
2. The Emergency Change bypasses the *Assess* phase and advances directly to the *Authorize* phase. The ITSM system generates a request for approval by the Emergency Change Approval Group, which includes the Change Manager and his/her proxies.
  - i. Each Approver in the Approval Group is notified that an approval is pending, and action by a single member of the Approval Group is adequate to approve or reject the Change;
  - ii. If an Approver rejects, the Emergency Change Request is cancelled;
  - iii. Approval of an Emergency Change Request is an indication of the Approver's understanding that the benefits of urgently implementing the Change offset the known risks.
3. Upon approval, the Change will advance to the *Scheduled* phase to await implementation, and may now be referred to as a Change Record.
  - i. The ITSM system assigns a Coordination Task to the Requester's Primary Team. If another team has responsibility for coordinating the Change activities, the Coordination Task may be reassigned to that team. The Assignee for this Task becomes the Change Coordinator.
  - ii. The Change Coordinator creates the necessary Tasks to implement the Change, and assigns to the appropriate teams. Task Assignees should accept their Tasks and add notes as work progresses; however, Tasks may not be closed while the Change is in the *Scheduled* phase.
4. When the Change is ready to implement, the Change Coordinator must manually advance the ticket to the *Implement* phase (note: if implementation is attempted outside the approved date and time window indicated on the Change Record, the ITSM system will display an alert; however, the Change will be allowed to continue):

- i. The ITSM system will automatically fill the Actual Start Date field;
  - ii. Assignees may close Tasks, providing work notes as prompted, and additional Tasks may still be created and assigned;
  - iii. When implementation is complete, the Change Coordinator shall close the Coordination Task. The Coordination Task should be the final Task to be closed.
5. Once all Tasks are closed, the ITSM system automatically fills the Actual End Date, and moves the Change into the *Review* phase. A member of the Change Management team becomes the Change Assignee, and conducts a Post-Implementation Review by:
  - i. Reading compiled Change Task notes to determine the relative success of the Change;
  - ii. Noting whether the Change was implemented during the approved date/time window;
  - iii. To the best of his/her ability using available tools, checking for Incidents or Problems that may have resulted from the Change.
  - iv. Adding closure notes to the Change Record, and selecting the Close Code that most accurately depicts the result of the Change:
    - a. Successful
    - b. Successful with Issues
    - c. Unsuccessful
    - d. Incomplete
    - e. Canceled
6. After completion of the PIR, the Change Assignee will advance the Change to the *Closed* phase, where the ITSM system will place it in a read-only state.

### III. Standard/Pre-Authorized Change

1. The Requester browses the ITSM System's Standard Change Catalog, and selects the appropriate template for the Change to be performed. The ITSM system automatically fills numerous fields from the template, with the Requester providing values for the remaining required fields at runtime.
  - i. The Requester must select the Configuration Item (CI) that will be experiencing the Change. If the CI cannot be found, the Requester may key the CI name in the "CMDB Add" field.
  - ii. If the Change is related to an Incident, Problem, Service Request, or another Change, the Requester may note that ticket number on the Related Records tab.
  - iii. Upon the Requester clicking Save, the ITSM system will advance the Change Request to the Scheduled phase.
2. Upon the Requester clicking Save, the ITSM system will advance the Change Request to the *Scheduled* phase and create one or more Tasks, depending on the template used:
  - i. Some Tasks are created with the assigned Branch and/or Team pre-filled, whereas some leave the Branch and/or Team to be selected by the Requester;
  - ii. The Requester/Change Coordinator may create additional Tasks as needed for implementation;
  - iii. Task Assignees should accept their Tasks and add notes as work progresses; however, Tasks may not be closed while the Change is in the *Scheduled* phase.
3. When the Change is ready to implement, the Change Coordinator must manually advance the ticket to the *Implement* phase (note: if implementation is attempted outside the date and time window indicated on the Change Record, the ITSM system will display an alert; however, the Change will be allowed to continue):
  - i. Assignees may close Tasks, providing work notes as prompted, and additional Tasks may still be created and assigned;
  - ii. When implementation is complete, the Change Coordinator shall close the Coordination Task. The Coordination Task should be the final Task to be closed.

4. When all Tasks are closed, the ITSM system automatically fills the Actual End Date, and moves the SPAC into the *Review* phase for a period of three (3) days:
  - i. The Change Management team does not conduct Post-Implementation Review (PIR) on individual SPAC, except by a special request from COT leadership;
  - ii. During this time the Work Notes are still editable;
  - iii. After the three (3) day period has elapsed, the ITSM system will automatically advance the Change to the *Closed* phase, and place it in a read-only state.

**\*End\***

**Change Lifecycle Diagrams**



