



White Paper
August 2006

BMC® Best Practice Process Flows for ITIL Change Management

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This edition applies to version 7.0 of the licensed program.

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1 Introduction

The *BMC Best Practice Process Flows for ITIL Change Management White Paper* describes the automated process flows implemented in the BMC® Remedy® 7.0 Change Management application that are based on the IT Infrastructure Library (ITIL) best practices.

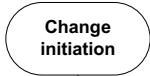


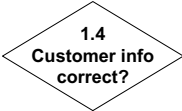
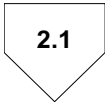

Change management is the process of planning, scheduling, implementing, and tracking changes to the IT infrastructure, or any other aspect of service, in a controlled manner. By using change management, you can implement approved changes with minimal disruption to the business environment.



To help you understand how the ITIL change management process is supported by our application, this white paper includes:

- Process flow diagrams—for both the high-level overview, and the detailed steps
- Text explaining how the process is supported by the application
- Delineation of the process into separate user roles

Process flow shapes and text indicators

The process flow diagrams in this white paper use the following shapes and text indicators:

Shape or text indicator	Description
	Start or end shape indicates the starting or ending point of the process flow, for example, change initiation.
	Flow line shape indicates the sequence of steps and the direction of the process flow.
	Action or process shape indicates a single step in the flow, for example, determine incident type.
	Decision shape indicates a branching point (Yes or No) in the process flow, for example, customer info correct?
	Off-page shape indicates that the process continues in a different diagram; the number indicates the step. For example, process continues in a different diagram with step 2.1.
	Chevron shape indicates that the process started from a different diagram and continues here. For example, process continues from step 2.11.

Shape or text indicator	Description
	Subroutine shape indicates a sequence of actions that perform specific tasks embedded within an external process flow, for example, Incident Management or Change Management.
	Identifies databases used in ITSM 7.0 process flows, for example, service level management or CMDB.
<i>Notification to assignees of related open incidents</i>	Italicized blue text indicates notification, for example, notification to assignees of related open incidents.

For more information

For information about additional BMC best practices, see the following documentation:

- *BMC Best Practice Process Flows for ITIL Incident and Problem*

Note: Documentation will be available at a future date to provide BMC best practices for ITIL processes as supported by the 7.0 BMC Remedy Asset Management and BMC Service Level Management applications.

For detailed information about the ITSM 7.0 applications, see the following documentation:

- *BMC Remedy Service Desk: Incident Management 7.0 User's Guide*
- *BMC Remedy Service Desk: Problem Management 7.0 User's Guide*
- *BMC Remedy Change Management 7.0 User's Guide*

For information about other BMC Remedy applications mentioned in this white paper, see the following documentation:

- *BMC Atrium CMDB 2.0 User's Guide*
- *BMC Remedy Knowledge Management 7.0 User's Guide – Remedy Interface*
- *BMC Service Level Management 7.0 User's Guide*

Chapter

2 Change management process flows

BMC Remedy Change Management enables your organization's service desk to create, implement, and manage change requests. It provides a system of planning, scheduling, implementing, and tracking changes that need to be completed within your organization. Using Change Management enables you to assess the scope of the change, analyze the costs associated with the change (in terms of time and expense), perform impact and risk analysis, and schedule the resources needed to complete the change.

A change request is the controlled process for the addition, modification, or removal of approved, supported, or baselined hardware, networks, software, applications, environments, or systems. A change request can involve multiple change activities.

The change management process flow includes the following user roles:

Table 2-A: Change Management user roles

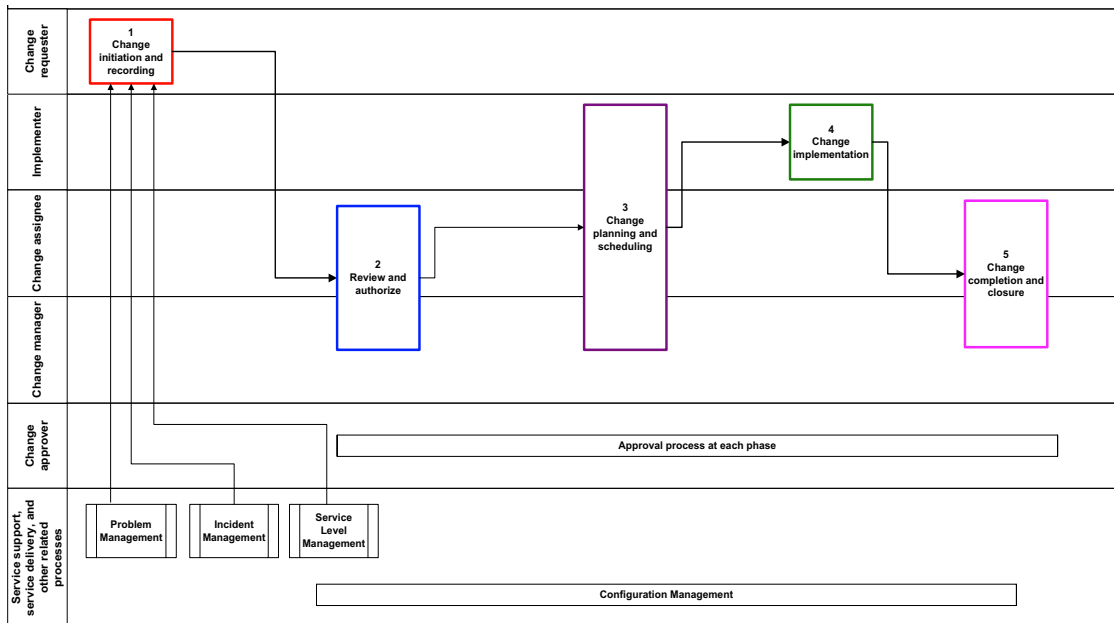
Role	Description
Change requester	This is a business user who submits a Request for Change (RFC) to the support staff. While any user can enter change requests into the system, change requests are likely initiated by a change manager or manager.
Implementer	This is a support person or group responsible for executing the tasks that make up a change request.
Change assignee	This is the person responsible for planning and implementing assigned changes. The Change Assignee might be working actively on the change, or coordinating the efforts of other groups or individuals.
Change manager	This is the member of the support staff who is responsible for creating, planning, and tracking the change request.
Change approver	The approver, or the Change Authority in ITIL terminology, could be the manager of the requester or the manager of the group which is responsible for implementing the change request, depending on which approval process your organization is using.
Service support, service delivery, and other related processes	This includes databases and other ITSM processes that interact with the change management process, including: <ul style="list-style-type: none">■ Incident Management■ Problem Management■ Request Management■ SLM

This section describes the Change Management processes and user roles. For information about using the application, see the *BMC Remedy Change Management 7.0 User's Guide*.

Overview

The following process flow diagram illustrates the lifecycle of a typical change request.

Figure 2-A: Change Management Process Overview



Stage 1 Change initiation and recording—A change requester can create a new change request directly within the Change Management application. A Request for Change (RFC) can also be generated externally from the Problem Management, Incident Management, or the Service Level Management processes.

Stage 2 Review and authorize—If the change request requires approval, the change manager (or in some cases, the change assignee) initiates the approval process. Each level of approvers must review the request and approve it. For example, the Change Advisory Board (CAB) must approve all significant changes but the change manager can approve a standard change.

Stage 3 Change planning and scheduling—A forward schedule of changes (FSC) is planned. The change request includes planning all the changes approved for implementation, targeting dates, and estimating the risks and costs. If the change request must be divided into several tasks, the change manager can create and schedule these tasks. When changing any configuration item (CI), planning also involves checking the BMC Atrium CMDB to account for all CIs under the control of Configuration Management.

Note: By Configuration Management, we mean the process of managing your CIs.

Stage 4 Change implementation—As the change request enters the Implementation stage, the implementers work on the CIs that need improving or altering. They log their progress as they work to implement the change request and the tasks that comprise it. When a task is completed, the implementer for the task with the next number in the sequence is notified of their task assignment. Implementers can track the cost of implementing their tasks.

Stage 5 Change completion and closure—The change manager or change assignee verifies that the change request was completed. They also might analyze key performance indicators (KPIs), for example, whether the change successful, or how many incidents were eliminated by the change request. Other KPIs include emergency or (unscheduled) changes, changes by priority or impact, and change cost variance

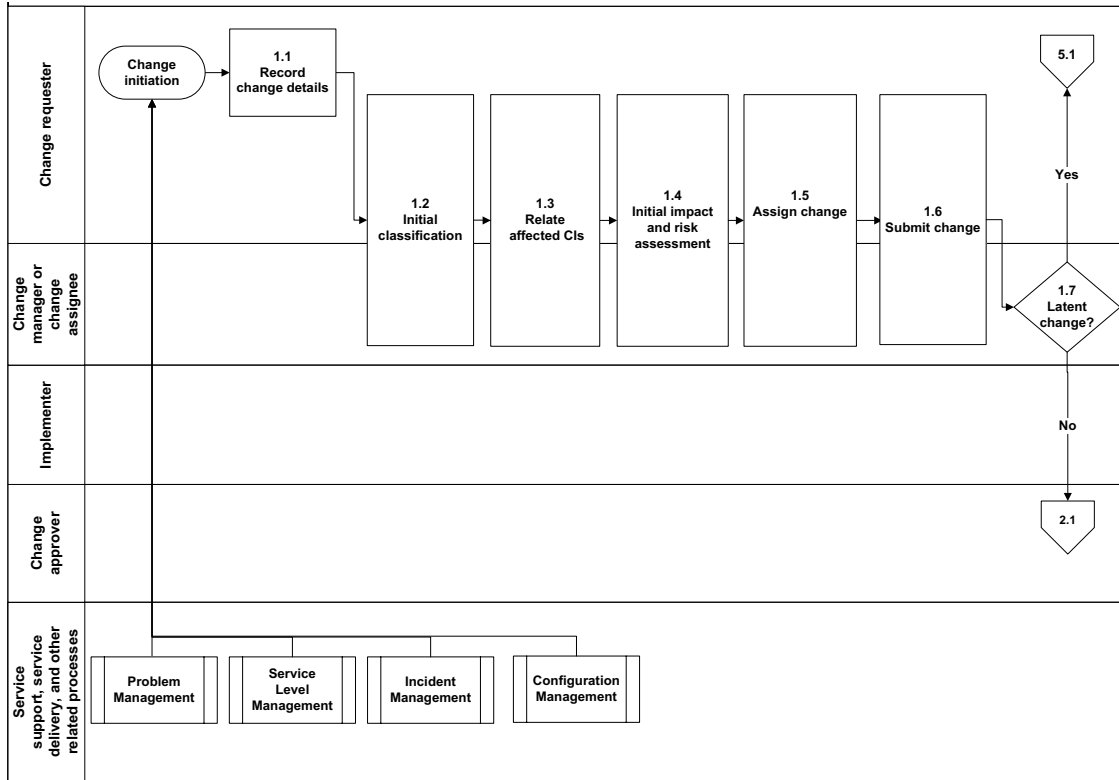
Details of the change management process

This section describes the detailed steps for each stage of the change management process.

Stage 1 Change initiation and recording

In this stage, a change request is initiated and recorded. Change requests can be created by a change requester. An RFC can also be generated externally from the Problem Management, Incident Management, or the Service Level Management processes.

Figure 2-B: Change initiation and recording (steps 1.1 through 1.7)



The RFC process is initiated when the change requester drafts a new change request, or when a change request is submitted externally from the Problem Management, Request Management, Incident Management, or Configuration Management applications. It continues with the following steps:

- 1.1 The change requester records the required change details to create a change request, for example, selecting a change type, defining the urgency level of the change, and so on.

Other information can be added as well: lead time, change reason, and so on.

- 1.2 The change manager or change assignee classifies the initial timing of the change and its categorization, for example, setting the timing to normal and software failure as the product categorization.

Important: BMC Remedy Change Management 7.0 supports the standard ITIL framework, for example, with standard or non-standard changes. The Change Management application uses the Timing field to map change requests to ITIL standard, non-standard, and urgent changes. You use the No Impact setting for standard changes, Normal for non-standard changes, and Emergency for urgent changes. Here you are given the flexibility to extend ITIL, based on the business needs of your organization, as shown in step 2.28.

The change requester *can* perform steps 1.2 through 1.6. Typically, however, these steps are performed by the change manager or change assignee. Most change requesters, for example, do not have enough information to be able to properly assign a change to the right personnel.

- 1.3 The change manager or change assignee can relate the change to the affected configuration item (CI).

The change request can also be related to other change requests, LDAP objects, a software library item (SLI) of the definitive software library (DSL), an asset configuration, incidents, or problems.

- 1.4 The change manager or change assignee sets their *initial* impression of the level of the change.

The change manager or change assignee determines the *actual* risk later (step 2.1) and updates the level accordingly.

- 1.5 To start work on the change request, the change manager or change assignee can assign it to the appropriate support group or individual.

Typically, change requests are automatically assigned to the proper change manager or change assignee, based on the change's categorization. But if the assignment definition has not been configured for Change Management, the change must be assigned manually.

- 1.6 After all the required information is provided, the change request is submitted or saved.

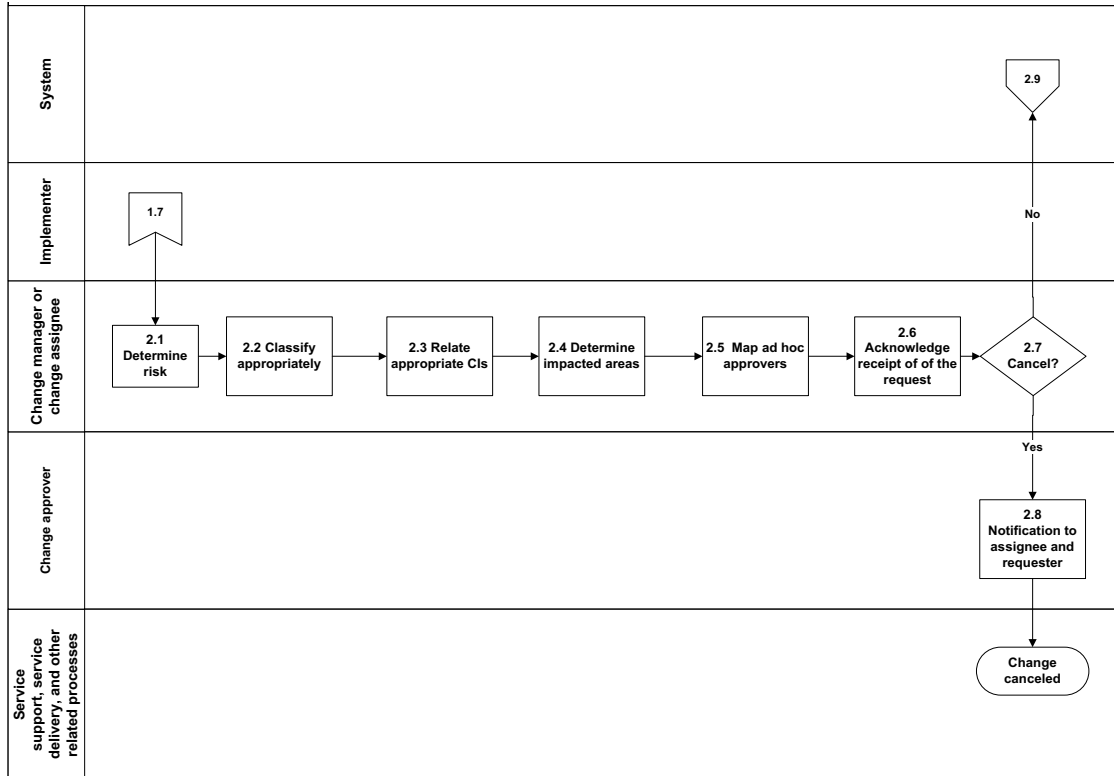
- 1.7 The change manager or change requester decides if the change request is a *latent* change, that is, the work has *already* been performed and it needs to be recorded after the fact.

- If the timing of the change is *latent*, the change must be completed and closed (step 5.1).
- If not, the change must be reviewed and authorized (step 2.1).

Stage 2 Change review and authorization

In this stage, the change manager or change assignee reviews and authorizes the initial scope of the change request. Review is necessary, for example, because the requester might have incorrectly classified the risk. After thorough review cycles, the proposed change request is approved or rejected.

Figure 2-C: Change review and authorization (steps 2.1 through 2.8)



2.1 For the change request to be authorized, the change manager or change assignee determines its *actual* risk. At this stage, inputs to the actual risk include:

- step 2.2—Classifying the risk appropriately.
- step 2.3—Relating the appropriate CIs.
- step 2.4—Determining which products and services are affected.

The Service Model from SIM can be used to determine the risk by determining what services would be affected by the change.

- 2.2 The change manager or change assignee classifies the change appropriately by adding detail to the change request, for example, other products and services affected by the change.

If necessary, the timing of the change can be modified, in the light of more detailed information.

- 2.3 The change manager or change assignee relates the change to the appropriate CIs that are affected.

The change request can also be related to other change requests, LDAP objects, SLIs of the DSL, asset configurations, incidents, problems, *and* services affected by the change.

- 2.4 The change manager or change assignee performs risk assessment to determine which products and services are impacted by the change. The impact of the change is also determined, based on the number of affected users.

- 2.5 If appropriate, the change manager or change assignee maps ad hoc approvers, for example, for emergency change approvals.

- 2.6 The change manager or change assignee acknowledges receipt of the change request. After they have assessed the change, they might decide, for a variety of reasons—if the change is no longer required or resources are not available—to cancel the change.

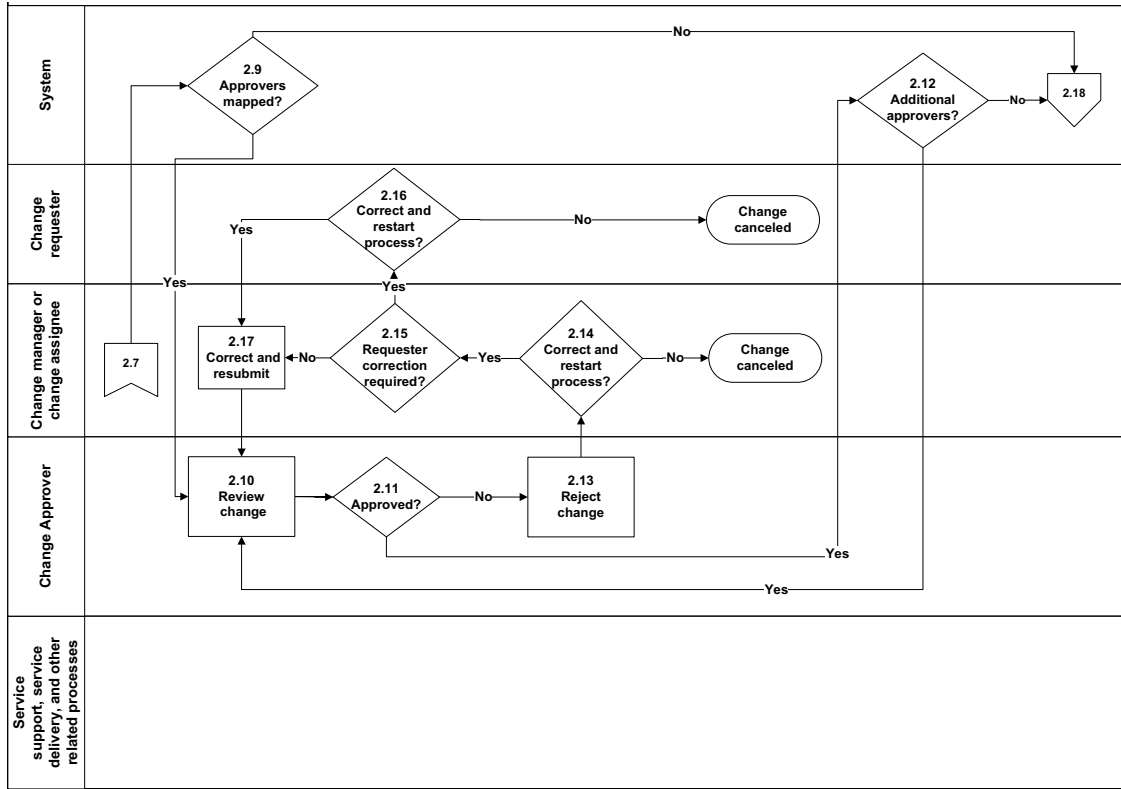
- 2.7 The change manager or change assignee decides if the change request should be canceled or not.

If the change is not canceled, it moves to step .

- 2.8 If the change is canceled, the change assignee and the requester are notified.

If a change request is canceled, all the task groups and tasks associated with the change are canceled as well.

Figure 2-D: Change review and authorization (steps 2.9 through 2.17)



The change request now enters the Review Approval phase, to make sure this a valid and appropriate change request fulfilled by the organization.

2.9 The system checks if the change requires approvers to move forward.

If approvers are required to approve the change request, they are mapped to it. Each level of approvers must be included in the change before it can move forward.

If no approvers are mapped to the change request, the system moves it to the Business Approval phase (step 2.18), where the impact of the change is decided.

2.10 The change approvers review and validate the change plans.

2.11 The system checks if the change request is approved, using the approval engine.

If the change is approved, the change moves forward to check if there are any more approvers, as shown in step 2.12.

If not, the change is rejected, as shown in step 2.13.

2.12 The system checks if additional approvers are required.

If additional approvers are required, they are assigned and reviewed, as shown in step 2.10.

If not, the system moves the change forward to step 2.17, where approvers must review the change and authorize it before it can move forward to the next state.

2.13 If an approver rejects the change, the approval process starts over.

The process sets the change to rejected. Then the change manager or change assignee starts a process to see if they can correct the issues which caused the rejection (step 2.14).

2.14 If the change manager or change assignee can correct the problems with the change, for example, supply any missing information, the approval process is restarted.

If so, the change manager or change assignee decides how to fix the issues with the change.

If not, for example, because the change is too expensive, it is canceled.

2.15 If the change manager or change assignee can delegate the change back to the requester, for example, to edit the description or provide additional information, the change process is corrected and restarted.

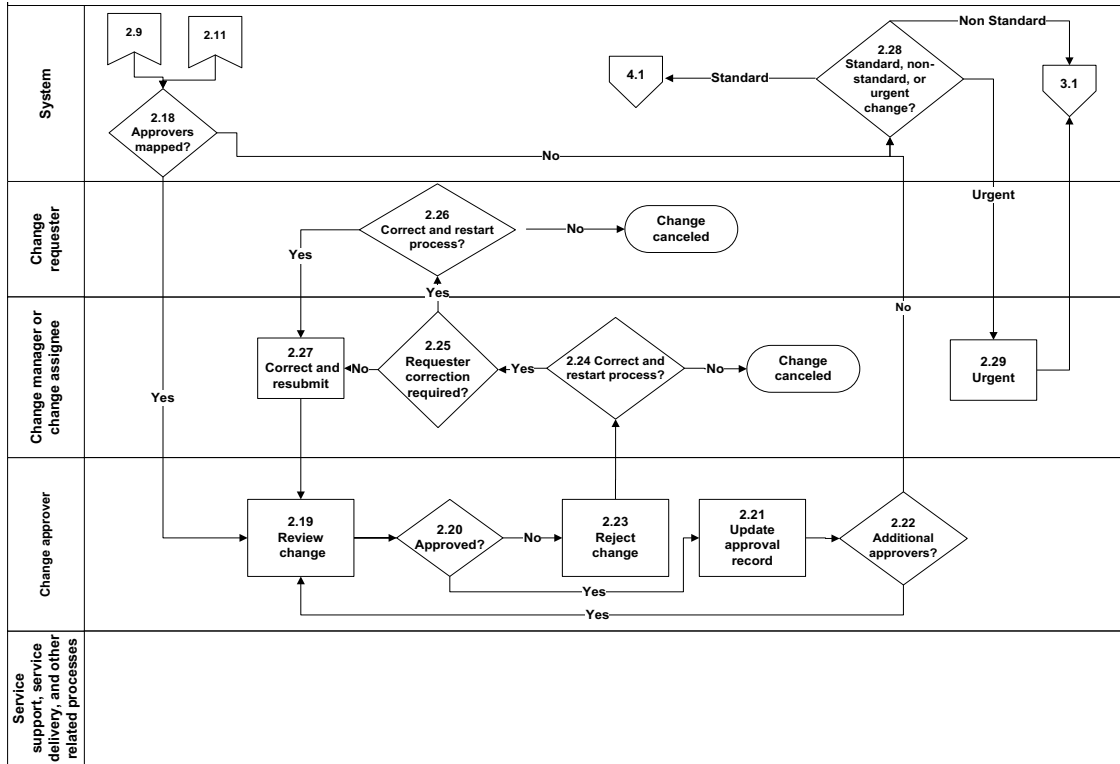
If the change manager or change assignee cannot delegate the change, the change must be corrected (as best it can with the best available information) and resubmitted to the approval process, as shown in step 2.17.

2.16 The change requester includes whatever information is needed to correct the change request and restart the approval process. The change request is forwarded to the change manager or change assignee for any corrections. They resubmit the change request for approval.

If the change requester cannot correct the problems with the change, it is canceled.

2.17 The change manager corrects and resubmits the change for approval.

Figure 2-E: Change review and authorization (steps 2.18 through 2.29)



The change request now enters the Business Approval phase, to make sure that there is an appropriate business need for the change request.

2.18 The system checks if the change requires approvers to move forward.

If approvers are required to approve the change request, they are mapped to it. Each level of approvers must be included in the change before it can move forward.

If no approvers are mapped to the change request, the system checks if the change is standard (step 2.28).

2.19 The approvers reviews and validates the change plans.

2.20 If each level of approvers approve the change request, the approval record is updated, as shown in step 2.21.

If not, the change is rejected, as shown in step 2.23.

2.21 When the change is approved, the approval record is updated.

- 2.22** The system checks if additional approvers are required to approve the change.

If so, they are notified and the change moves back to the review state, as shown in step 2.19. Approvers must review the change and authorize it before it can move forward to the next state.

If not, the change is moved to step 2.28, where the impact of the change to the infrastructure is checked.

- 2.23** The system checks that the change is rejected. It then goes into a process to correct the change by the change manager.

- 2.24** If the change manager can correct the approval problems with the change, the approval process is restarted.

If they cannot correct the problems with the change, it is canceled.

- 2.25** If the change manager or change assignee can delegate the change to the change requester to provide more information to support the business approval, the change process is corrected and restarted.

If they cannot delegate the change, the change must be corrected (as best it can with the best available information) and resubmitted to the approval process, as shown in step 2.28.

- 2.26** The change requester includes whatever information is needed to correct the change request and restart the approval process. The change request is forwarded to the change manager or change assignee for any corrections. They resubmit the change request for approval.

If the change requester cannot correct the problems with the change, it is canceled.

- 2.27** The change manager or change requester correct and resubmit the change for approval.

- 2.28** Based on how the change affects the IT infrastructure—if it is standard, non-standard, or emergency—one of the following processes follows:
- If the change is standard, the system moves the change forward to the appropriate task implementer, to accept it and start work on it (step 4.1).
 - If the change is non-standard, the system moves it forward to step 3.1, where the change manager or change assignee plans and schedules the change.
 - If the change is emergency, the process for handling emergencies takes over (step 2.29).
- 2.29** The change manager or change assignee start the process for dealing with emergency changes.

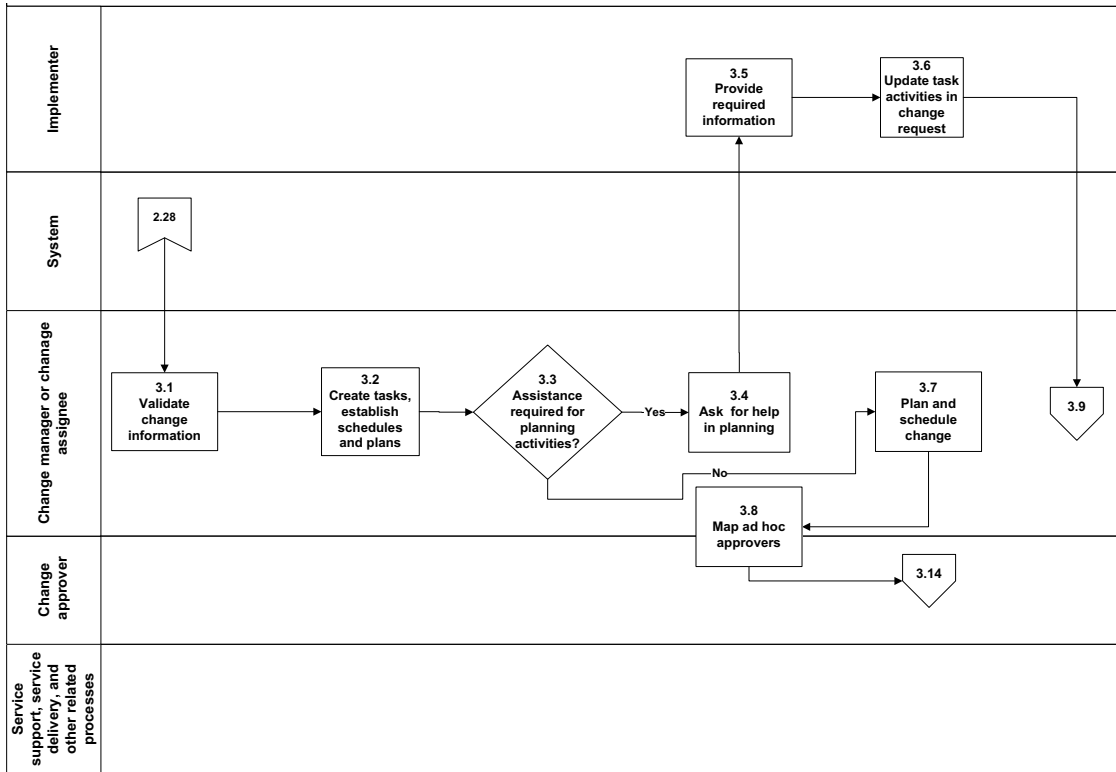
Important: An emergency change is an exception case to the standard change process that handles emergency change requests and flows through the non-standard process flow. However, for the approval stages of an emergency change request, the list of approvers can be adjusted to simplify its escalation.

If the change has impact on the IT infrastructure, the resources needed to complete the change must be scheduled by the change manager or change assignee, as shown in step 3.1.

Stage 3 Change planning and scheduling

In this stage, the change manager or the change assignee plans the details associated with the change.

Figure 2-F: Change planning and scheduling (steps 3.1 through 3.8)



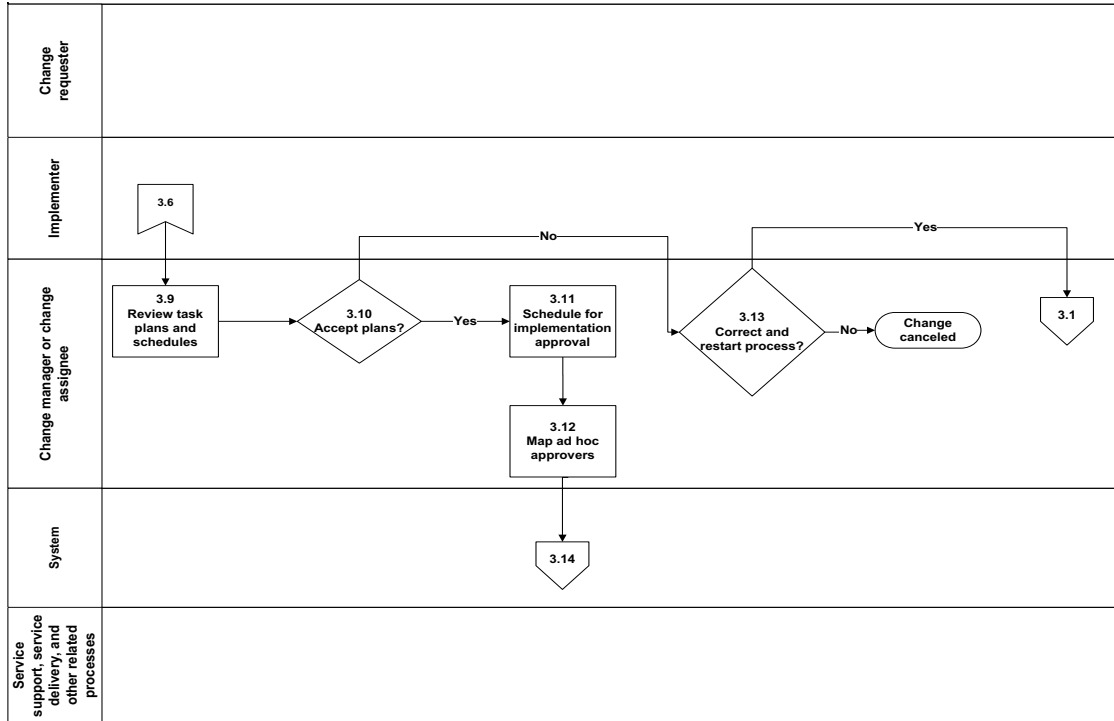
- 3.1 The change manager or the change assignee reviews and validates the plans for the change request.

This step includes estimating both the time the project will take and any applicable downtime, including the change in the FSC calendar, creating maintenance and blackout windows, scheduling additional changes, and so on.

- 3.2 The change manager or the change assignee creates tasks, estimates both the time the project will take and any applicable downtime, registers available or unavailable time segments to perform the change, and establishes schedules and plans.

- 3.3** If the planning activities require assistance, the change manager or change assignee assigns the planning activities to the appropriate task implementer. If not, the change is moved forward to actually plan and schedule the change, as shown in step 3.7.
- 3.4** The change manager or change assignee asks various subject matter experts for their help in planning the change, for example, how long it takes to replace a crucial piece of server hardware. The planning activities are then assigned to the appropriate implementer.
- 3.5** The implementer provides any required information to help plan the schedule.
- 3.6** The implementer updates their task activities in the change request, so that the change manager or change assignee can review the task plans and schedules, as shown in step 3.9.
- 3.7** With all the necessary details now included, the change manager or change assignee plans and schedules the change.
- 3.8** Any additional ad hoc approvers who are needed to approve the change can be mapped by the change approver, the change manager, or the change assignee. The change moves forward to step 3.14.

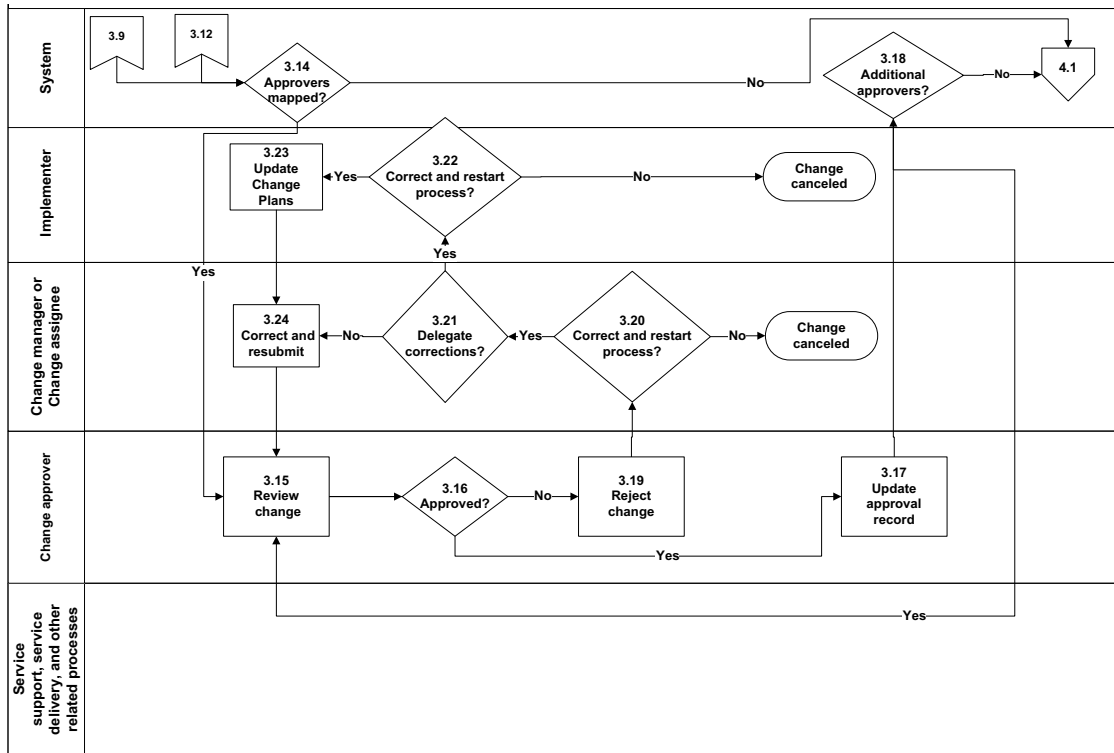
Figure 2-G: Change planning and scheduling (steps 3.9 through 3.13)



- 3.9** The change manager or change assignee reviews all the task plans and schedules.
- 3.10** If the change plan is accepted, it moves forward to be scheduled for implementation approval.
If not, the planning and scheduling process must be corrected and restarted, as shown in step 3.13.
- 3.11** The change manager or change assignee schedules the change request to be approved for implementation.
- 3.12** Any additional ad hoc approvers who are needed to approve the change can be mapped by the change manager or the change assignee. The change moves forward to step 3.14.
- 3.13** If the change manager or change assignee can delegate the change to the appropriate person who can fix the plans, the change process is corrected and restarted. The change request returns to step 3.1, where the change information can be reviewed and validated.

If the change cannot be corrected and restarted, it is canceled.

Figure 2-H: Change planning and scheduling (steps 3.14 through 3.24)



The change request now enters the Implementation Approval phase, to make sure the implementation plans are appropriate for the change request.

3.14 The system checks if the change requires approvers to move forward.

If approvers are required to approve the change request (with its tasks included), they are mapped to it. Each level of approvers must be included in the change before it can move forward.

If no approvers are mapped to the change request, the change moves forward to start implementation, as shown in step 4.1.

3.15 The change approver reviews and validates the change plans.

3.16 If each level of approvers approve the change request, the approval record is updated, as shown in step 3.17.

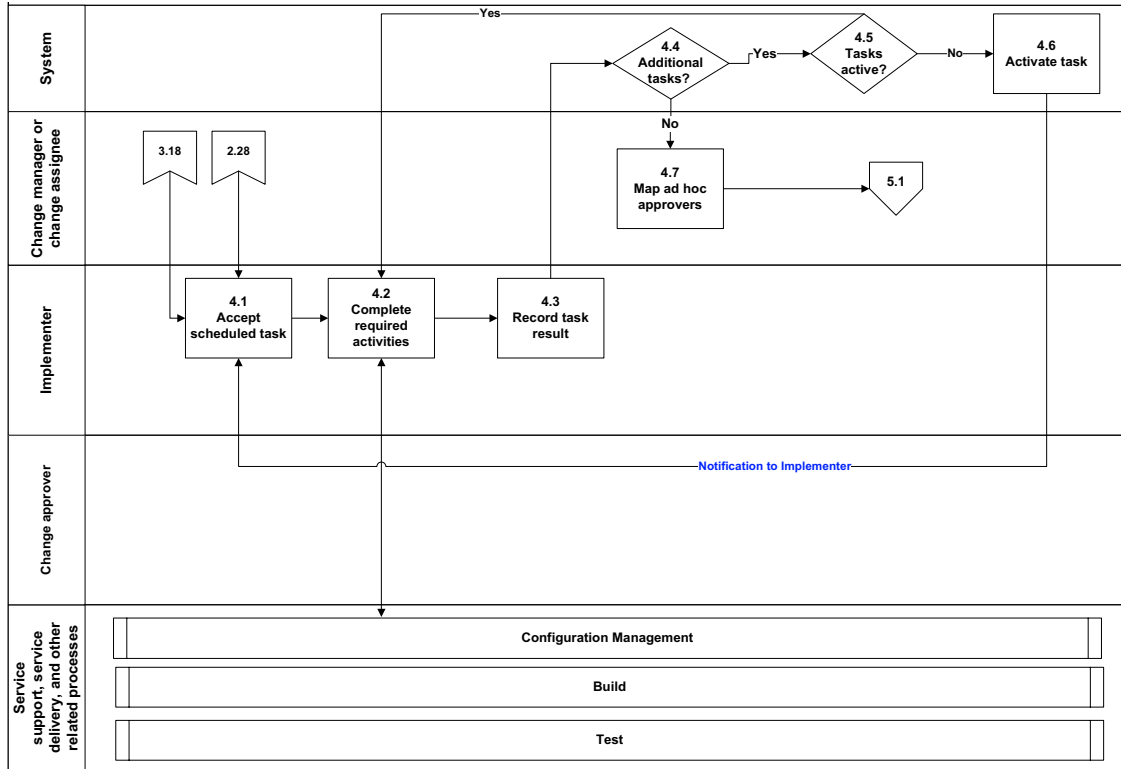
If not, the change is rejected, as shown in step 3.19.

- 3.17** When the change is approved, the approval record is updated.
- 3.18** The system checks if additional approvers are required to approve the change. Approvers must review the change and authorize it before it can move forward to the next state.
- If so, the change moves back to be reviewed, as shown in step 3.15.
- If not, the change moves forward to start implementation, as shown in step 4.1.
- 3.19** If an approver rejects the change, the approval process starts over.
- 3.20** If the change manager or change assignee can correct the approval problems with the change, the approval process is restarted.
- If not, the change is canceled.
- 3.21** If the change manager or change assignee can delegate the change to the appropriate implementer who can fix whatever is wrong, for example, by supplying additional information, the change process is restarted. The change request is forwarded to the task implementer.
- If not, the correct implementer must be designated and the change resubmitted to the approval process, as shown in step 3.24.
- 3.22** The implementer corrects the change plans and restarts the planning and approval process.
- If not, the change is canceled.
- 3.23** The implementer updates the change plans with any new information. The change plans are then forwarded to the change manager or change assignee.
- 3.24** The change manager or change requester corrects and resubmits the change for approval.

Stage 4 Change implementation

In this stage, implementers work on the CIs that need repair, update, replacement, and so on. As they complete their required activities, they record their results. When a task is completed, the implementers for the next tasks in the sequence are notified of their task assignment.

Figure 2-I: Change implementation (steps 4.1 through 4.7)



4.1 The implementer accepts the scheduled task(s).

At least one task related to the change request is in progress; all the rest (if there are any) are staged.

4.2 The implementer starts work on the task and completes its required activities.

Note: A change request can also include build, test and configuration management tasks, for example, the “closed-loop” verification of software installation.

4.3 After finishing the task, the implementer records the task result.

- 4.4 When the task result is recorded, the system checks if there are any additional tasks assigned.
- If not, the change moves forward to step 4.6, so that the change manager or change assignee can map any ad hoc approvers.
- 4.5 If the next task in sequence is active, the change is moved forward so that the next implementer can complete the required activities on it, as shown in step 4.2.
- If not, the next staged task becomes activated.
- 4.6 The implementer activates the task. The implementer of the next task is notified to accept the scheduled task, as shown in step 4.1.
- 4.7 Any additional ad hoc approvers who are needed to approve the change can be mapped by the change manager or the change assignee. The change moves forward to step 5.1.

Stage 5 Change completion and closure

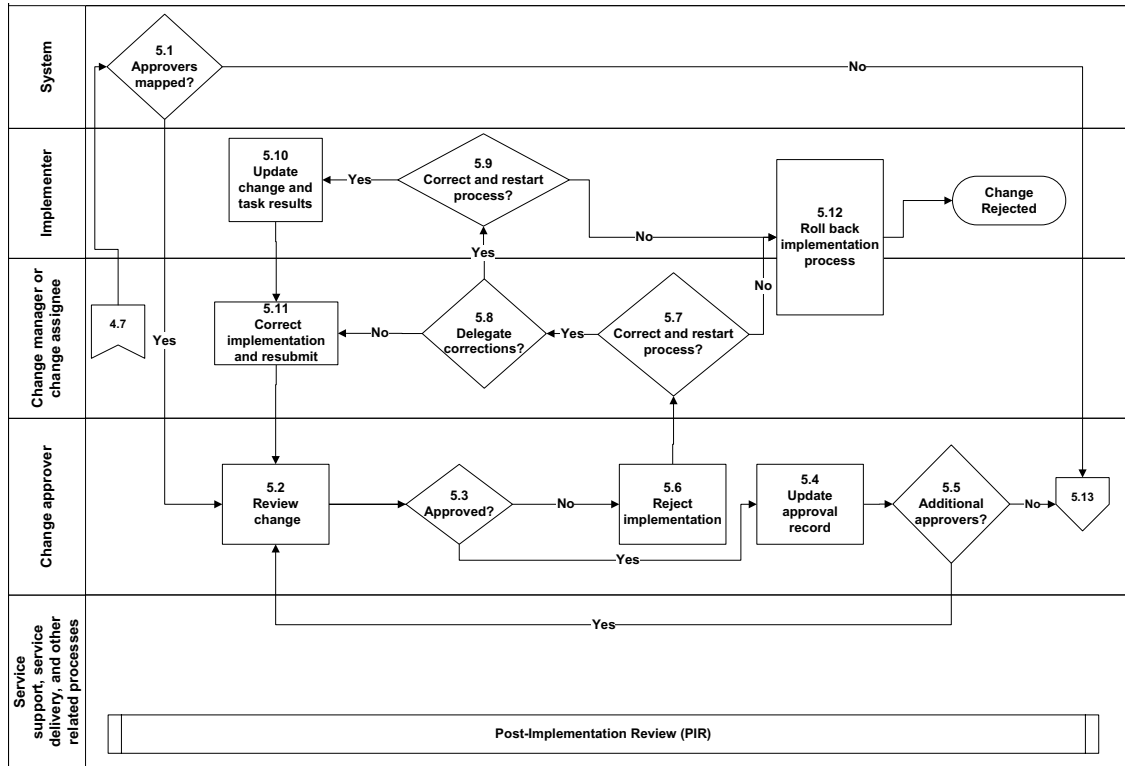
In this stage, reviewers review the change request and verify that the tasks were properly completed. They also might analyze KPIs, for example, for whether the change was successful, or for the number of incidents that were eliminated by the change request.

When the post-implementation review (PIR) approvers—for example, customers, the requester, or others in the organization—have verified that the change request was implemented satisfactorily, the change request can be closed.

The PIR process is an important part of the ITIL change management process improvement, to confirm that the change has met its objectives and did not cause unintended side-effects. PIR process improvement in the Change Management application can include the use of the following tools:

- The Performance Rating field that supports the PIR process. It rates how well the organization performed during the change request process. You supply this rating *after* the implementation is closed.
- Change reports that help you analyze key data
- Change Management Dashboard of key metrics associated with changes occurring in the organization
- Viewing SLM service targets against the change request, to see if you are meeting your goals and activities

Figure 2-J: Completion and closure (steps 5.1 through 5.12)



The change request now enters the Close-Down Approval phase, to make sure the appropriate closed processes are followed to close down the change request.

- 5.1 The system checks if additional approvers are required to approve the completion of the change request.

If so, they are mapped to it and the change moves forward to the change approver. Each level of approvers must be included in the change before it can move forward.

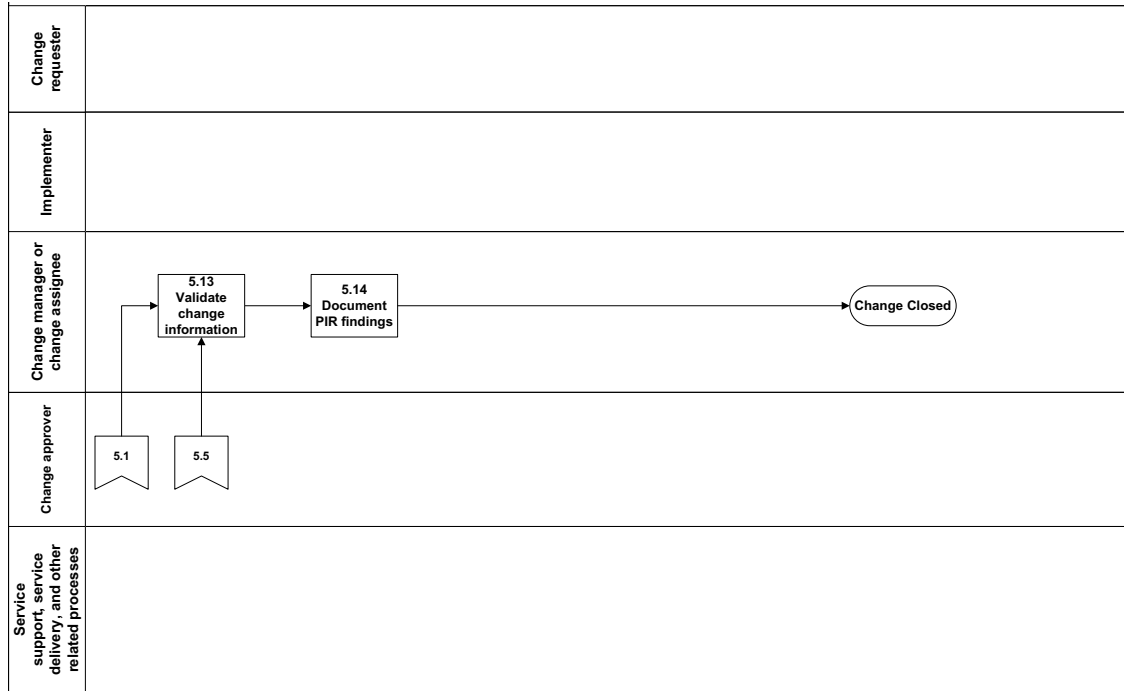
If no approvers are mapped to the change request, the change moves to step 5.13, where the change information is validated.

- 5.2 The approvers must review and validate that the tasks included in the change request were properly completed.

- 5.3 If each level of approvers approve the change request, the approval record is updated, as shown in step 5.4.
If not, the change is rejected, as shown in step 5.6.
- 5.4 When the change is approved, the approval record is updated.
- 5.5 If additional approvers are required to approve the change, for example, ad hoc approvers, the change moves back to be reviewed, as shown in step 5.2.
If not, the change moves to step 5.13, where the change information is validated. Approvers must review the change and authorize it before it can move forward to the next stage.
- 5.6 The system rejects the change.
- 5.7 If the change manager or change assignee can correct the problems with the change, the approval process is restarted.
If not, the change is rolled back (step 5.12).
- 5.8 If the change manager or change assignee can delegate the change to the appropriate implementer, the task is forwarded to them.
If not, the correct approver is designated, and the change is corrected and resubmitted to the approval process, as shown in step 5.11.
- 5.9 If the implementer can correct and restart the task process, the change or task results are updated.
If not, the change is rolled back (step 5.12).
- 5.10 The implementer updates the change or task results. The change is then forwarded to the change manager or change assignee.
- 5.11 The change manager or change requester corrects and resubmits the change for approval. The approvers must then review the change, as shown in step 5.2.
- 5.12 The implementer uses the roll-back implementation process to back out the change.

Important: If some error has occurred *after* the change has been implemented, a roll-back procedure must be prepared and documented in advance, so that the implementer can restore the quality of the IT infrastructure with minimum impact on the service quality.

Figure 2-K: Completion and closure (steps 5.13 through 5.14)



5.13 After the last task is closed, the final review is completed, and all approvals are finished, the change manager or change assignee validates the change information that the change request has been finally completed.

5.14 The change manager or change assignee completes and documents the post-implementation review (PIR) findings and grants any necessary closedown approvals.

The change request is finally closed and successfully completed.

State transitions of change requests

Some status transitions in the change request life cycle can only be performed by users who have been assigned a specific role. For example, while all users can move a change request into the Request For Authorization state, only a Change Manager can cancel a change request.

Important: Some status transitions in the change request life cycle can only be performed by users who have been assigned a specific role. For example, while all users can move a change request into the Request For Authorization state, only a Change Manager can cancel a change request.

Table 2-B describes the successive stages and approval phases of a change request. It also identifies legal state transitions for each of these forms.

Table 2-B: Stages and approval phases of a change request

Stage	Approval phase	Status	Description	Tasks
Initiate		Draft	Verifies that all the required fields to create the change request are entered in the Change form. Use the Draft status to record a change request without submitting it to the Change Management process.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Cancel
Initiate	Review	Request for Authorization	Change is in the Review approval phase. If it is approved, only then does it move forward to the Review & Authorize stage.	<ul style="list-style-type: none"> ■ Approve ■ Reject ■ Cancel
Review & Authorize	Business Approval	Request for Change	Change is in the Business Approval phase. Lets approvers review the change and authorize it.	<ul style="list-style-type: none"> ■ Approve ■ Reject ■ Cancel
Plan & Schedule		Planning in Progress	Tasks can be built at any change status except Completed.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Relate CI ■ Cancel

Table 2-B: Stages and approval phases of a change request (Continued)

Stage	Approval phase	Status	Description	Tasks
Plan & Schedule		Scheduled for Review	Change Manager reviews and validates the change plans.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Cancel
Plan & Schedule	Implementation	Scheduled for Approval	Change is in the Implementation Approval phase. Each level of approvers must review the change and approve it.	<ul style="list-style-type: none"> ■ Approve ■ Reject ■ Cancel
Plan & Schedule		Scheduled	Change is included in the Forward Schedule of Changes (FSC) Calendar.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Relate CI ■ Cancel
Implement		Implementation in Progress	At least one task related to the change is in progress.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Cancel
Implement	Close Down Approval	Completed	Change is in the Implementation Approval phase. The change is completed but needs approval to reach the Closed stage.	<ul style="list-style-type: none"> ■ Approve ■ Reject ■ Cancel
Implement	Final Review Complete	Completed	Reviewers verify change was implemented and all required tasks have been completed. KPIs analyzed.	<ul style="list-style-type: none"> ■ Next stage ■ Enter pending (or resume) ■ Cancel
Closed		Successful	Post Implementation Review has been completed and any necessary Closedown Approvals have been granted. No further activities are performed on the change.	None

- For state transition diagrams that depict the status flow of change requests, see “Change request status transitions” on page 38.
- For a helpful overview of how task states compare to change states, see “Relation of task states to change states” on page 44.

Additional status values for change requests

Table 2-C describes the additional status values for change requests, for example, if an approval has been rejected.

Table 2-C: Additional change status values

Change request status	Description
Pending	Work on the change has been suspended temporarily. The Status Reason field is required to describe the reason for interruption.
Relate CI	In the Plan & Schedule stage, you can search for configuration items and relate them to the change requests.
Rejected	The change has been rejected by an approver at any Approval Phase.
Canceled	The change is no longer required or current change plans must be modified.

Requirements for status reasons

Users can identify a requirement for additional status reasons. Table 2-D displays *only* the applicable status reasons. You *must* specify the status reason when the Change Request Status is Pending.

Table 2-D: Change request status reasons

Change request status	Status reasons
Planning in Progress	<ul style="list-style-type: none"> ■ Accepted ■ Assigned ■ Built
Implementation in Progress	<ul style="list-style-type: none"> ■ In Rollout ■ In Development ■ In Test ■ In Built ■ In Rollback ■ In Documentation ■ In Verification
Pending	<ul style="list-style-type: none"> ■ Future Enhancement ■ Manager Intervention ■ Miscellaneous ■ Support Group Communication ■ Task Review ■ Vendor Purchase
Rejected	<ul style="list-style-type: none"> ■ Insufficient Task Data ■ Insufficient Change Data ■ Schedule Conflicts
Completed	<ul style="list-style-type: none"> ■ Final Review Required ■ Final Review Complete ■ Additional Coding Required

Table 2-D: Change request status reasons (Continued)

Change request status	Status reasons
Closed	<ul style="list-style-type: none"> ■ Successful ■ Successful with Issues ■ Unsuccessful ■ Backed Out ■ Automatically Canceled
Canceled	<ul style="list-style-type: none"> ■ No Longer Required ■ Resources Not Available ■ To Be Re-Scheduled ■ Funding Not Available

Sending and receiving notifications

When a change request moves into a new state, for example, Completed, Change Management executes workflow that triggers notifications. Based on your group or role, you might receive notifications during various change states.

For more information about notification preferences, see the *BMC Remedy IT Service Management 7.0 Configuration Guide*.

Notifications by groups

The following table lists the change states that trigger notifications and the change management groups they are sent to.

Table 2-E: Change states when notifications are sent to groups

Current status	Assignee group	Support group	Task implementer group
Draft			
Request for authorization			
Request for Change	Yes	Yes	
Planning in Progress	Yes	Yes	Yes
Scheduled For Review	Yes	Yes	

Table 2-E: Change states when notifications are sent to groups (Continued)

Current status	Assignee group	Support group	Task implementer group
Scheduled For Approval			
Scheduled	Yes	Yes	Yes
Implementation in Progress			
Completed	Yes	Yes	
Closed			
Pending			
Rejected		Yes	
Canceled			

Notifications by roles

The following table lists the change states that trigger notifications and the change management roles they are sent to.

Table 2-F: Change states when notifications are sent to roles

Current Status	Change assignee	Change manager	Requested by	Requested for	Task implementer
Draft			Yes	Yes	
Request for authorization					
Request for Change	Yes	Yes			
Planning in Progress	Yes	Yes			
Planning in Progress	Yes	Yes			Yes
Scheduled For Review	Yes	Yes			
Scheduled For Approval					
Scheduled	Yes	Yes	Yes	Yes	Yes
Implementation in Progress					

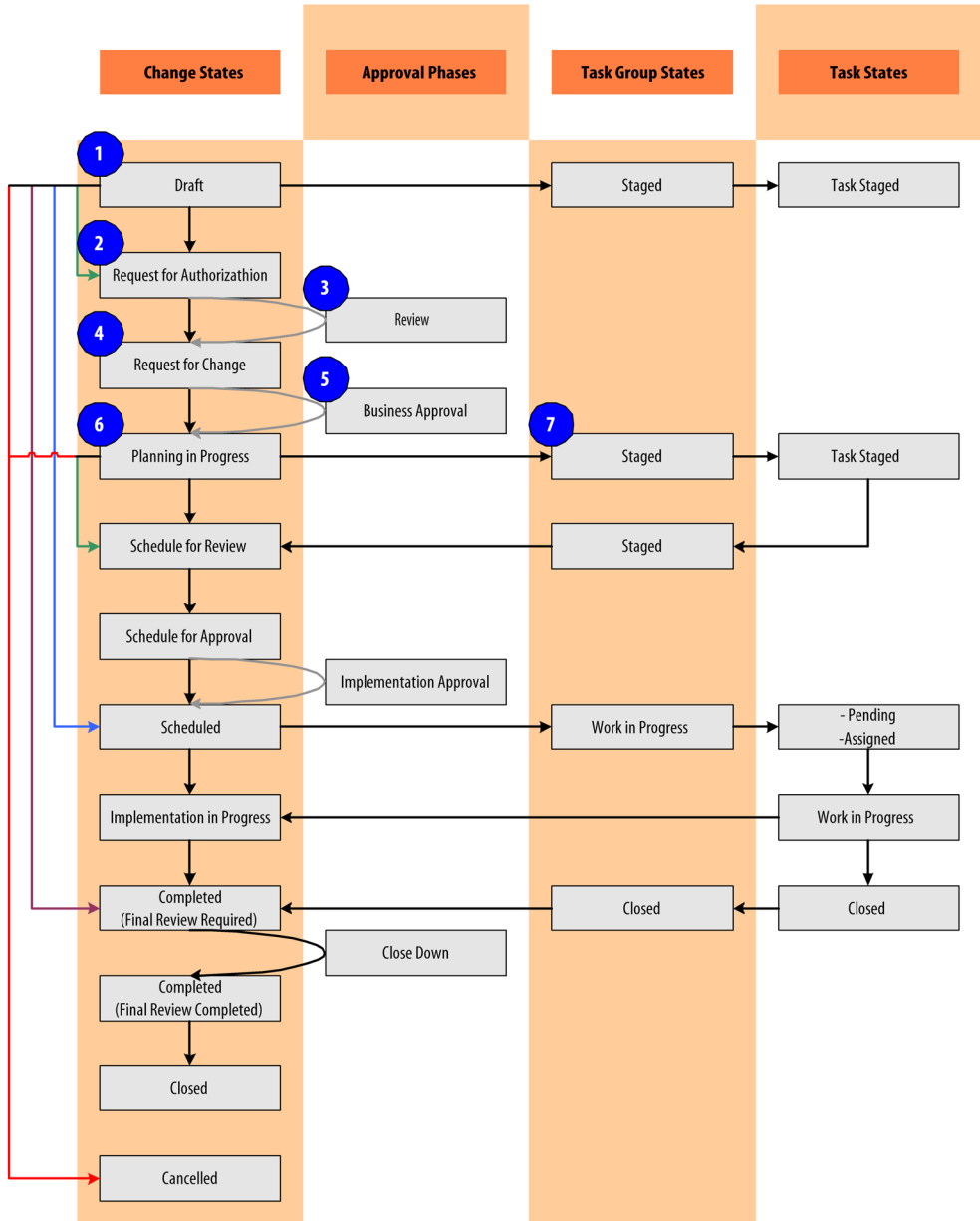
Table 2-F: Change states when notifications are sent to roles (Continued)

Current Status	Change assignee	Change manager	Requested by	Requested for	Task implementer
Completed	Yes	Yes	Yes	Yes	
Closed					
Pending					
Rejected		Yes			
Canceled			Yes	Yes	

Change request status transitions

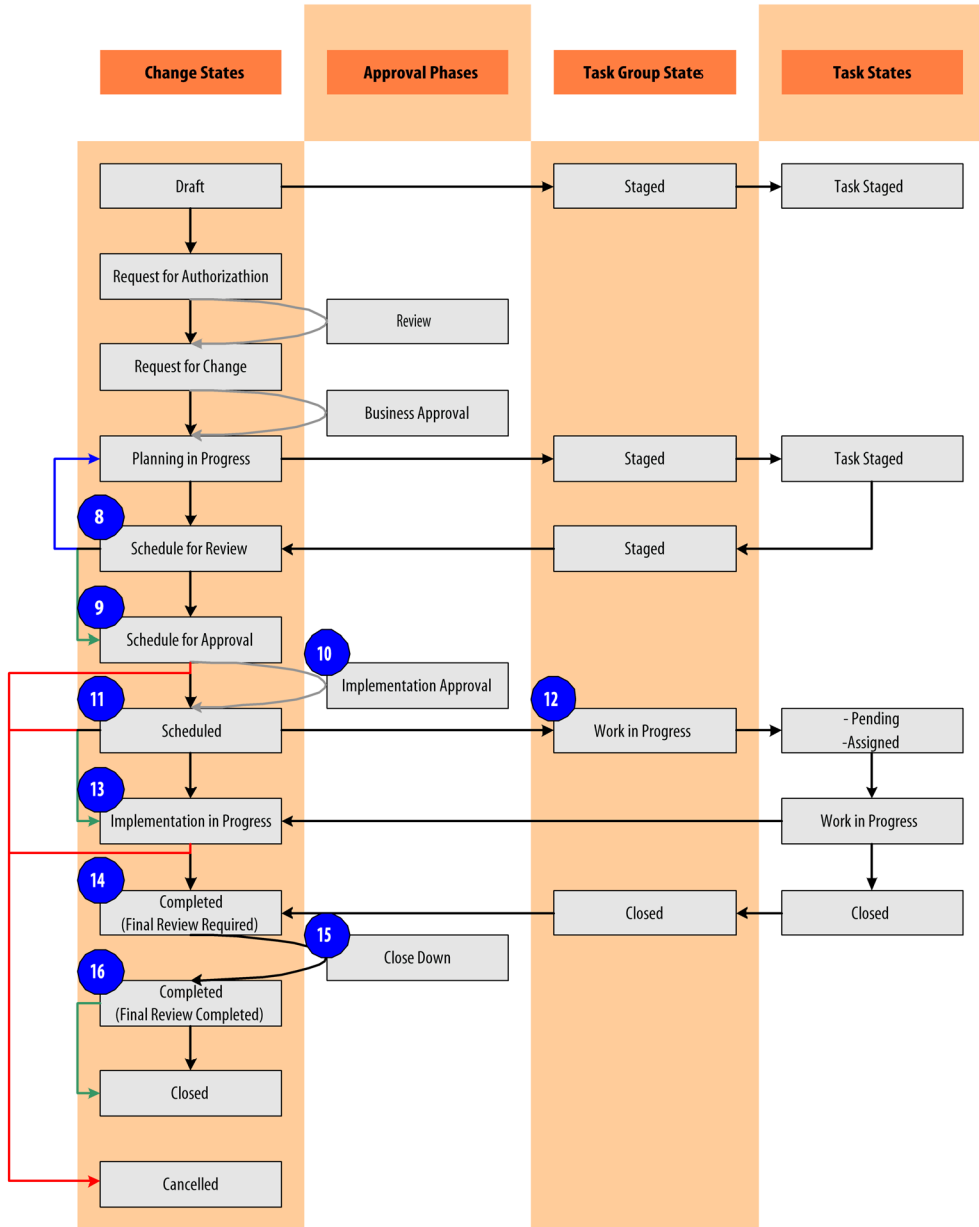
The following change request status transition diagrams are included for reference. You can use these to follow the flow of a change request from the Draft to the Completed states.

Figure 2-L: State transitions—Steps 1 to 7



- Step 1** When a change request is created, it moves into the Draft state. The approval group or approvers are notified that the change request requires approval for the Review phase. Any task groups or tasks are in the Staged state. Tasks are marked as Staging in Progress in the Status Reason field.
- If there are approvers in the Review approval phase, the change remains in the Request for Authorization state.
 - If the Timing of the change is No Impact, it moves to the Scheduled state.
 - If the Timing of the change is Latent, it moves to the Completed state.
- Step 2** If there are no approvers in the Review approval phase, the change request moves to the Request for Change state and the change manager or the change assignee are notified. The change request requires that the change manager or change assignee to approve it before the change can move forward.
- Step 3** When the change request is in the Request for Change state, the approval group or approvers are notified that the change request requires approval for the Review phase.
- Step 4** The change remains in the Request for Change state if there are approvers in the Business Approval phase. If there are no approvers in this phase, the change moves to Planning in Progress.
- The change moves automatically to Planning in Progress when all approvers approve the change. Change managers and change assignees can approve the change on behalf of the approvers. If they cancel the request, it moves to the Canceled state.
- Step 5** Approval group or approvers are notified that the change request requires approval for the Business Approval phase.
- Step 6** Change manager or change assignee is notified that the change is ready for planning. When the status reason of all the tasks has been marked as Staging Complete, the change moves to the Scheduled for Review state.
- Step 7** Task implementers are notified that the task or tasks are set to staged.

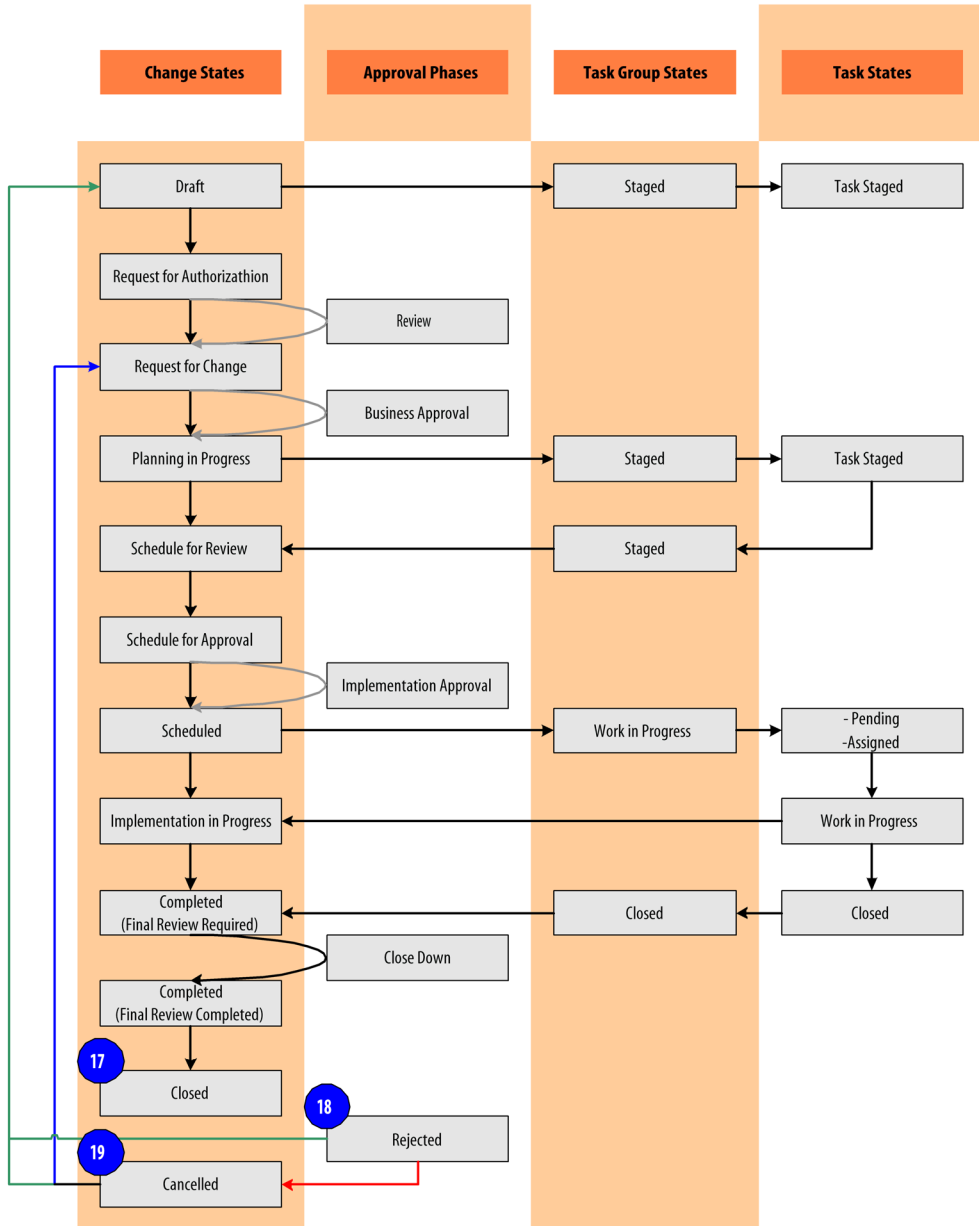
Figure 2-M: State transitions—Steps 8 to 16



Step 8 Change manager or change assignee is notified when the change request is in the Schedule for Review state. The change can be moved into the Scheduled for Approval State, canceled, or moved back to Planning in Progress state.

- Step 9** The change remains in the Scheduled for Approval State if there are approvers in the Implementation Approval phase. If there are no approvers, the change moves to the Scheduled state.
- Step 10** Approval group or approvers are notified that the change request requires approval for the Implementation Approval phase.
- Step 11** The change automatically moves to the Scheduled state when all approvers approve the change or if there are no approvers. Change managers and change assignees can approve the change on behalf of approvers. In the Scheduled state, the change manager, change assignee, and change requester are notified when the change request has been scheduled as a change with no impact. For taskless changes only, the change implementer is notified. Tasks can be set to the Assigned state.
- Step 12** When the change manager or change assignee moves the change request into the Implementation in Progress state, the task group is set to Work in Progress and the first task is set to Pending or Assigned.
- Step 13** In the Implementation in Progress state, the task implementers are notified to start working on tasks. They set the task to Work in Progress when actual work begins. Task implementers can now update the task information and start implementing the task.
- Step 14** After last task is marked as Closed, the task group is set to Closed. The change manager, change assignee, and change requester are notified that the change request is completed. Workflow enters required information into the Actual Start Date, Actual End Date, and Performance Rating fields.
- The change automatically moves to the Completed (Final Review Required) state when all the tasks have been completed and there are approvers for the Close Down phase. Change managers and change assignees can approve the change on behalf of approvers.
- Step 15** Approval group or approvers are notified that the change requires approval for the Close Down approval phase. The change request is placed in Completed status with a status reason of Final Review Required. If approved, the status reason is automatically updated to Final Review Complete.
- Step 16** Change manager or change assignee is notified when the final review is completed. The change automatically moves to the Completed (Final Review Complete) state when all tasks are completed and there are *no* approvers for the Close Down phase.

Figure 2-N: State transitions—Steps 17 to 19



Step 17 After the final review is completed, the change request moves into the Closed state.

Step 18 If a change has been rejected, it can be moved back to the Canceled state. The change manager or change assignee can also move it back to the Draft state and start the process over. The change requester is notified of the rescheduled change.

Step 19 If change request is canceled, requester is notified.

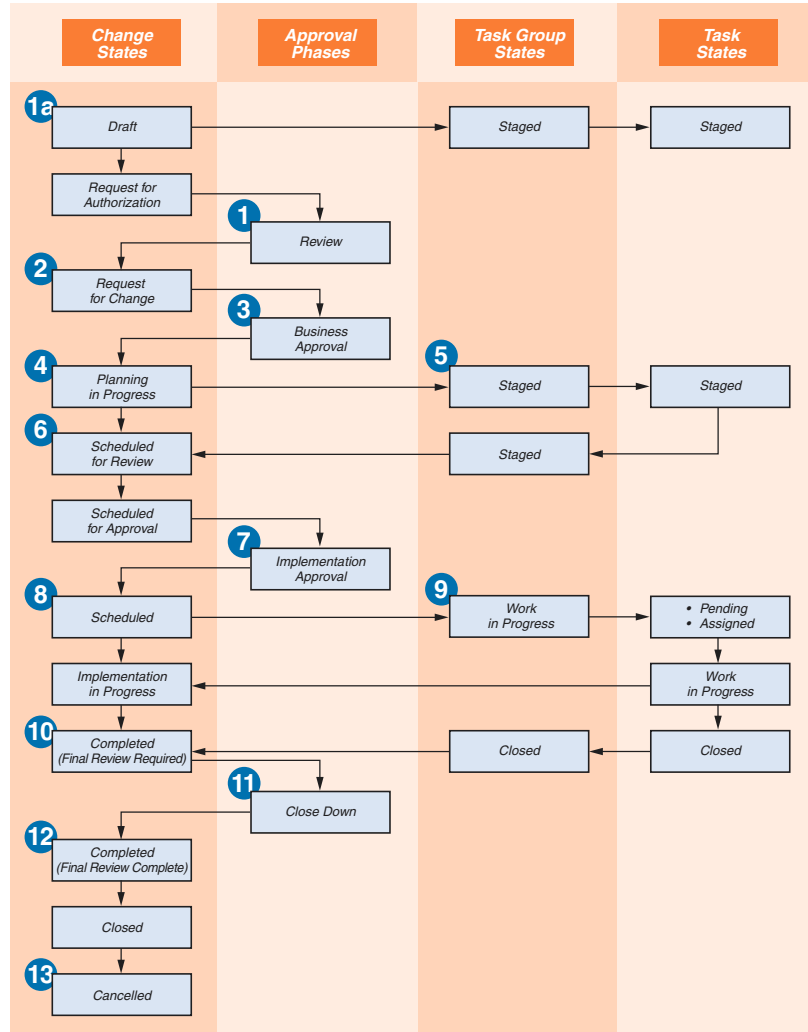
- If a change request is canceled, all the task groups and tasks associated with the change are canceled as well.
- If a task group is canceled, all its tasks are canceled.

Relation of task states to change states

Tasks, like change requests, go through many state transitions as they progress. The status in which a task is created depends upon the status of the parent change request.

Changes, approval, task groups, and tasks follow this flow:

Figure 2-O: Overview of change and task states with approval phases



Step 1a Change manager or change assignee is notified when a request is moved from Canceled to Draft (Rescheduled Notification). The change requester is notified of the rescheduled change. Any task groups or tasks are in the Staged state.

- If a change request is canceled, all the task groups and tasks associated with the change are canceled as well.
- If a task group is canceled, all its tasks are canceled as well.

- Step 1** The change request moves into the Request For Authorization state and the approval group or approvers are notified that the change request requires approval for the Review phase. Any task groups or tasks are in the Staged state. Tasks are marked as Staging in Progress in the Status Reason field.
- Step 2** Change manager or change assignee is notified when the change request is moved into Request for Change state. Change manager or change assignee are also notified when the request is moved from Canceled to Request for Change (Rescheduled Notification).
- Step 3** Approval group or approvers are notified that the change request requires approval for the Business Approval phase.
- Step 4** Change manager or change assignee is notified when the change request is ready for planning. For taskless changes only, the change implementer is notified.

When the status reason of all the tasks have been marked as Staging Complete, the change moves to the Schedule for Review state.

- Step 5** Task implementers are notified that the task group or tasks are set to Staged.
- Step 6** Change manager or change assignee is notified when the change request is scheduled for review.
- Step 7** Approval group or approvers are notified that the change request requires approval for the Implementation Approval phase.
- Step 8** Change manager, change assignee, and change requester are notified when the change request has been scheduled as a change with no impact. For taskless changes only, the change implementer is notified. Tasks can be set to the Assigned state.
- Step 9** When change request is moved into the Implementation in Progress state, the task group is set to Work in Progress and the first task is set to Pending or Assigned.

The task implementers are notified to start working on tasks. They set the task to Work in Progress when actual work begins. Task implementers can now update the task information and start implementing the task.

- Step 10** After last task is marked as Closed, the task group is set to Closed. The change manager, change assignee, and change requester are notified that the change request is completed. Workflow enters required information into the Actual Start Date, Actual End Date, and Performance Rating fields.
- Step 11** Approval group or approvers are notified that the change request requires approval for the Close Down phase.
- Step 12** Change manager or change assignee is notified when the final review is completed.
- Step 13** If change request is canceled, requester is notified.

