CHANGE MANAGEMENT PROCEDURES

1 Change Management Operating Procedures

1.1 Summary of Requirements

1. To ensure the integrity and high availability of the production IT environment, all changes must be submitted through Service Desk using the appropriate Change Request Form. Changes should be submitted at the point when they are ready to be implemented in the production environment.
2. Changes are planned in response to new internal or external requirements. Changes are categorized into four categories, each with different approval and notification requirements that are outlined in the Change Classification Matrix (see section 2.1.1). In addition, all changes are assigned a priority based on the Change Priority definitions (see section 2.1.2).
3. Once a change request is submitted by the initiator, it will be reviewed and then routed for approval(s) by the appropriate Change Manager and/or the Change Advisory Board (CAB) based on the change type. Initiators should allow sufficient time for approvals, based on the Change Classification Matrix in section 2.1.1.
4. A second round of review and approval takes place at a meeting of the CAB every Tuesday and Thursday. Representatives of each IRT department vote to approve or reject the current week's planned changes. Questions, clarifications and scheduling conflicts may be discussed and resolved. If conflicts between representatives cannot be resolved at the meeting, then the Change Coordinator must escalate such conflict to the appropriate IT manager for resolution. The CAB meeting is not the forum to review whether or not a change has merit, but rather how and when a change should be implemented, to minimize impact to the production environment. Planned changes should have already been approved by the Change Manager that sponsored and funded the change.
5. It is the responsibility of each CAB member to read the weekly report of upcoming changes, identify potential conflicts and resolve any potential conflicts before implementation. A potential conflict is a change to a production system that may interfere with other planned changes, maintenance activities, or normal usage by the users.
6. All changes should be properly planned and scheduled to ensure the following:
    a. Full testing, where possible, has been completed
    b. Multiple conflicting changes are not targeted tor the same time period
    c. Conflicts can be reconciled prior to communication and commitment to the user community
    d. Adequate implementation planning has taken place
    e. All personnel involved are notified of the proposed change, especially if the change results in a significant outage affecting entire Departments, Schools, or campuses
    f. Resources required to implement and rescind the change can be made available
    g. No conflict exists with the activities of an area outside of the change request
    h. Change is implemented smoothly and efficiently without incurring excessive down time and

service interruption

i. Ample time to circulate a list of planned changes for review by the Change Advisory Board (CAB).

7. Testing should not be done in the production environment. Further, internally developed production changes should not be implemented by the development team or staff. The development team and production team should always be separate to avoid conflicting responsibilities. In areas where this cannot be accomplished, approval should be granted by the Department.

8. Emergency changes require, at a minimum, verbal approval by the Change Manager. The completion of the change request form in the ITSM may be deferred until the issue is resolved or under control, however, it must be submitted no later than 1 business day after the start of the triage. The CAB will review the issue during the next scheduled meeting.

1.2 CAB Organization and Roles & Responsibilities

The Change Advisory Board (CAB) is comprised of (but not limited to):

- Change Advisory Board Coordinator, or designate who will function as the chairperson
- Change Managers from each IRT Department, or designate(s)
- Technical Department representative(s) – if applicable to support CAB reviews
- Applications representative(s) - if applicable to support CAB reviews
- Business representative(s) - if applicable to support CAB reviews

The Change Coordinator is responsible for preparing the meeting agenda, which includes a list of all Change Requests to be reviewed during the meeting. It is the responsibility of CAB participants to obtain and review the meeting agenda prior to each CAB. Changes may be rejected by the CAB if it lacks appropriate acceptance, lacks appropriate documentation, or if issues/concerns are raised during the CAB.

The Change Coordinator will always act as the Chair of any CAB meetings, whether virtual or face to face. CAB meetings will be held every Tuesday and Thursday, and will be called by the Change Coordinator at appropriate times to ensure the prompt and efficient handling of all changes. During times with high levels of change, this could potentially be on a daily basis. Meetings will have a standard agenda. Relevant change information will be circulated in advance to allow CAB members to conduct impact and resource assessments prior to the CAB meeting.

The CAB called by the Change Coordinator will consist of attendees who are relevant to RFCs being considered, as well as designates from all IRT departments. CAB review is required for each change from the appropriate representatives from all areas affected by the proposed change. All major changes must have CAB representation from the senior departmental manager of the requesting department.

A list of standing CAB members will be documented and updated. It is also recommended that backup or secondary representation be identified to ensure that key meetings are not held up and critical areas lack

representation due to potential schedule conflicts.

Roles	Description/Responsibilities
Change Advisory Board (CAB)	The Change Advisory Board is a group called together by the Change Coordinator to act in an advisory capacity to the Change Manager to all changes that are categorized as major or emergency (after triage). They also authorize changes as Standard Changes, if the qualifications are met. The CAB is made up *or* individuals within or outside IT who are relevant in the making the decisions on whether a change should be authorized. They are called together as required in order to ensure that changes are progress in a prompt and efficient manner.
Change Advisory Board Members	• Review the list of scheduled changes • Attend a weekly meeting either in-person, by video or telephone conference. • Prepare for the weekly meeting by inviting representatives from business or user groups, technical support staff and vendors as necessary to resolve potential conflicts. • At the meeting, affirm acceptance of planned changes on behalf of the Department or state potential conflicts and work to resolve them. Stated positions will be required and recorded.
Change Coordinator	The Change Coordinator will be the chairperson for the CAB. Responsible for the coordinating the flow of documentation/communication surrounding any changes to the IT production environment.
Change Implementer/Change Implementation Team	The Change Implementer will usually be the technology subject matter expert who is responsible for implementing the change into production. If the change implementation needs external third party or supplier involvement this needs to be documented within the RFC form.
Change Initiator	Anyone can initiate a change within the organization – however, consideration must be given to whether this should include all users. If users are to be allowed to raise changes this should be controlled through the service desk, this will ensure that only relevant and appropriate changes are raised.
Change Owner	The Change Owner is the person who is responsible for the making the change happen, ensuring the change ticket is updated and marked as completed. This includes designing the change.
Change Tester	Wherever possible with all changes the Change Tester should not be the Change Implementer. This is to ensure rigorous and error free testing.
Internal Audit (IA)	Determine the effectiveness of internal controls, adherence with applicable laws and regulations, and reliability of financial reporting
Change Manager	The role of the Change Manager in the change process is to authorize/approve all changes. The Change Manager also ensures that all activities to implement the change are undertaken in an appropriate manner and are documented and reviewed when completed.

1.3 Standard CAB agenda

The following is a sample agenda used to conduct any formal Change Advisory Board meetings. Not all agenda points will apply to all meetings of the board.

Date of Meeting:

Agenda

- Review of Emergency Changes: implemented, problems resolved, root cause identified.
- Failed changes
- Backed out changes
- Implemented Normal Major changes since the last CAB meeting
- Normal Major RFCs to be assessed by CAB members
- Changes to be assessed as Standard Changes by CAB members
- Review of expired Minor and Standard Changes by CAB members
- The change management process – including any amendments made to the process, as well as proposed changes to the process (as appropriate)

1.4 CAB considerations for each change (prior to Review)

The following list contains a list of concepts or items that should be considered by members of the CAB regarding the applicability or acceptance of a proposed RFC:

- Impact assessment (on the business)
- Risk assessment (on the business) – assign the Risk value based upon the schema listed within this document
- Effect upon the infrastructure and customer service, as defined in the SLA, and upon the capacity and performance, reliability and resilience, contingency plans, and security
- Impact on other services that run on the same infrastructure (or on software development projects)
- Resource assessment – the IT, business and other resources required to implement the change, covering the likely costs (if not already budgeted), the number and availability of people required, the elapsed time, and any new infrastructure elements required
- The impact on non-IT infrastructures within the organization
- Effect/risk/impact of not implementing the change
- Other changes being implemented on the Forward Schedule of Change
- Technical capability and technical approval
- Financial approval (if required, based on costs not already budgeted)
- Third party/supplier involvement in the implementation of the change
- Business approval (if required)
- Review/assessment of the change priority
- Need for Information Security review and testing prior to implementation

1.5 CAB comments/issues

All CAB comments on each change and any issues that have been discussed must be documented by the Change Coordinator within the CAB meeting information section of the RFC form.

1.6 CAB recommendations/decisions

All CAB recommendations and decision that have been discussed must be documented by the Change Coordinator within the CAB meeting information section of the RFC form.

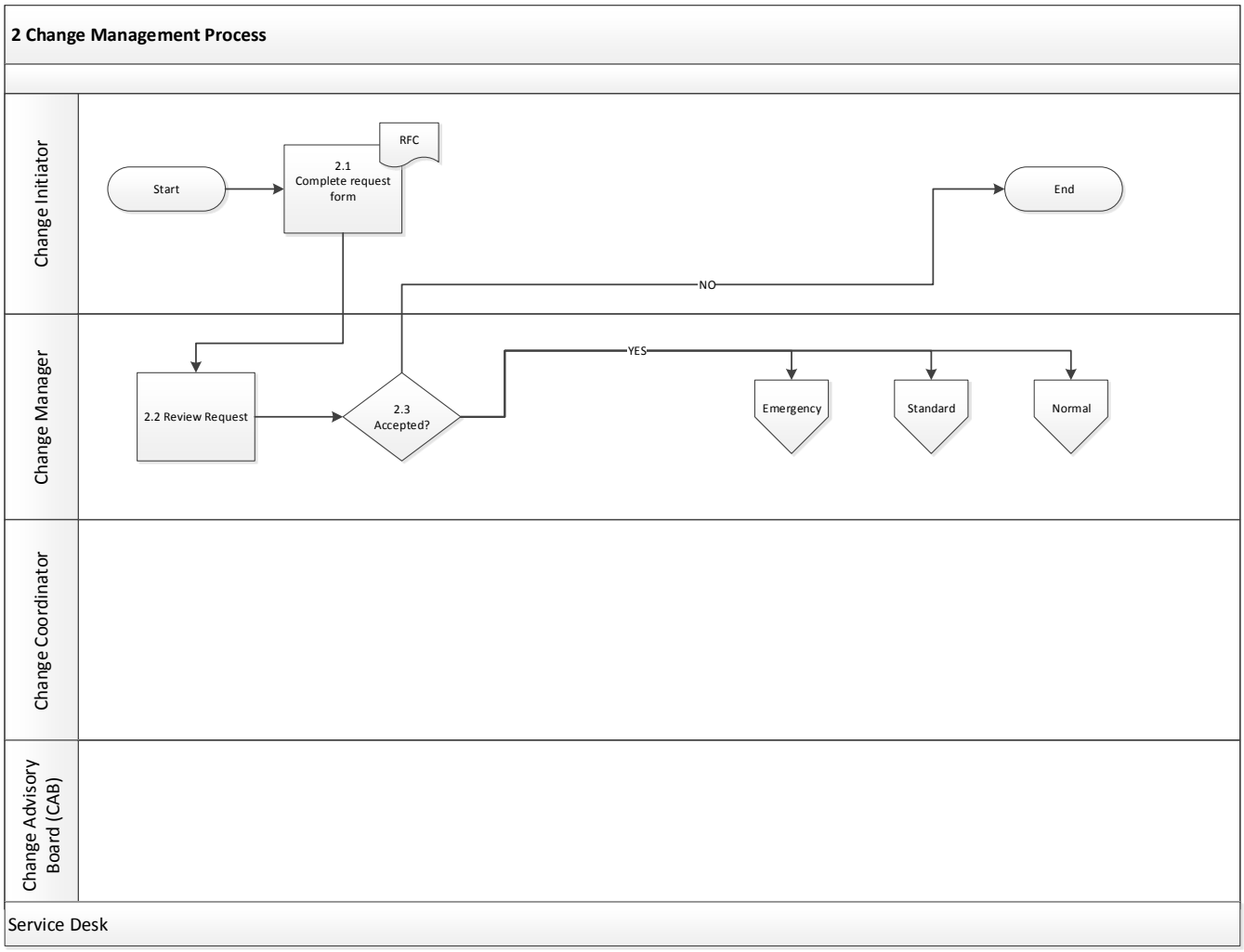
1.7 Notifications

1.6.1 Prior to the standing CAB meetings, the Change Control Coordinator will circulate a report of accepted and upcoming changes, along with changes seeking acceptance at the meeting, to a group of IT professionals in the Departments.

1.6.2 Emergency changes that are accepted in advance of implementation will be communicated as an update to the original communication.

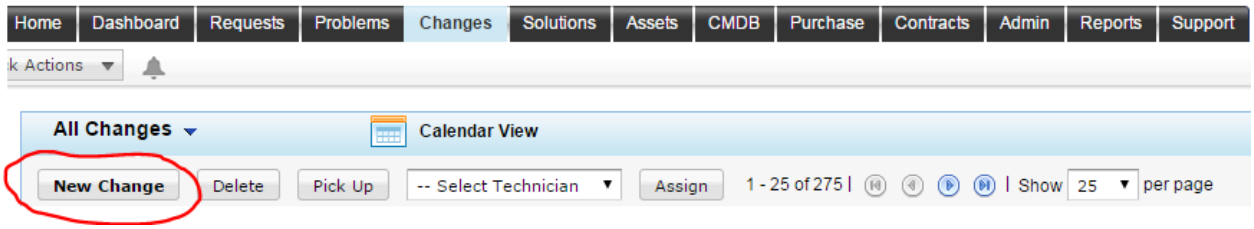
1.6.3 Events and emergency changes that are accepted after implementation will be communicated as soon as possible.

2 Change Management Process



2.1 Complete Request Form

To start the Change Management Process, the Initiator will complete a Request for Change (RFC) form in the ITSM system, by navigating to ***Changes***, and selecting the ***New Change*** button.



Select the appropriate template, based on the type of change to be submitted (see 2.1.1 for an explanation of change types):

- V2 RFC Normal Major or Standard Change
- V2 RFC Normal Minor Change
- V2 RFC Emergency Change

Change information to be entered will include the following:

- The title of the change
- Change initiator (person initiating the change request)
- Change Owner (person responsible for the making the change happen, ensuring the change ticket is updated and marked as completed. This includes designing the change. Change Owner is the lead of the implementation team.)
- Category (Service or Application, from a drop down in the ITSM system)
- Subcategory (Subject Area, from a drop down in the ITSM system based on the Category)
- Change manager (IT Manager responsible for the service to be changed)
- Change type (Major, Minor, Standard, or Emergency). Default will be Major. See section 2.1.1.
- Priority (Urgent, High, Medium, Low, Normal). Default will be Normal, except for Emergency Changes, which will be set to Urgent. See section 2.1.2.
- Risk (high, medium, low). See section 2.1.3
- The scheduled start, target completion, and "need by" dates and times of the change.
- Expiration Date. This applies only to Standard changes, which will be reviewed on a yearly basis. Therefore it should be set the date one year in future from the date of the original request.
- Business Unit (the main business unit that this change will affect. Specify site names if needed to support Campus Impact field)
- Campus Impact (All Locations, Camden, Glassboro, Stratford, or Multiple Locations, Remote Clinics)
- Outage Required (yes or no)
- Notification Needed? (external, internal to IRT, external and internal to IRT, no). Use this field to indicate whether an external or internal notification needs to go out regarding this change. Please contact your Department Manager or the Communications Coordinator for guidance with this activity.
- Description of the change, to include the following

    - Impact to existing services. Will an outage occur due to the change (system downtime)?
    - A list of stakeholders that will be affected by this change.
    - The business reason or justification for the change
    - Why the change is needed – in particular giving detailed information on implications of not implementing the change – i.e. security risks etc.
    - Known risks or impact to the business of implementing the change – consideration should also be given to the risk and impact to the business of not implementing the change
    - Required resources – including people, time and investment/costs (if not already budgeted)
- Stage (System field, do not modify. Default will be Submission)
- Status (System field, do not modify. Default will be Requested)

After completing the above data entry, select the ***Save*** button to submit the change. Upon submittal, the status of all changes will be set to **REQUESTED**, with the exception of Emergency changes, which will be set to **PLANNING IN PROGRESS**.

2.1.1 Assigning a change type to a change

The Initiator assigns a categorization based on the following information:

Category information (category is based on the required level of authorization):

- **Standard change** – using a procedure – pre-authorized (already tested, documented well with a proven back out plan). Examples: implementation of a user account, provisioning, and automated processes. Required Change Manager input during the initial RFC process, however no change request is required after the Standard change is accepted by the CAB. All standard changes will be reviewed on a yearly basis by the Change Manager. Each time a standard change is implemented, the Work Log will be updated by the Implementer or Initiator.
- **Normal Minor change** – authorized by Change Manager (low risk and low impact to the business) Examples: modifying an ACL or adding a new switch to an existing stack.
- **Normal Major change** – authorized by the CAB (high risk and/or high impact to the business) Examples: Modifying Internet inbound rules to the network.
- **Emergency change –** immediate change, requires no pre-authorization (emergency change process), however the change will flow through the system similar to a Normal change, to ensure visibility by the Change Manager and CAB. Problem causing loss of service or severe usability problems to a larger number of Users, a mission-critical system, or some equally serious problem. Immediate action required. Resources may need to be allocated immediately to build such authorized changes.

Change Classification Matrix			
Level	**Description**	**Risk**	**Submittal/Approval Requirements**
Normal Major Change **	Potential to disrupt critical business and/or student activities for many users.	High	Change Request is submitted at least 7 calendar days prior to target implementation date
	Introduces major new technologies on a considerable scale		
	Affects a major part of the business-critical infrastructure		Review and approval by the Change Manager and Change Advisory Board (CAB)
	High probability of service outage with lengthy back out plan (> 1hr)		
	Complex or lengthy implementation		
	Not standard or emergency change		
Normal Minor Change	Change impacts a small user group.	Moderate	Change request is submitted prior to EOB on the day preceding a CAB meeting and target implementation time is scheduled after CAB
	High probability of success		
	Not standard or emergency change		Review and Approval by the Change Manager
	Relatively simple or quick implementation and back-out		
Standard Change**	Pre-authorized change that has a established implementation path, that has been proven successful with minimal business impact and has a documented set of procedures, including a well documented and successfully tested back out procedure.	Low	No minimum submission requirement.
			Initial Review and Approval by Change Manager and CAB, with approval expiration date of 1 year. Subsequent implementations do not require approval, however will be recorded in the work log of the Standard Change.
Emergency Change **	Critical service is down or severely impaired with disruption to business and/or student activities	Critical	Email notification of change to Information Security Office immediately
			Change Request is submitted within 1 business day after the start of the triage
	Change Request is deferred until the issue is resolved or under control.		Change is reviewed at the next Change Advisory Board (CAB) Meeting

** Requires Review/Approval by the Change Advisory Board (CAB)

2.1.2 Assigning a priority to a change

The Initiator assigns the change a priority based on the following information:

Priority information (priority is based on how quickly the change needs to be implemented):

Priority	Description
Immediate	Requires immediate implementation (emergency change process). Causing loss of service or severe usability problems to a larger number of Users, a mission-critical system, or some equally serious problem. Immediate action required. Resources may need to be allocated immediately to build such authorized changes.
High	Requires implementation within 48 hours. Severely affecting some users, or impacting upon a large number of users. To be given highest priority for change building, testing and implementation resources. (Other than emergency).
Medium	Requires implementation within five days. No severe impact, but rectification cannot be deferred until the next scheduled release or upgrade. To be allocated medium priority for resources.
Low	Requires implementation by an indicated date. A change is justified and necessary, but can wait until the next scheduled release or upgrade. To be allocated resources accordingly.

2.1.3 Assigning a risk to a change

The Initiator assigns the change a risk based on the following information:

The risk will be classified as Low, Medium, or High. Risk is based on both the likelihood and Impact of an outage, as classified below:

Impact		Likelihood of an Outage: A – Very Unlikely	B – Possible but not likely	C – Likely	D – Will Occur
1	No or few users affected	Low	Low	Medium	Medium
2	Less than 50 users affected	Low	Medium	Medium	Medium
3	Between 50 and 100 users affected	Low	Medium	Medium	High
4	Over 100 users affected	Medium	Medium	High	High

2.1.4 Update the Roles with Implementers

The Initiator updates the Roles on the Submission tab to identify the Implementers, to ensure they receive notifications specific to this change (e.g.: Approvals, Rejections, Requests for more information).

2.1.5 Change Planning

The Initiator has the opportunity to also update plan information on the Planning tab, including the Implementation Plan (Roll Out Plan), Backout Plan, Test Plan, and Support Center Training Plan. The Support Center Training Plan is used to identify changes to helpdesk scripts or documentation that will be needed for interactions with the end users via e-mail, Service Desk, phone, or in person.

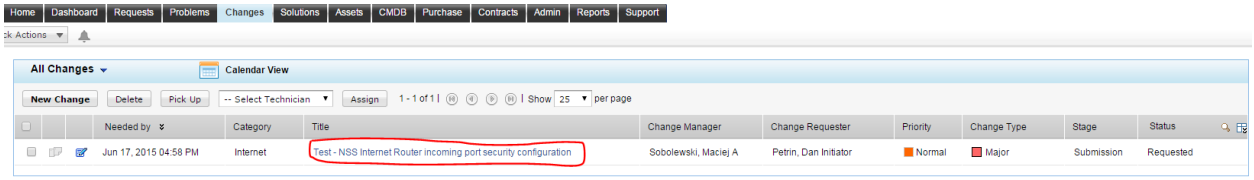
This information can also be updated after the Change Manager **Accepts** the change; however it is important that the Initiator enter all necessary plan information needed for acceptance.

2.2 Change Manager Reviews Request

All changes are filtered and assessed by the Change Manager. There should be two levels of review for all proposed RFCs. Either the Change Manager and the CAB (Normal Major and Standard changes) or a Change Manager (Normal Minor or Emergency) is required for any change to be implemented. If the Change Manager is not available to review the Emergency change request, a verbal approved is required.

2.2.1 Navigate to the Change Request List

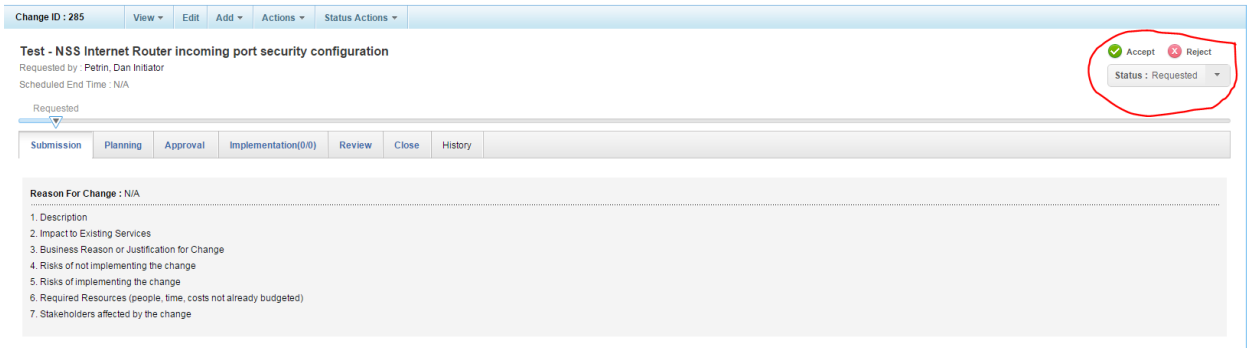
Navigate to ***Changes***, and select the Title of the change you wish to process.



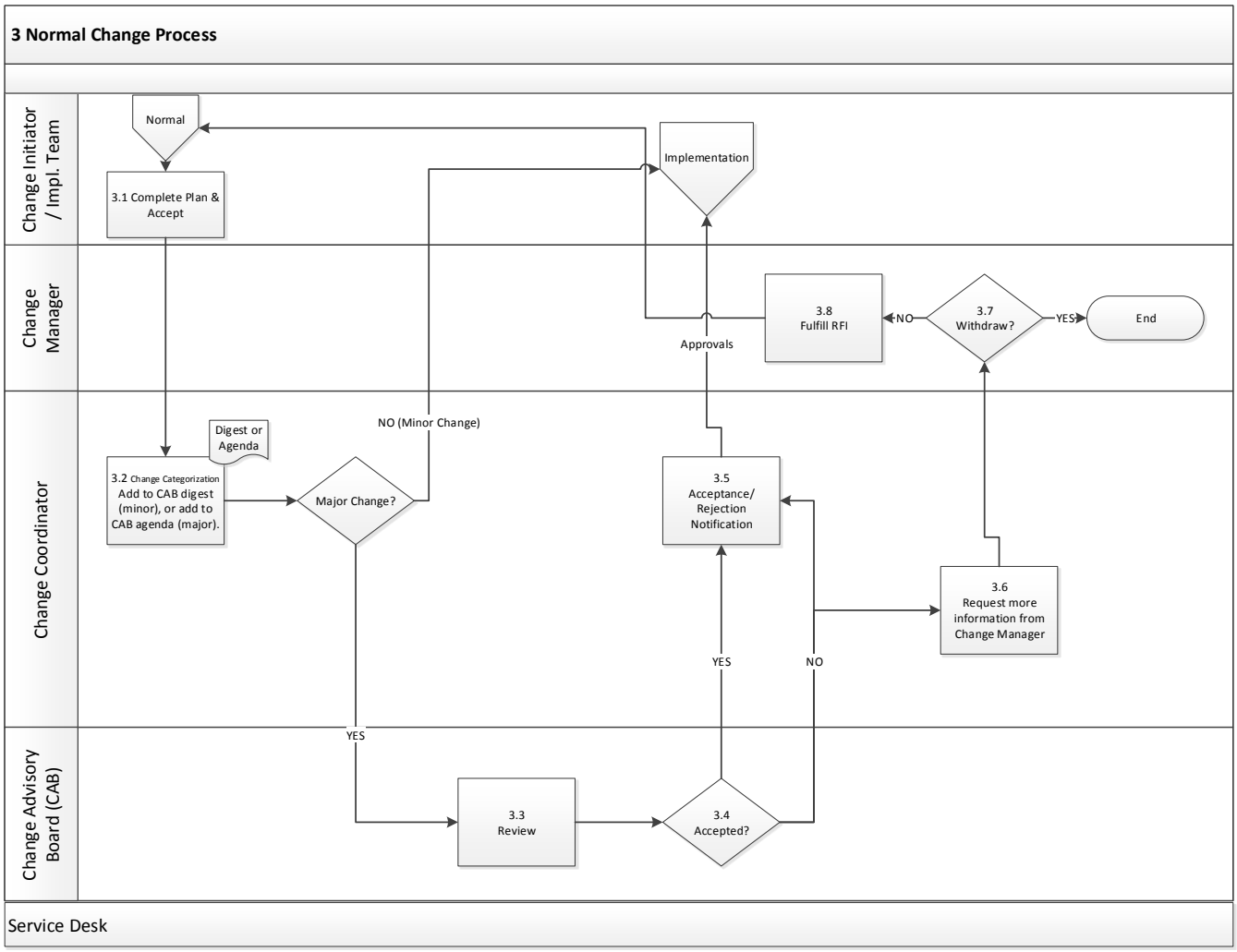
2.3 Acceptance/Rejection OF CHANGES AT ASSESSMENT STAGE

Where a RFC has been assessed and considered inappropriate, impractical or unjustified they should be returned to the Initiator by setting the status to **REJECTED**, together with brief details of the reason for the rejection, and the RFC should record the rejection information. A right of appeal against rejection should exist, via normal management channels, and resubmittal of the RFC. The status of a change rejected at this stage of the change process will be: **REJECTED**.

If the Change Manager completed the change assessment and considers the request viable, the RFC status should be set to **ACCEPTED**, and the status proceeds to **PLANNING IN PROGRESS**.



3 Normal Change Process



3.1 Change Planning

The Initiator updates plan information on the Planning tab, including the Implementation Plan (Roll Out Plan), Backout Plan, Test Plan, and Support Center Training Plan. The Support Center Training Plan is used to identify changes to helpdesk scripts or documentation that will be needed for interactions with the end users via e-mail, Service Desk, phone, or in person.

When the Initiator has entered the required plan information, they will set the status to **APPROVED**. This will let the CAB know that they have entered all necessary plan information needed for approval. If the Initiator needs to add additional plan information after approval, the RFI (Request for Information) function can be triggered by the Change Manager.

3.2 Change Categorization

If a change is categorized as a Minor Change, the RFC status will be set to **IMPLEMENTATION IN PROGRESS** and will be aggregated to the digest agenda for the next CAB meeting, to provide visibility to all Minor changes.

If the change is categorized as a Major Change, the RFC status will be set to **ACCEPTED** and will be added to the CAB agenda for review at the CAB meetings.

3.2.1 Normal Major Change Notification

A notification will be sent by the ITSM system with details on the change to allow the CAB members to review in preparation for the CAB meeting.

3.3 CAB Review

Once all aspects of the change have been considered (as per CAB considerations for each change information above) the CAB will then give review input for the change to be progress for scheduling and into the change build stage of the process.

Note that the CAB is an advisory body. *The Change Coordinator is responsible for reviewing the RFC and noting the CAB acceptance or rejection of a change. If the Change Coordinator forwards a RFC to implementation that was not accepted by the CAB then they must explicitly document the reasoning and direction for this decision including the identification of executive direction or critical business drivers that led to passing the RFC without CAB acceptance.*

If the CAB cannot make a final decision on its acceptance of a change then a change escalation needs to be initiated by the Change Coordinator to ensure that acceptance is given (via escalation) at a higher level. The escalation of change acceptance must be documented in the RFC – the Change Coordinator will detail to whom the change was escalated and the final decision that was made either accepted or rejected.

3.4 Acceptance/Rejection of a change by the Change Advisory Board

If the CAB accepts the change, the status of the change at this stage of the change process will be: **IMPLEMENTATION IN PROGRESS**. The Change Coordinator will update the "Comment for status change" of the RFC with the names of all the change authorizers.

If the CAB rejects the change, the Change Coordinator must document, in full, the reasons for the rejection and ensure that the decision is communicated to the Change Initiator. The status of the change at this stage of the change process will be: **REJECTED.**

3.5 Notification of Acceptance/Rejection by the Change Advisory Board

Based on the status of the change (**APPROVED** or **REJECTED**), a notification will be sent from the ITSM. For Approved, a Notification will be sent to the CAB, Change Manager, Initiator, and other Stakeholders identified in the RFC. For Rejections, a Notification will be sent to the Initiator and Change Manager, asking for more information or with specific instructions on how the RFC should be updated (e.g.: update categorization of the change type, etc.).

If the CAB accepts the change, the status of the change at this stage of the change process will be: **APPROVED.**

3.6 Request for More Information from Change Manager

As output of the CAB meeting, as a follow-up from the Notification, the Change Coordinator will ask for more information or provide specific instructions on how the RFC should be updated (e.g.: update categorization of the change type, etc.).

3.7 Decision to Withdraw RFC by Change Manager

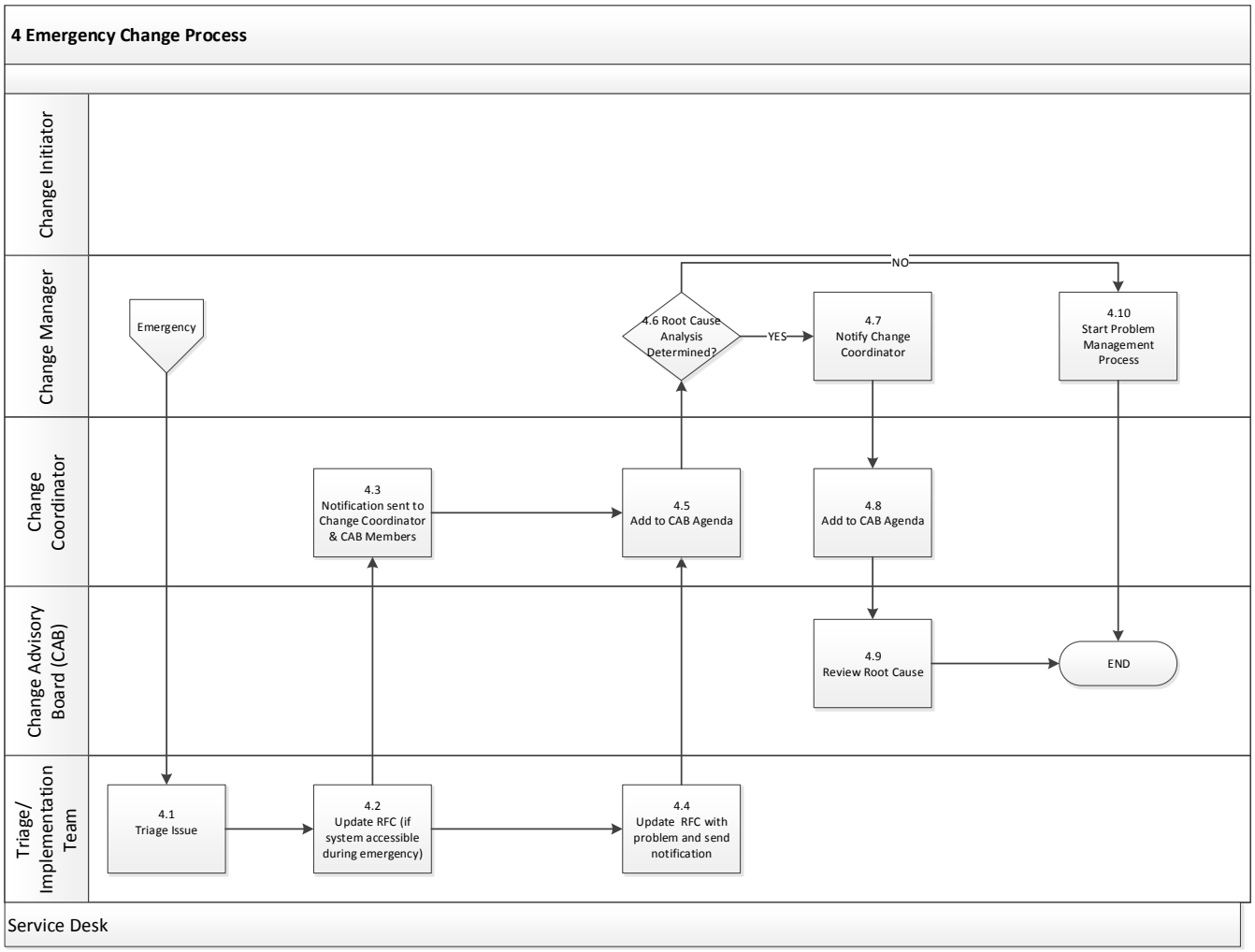
Based on the advice of the CAB, the Change Manager will make the decision on whether to withdraw the original request, or update the request and resubmit for review.

3.8 Fulfill RFI by Change Manager

The Change Manager will update the RFC with the required information, and the RFC will again flow through the Normal change process.

4 Emergency Change Process

The intent of the Emergency Change Process is to allow the triage/implementation team to resolve issues in a timely manner, however document all aspects of the emergency process, including the initial notification for awareness, problem resolution specifics, and root cause analysis. This will ensure that the entire IRT staff is communicated with on a frequent basis regarding the emergency until closure.



4.1 Triage Issue

The Emergency Change Process begins with the resolution of an immediate incident, which is causing a service outage for multiple users, by the triage/implementation team.

4.2 Update RFC

If the ITSM system is available during the emergency, the Triage/Implementation team will update the RFC.

4.3 Emergency Change Notification sent to Change Coordinator & CAB Members

The ITSM will send a notification to the Change Coordinator, Change Manager, and CAB members.

4.4 Update RFC and Send Problem Resolution Notification

Upon resolution of the Problem, the Problem will be updated in the ITSM, and linked to the Emergency RFC.

The ITSM will send a notification to the Change Coordinator and CAB members. The RFC will be aggregated to the agenda for the next CAB meeting, to allow the CAB to review the problem/resolution.

4.5 Add Emergency Change to CAB Agenda (initial review and problem review)

The RFC will be aggregated to the agenda for the next CAB meeting, to allow the CAB to review the issue.

4.6 Root Cause Analysis Determined

The implementation team will work to determine the root cause of the problem. Upon determination of the root cause, the Problem will be updated in the ITSM, and linked to the Emergency RFC. If the Root Cause is not found by the implementation team, the problem will be transitioned to the Problem Management process, to be owned by a separate working team. Once the root cause is identified, the associated Problem record and RFC will be updated.

4.7 Notification of Root Cause Resolution

The ITSM will send a notification to the Change Coordinator, Change Manager, and CAB members.

4.8 Add Emergency Change to CAB Agenda (root cause review)

The RFC will be aggregated to the agenda for the next CAB meeting, to allow the CAB to review the root cause analysis.

4.9 Root Cause Analysis Review

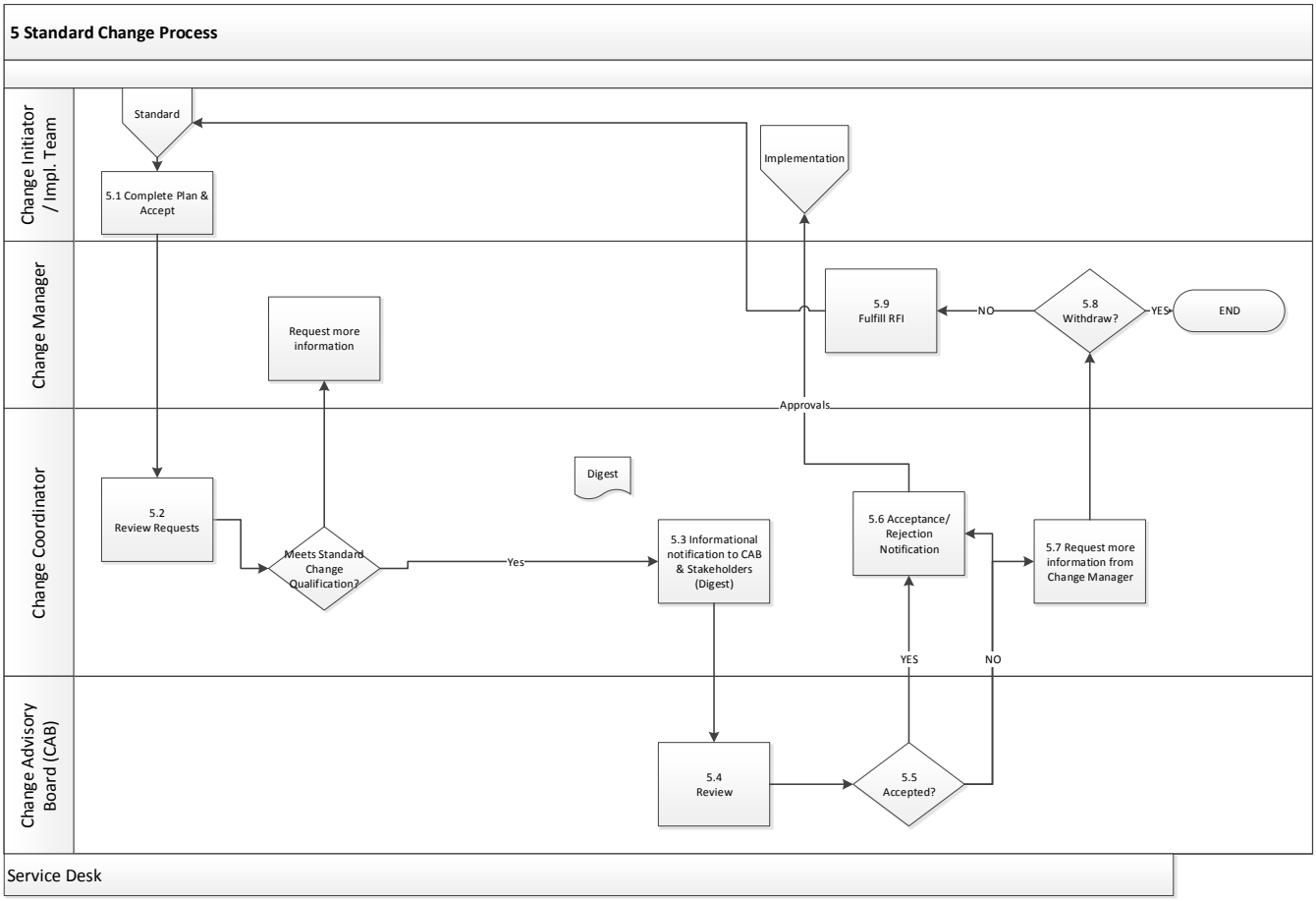
A root cause analysis review will be conducted by the CAB for each Emergency Change to review the root causes of the problem, and to determine if a change has or can be made to the technology, people, or processes to prevent the final undesirable incident from recurring.

4.10 Problem Management Process

IRT will assign a working team to review the issue in accordance with the standard Problem Management Process, if the Root Cause of the problem is unable to be determined.

5 Standard Change Process

The Standard Change Process is to be used for a change that is to be repeated on a number of occasions, has a low impact, thorough implementation documentation, and a proven back out plan. The CAB will need to assess it in line with the option to make it a standard change using a pre-authorized procedure. Once accepted, the Standard Change will not require a new RFC, acceptance from the Change Manager, or the CAB.



5.1 Change Planning

The Initiator updates plan information on the Planning tab, including the Implementation Plan (Roll Out Plan), Backout Plan, Test Plan, and Support Center Training Plan. The Support Center Training Plan is used to identify changes to helpdesk scripts or documentation that will be needed for interactions with the end users via e-mail, Service Desk, phone, or in person.

When the Initiator has entered the required plan information, they will set the status to **APPROVED**. This will let the CAB know that they have entered all necessary plan information needed for approval. If the Initiator needs to add additional plan information after approval, the RFI (Request for Information) function can be triggered by the Change Manager.

5.2 Review of Standard Change Requests by Change Coordinator

Requests to classify a Change as a Standard Change will be routed to the Change Coordinator after Change Manager acceptance. The Change Coordinator will review the request information to ensure the impact is correctly assessed as low, and that the proper implementation and back out documentation has been provided.

5.3 Notification of Request to the CAB

The ITSM will send a notification to the Change Coordinator and CAB members. The RFC will be aggregated to the agenda for the next CAB meeting, to allow the CAB to review the request.

5.4 Review of Standard Change Request by CAB

The CAB will review the RFC at the regularly scheduled CAB meetings.

5.5 Acceptance/Rejection of the Standard Change RFC

Upon acceptance of the Standard Change, the RFC will be updated to note the status of this Change to **APPROVED**, ensuring that it will be included in the periodic digest notifications to the CAB.

Upon rejection of the Standard Change, the Change Coordinator will update the RFC with the request for reclassification of the change or request for more information. The RFC will be routed back to the Initiator to review and update, as per the start of the RFC process.

5.6 Notification of Acceptance/Rejection by the Change Advisory Board

Based on the status of the change (**APPROVED** or **REJECTED**), a notification will be sent from the ITSM. For Acceptance, a Notification will be sent to the CAB, Change Manager, Initiator, and other Stakeholders identified in the RFC. For Rejections, a Notification will be sent to the Initiator and Change Manager, asking for more information or with specific instructions on how the RFC should be updated (e.g.: update categorization of the change type, etc.).

5.7 Request for More Information from Change Manager

As output of the CAB meeting, as a follow-up from the Notification, the Change Coordinator will ask for more information or provide specific instructions on how the RFC should be updated (e.g.: update categorization of the change type, etc.).

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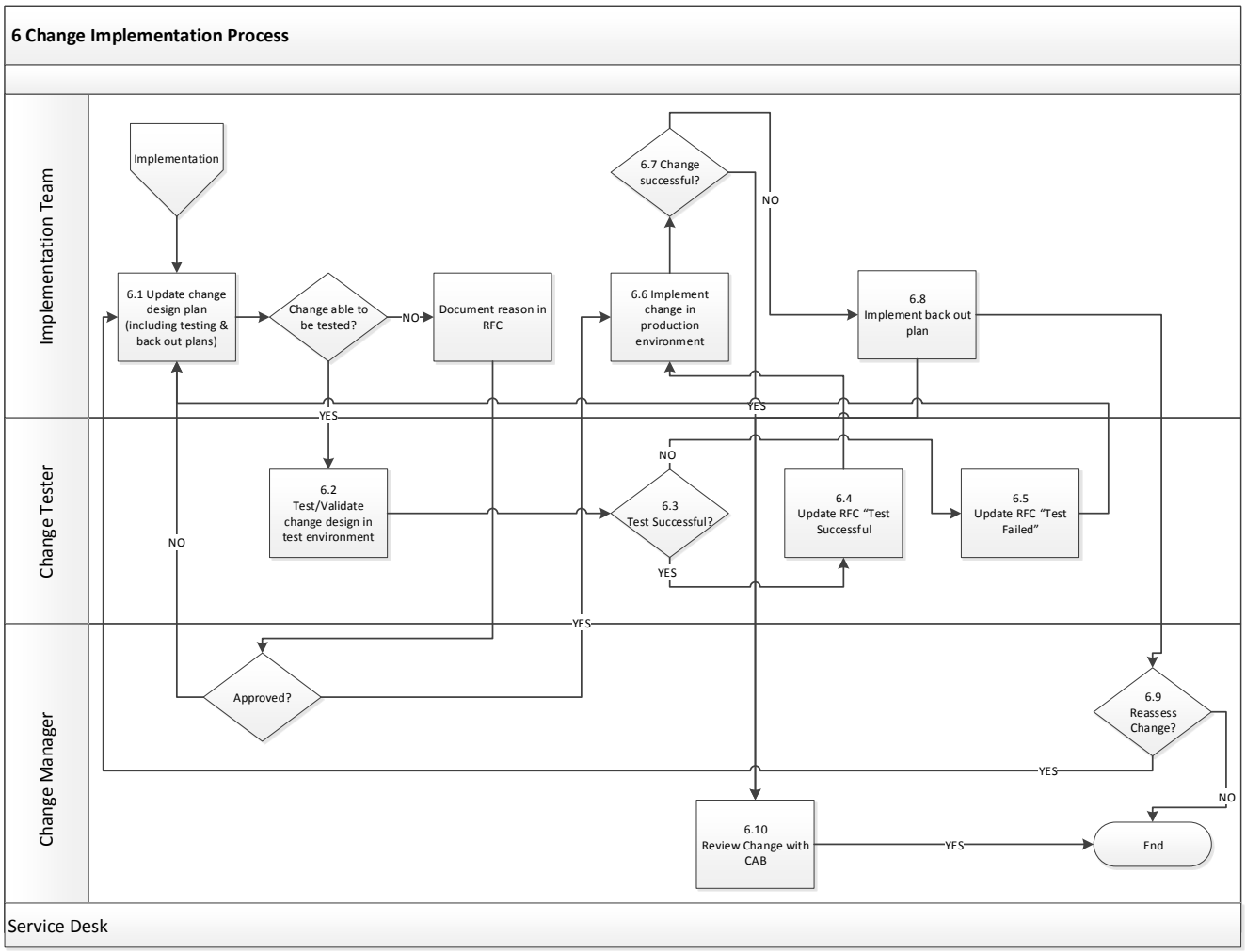
5.9 Fulfill RFI by Change Manager

The Change Manager will update the RFC with the required information, and the RFC will again flow through the Standard change process.

6 Change Implementation Process

The Change Implementation Process is to be used to design, test, and rollout all Authorized and Accepted changes, for types Normal Major and Standard. Departmental Standard Operating Procedure documents should be maintained and available for all Normal Minor, Normal Major, and Standard change types.



6.1 Update Change Design Plan (including testing & back out plans)

Departmental Standard Operating Procedure documents should be maintained and available for all Normal Minor, Normal Major, and Standard change types. This should include configuration and procedural documentation, testing plans, and back out plans. The RFC will include a link to the storage location.

6.2 Test/Validate Change Design in Test Environment

If a change is able to be tested and validated prior to a rollout in Production, this should be completed in a Test Environment.

6.2.1 Activities of Change Tester

To prevent changes from adversely impacting service quality, it is strongly recommended that the Change Tester carry out the following activities to ensure that the change is thoroughly tested in advance (including Backout procedures), where possible. Testing should include aspects of the change such as:

- performance
- security
- functionality
- testing of the Backout plan
- documenting testing carried out and results

Usually most of this testing will require a separate test environment. It may not be possible for every type of change to the tested. In these instances, a more detailed impact and risk of implementing these types of changes must be undertaken to reduce issues during the Implementation of the change.

6.2.2 Change dependencies identified

The Change Tester needs to consider any change dependencies that may have an impact on this change being built as a result of the testing. This may include the consideration of order in which any dependent changes need to take place – and potential risk and resource implications. The Change Tester will need to check all changes that have been authorized and are potentially being built by other teams and also any changes that are currently being assessed to ensure that no dependencies exist. If there are dependencies they need to be document in change dependencies Identified section of the RFC.

6.3 Details of the testing carried out

The Change Tester needs to document all testing carried out, and update the RFC with the test results.

6.4 Update RFC "Test Successful"

For successful tests, the Change Tester will update the ***Notes*** field of the ***Submission*** tab in the RFC as **TEST SUCCESSFUL**. The Change can then be implemented in Production as per the planned change window.

6.5 Update RFC "Test Failure"

For failed tests, the Change Tester will update the ***Notes*** field of the ***Submission*** tab in the RFC as **TEST FAILED**. The Change will go back to the start of the Change Implementation Process, to allow the implementation team to reevaluate the update the change design plan. Additional cycles of testing will follow until the change test is successful.

6.6 Implementation of a change

6.6.1 Change Work Log Details

The Change Implementer will update the ***Work Log*** details in the ***Implementation*** tab with the date the change was implemented, and the details of the change. To perform this function, select "Add New" in the Work Log Details section.

For all Standard changes, the Work Log of the Change record should be updated with a new record, each time this change is implemented. It shows the owner, time taken, start time, end time, description, and can be exported to a spreadsheet as needed

6.6.2 Issues encountered

Issues encountered during the change implementation need to be documented. Even if issues are encountered

that do not lead to the use of the Backout plan they must be documented to ensure that they are known and discussed at the change review. These issues need to be documented by the Change Implementer in the RFC form.

6.7 Change successfully implemented

6.7.1 Implementation Completed

Upon completion of the change, the Change Owner will change the status of the RFC implementation to **COMPLETED**.

6.7.2 Review Completed

Upon review of the change ticket, the Change Manager will change the status of the RFC review to **COMPLETED**.

6.8 Implement Back Out Plan

If a failure occurs that requires the Backout plan to be executed, this needs to be documented by the Change Owner in the RFC form. The change status of the RFC will be set to **BACK OUT**.

6.9 Reassess Change

For changes that required the Backout plan to be executed, the Change Manager will reassess the need for the change. If the change is required, the change will go back to the start of the Change Implementation Process, to allow the implementation team to reevaluate the update the change design plan. Additional cycles of testing will follow until the change test is successful.

6.10 Review Change with CAB

After successful or failure of the change, a review of the events is conducted at the next regularly scheduled CAB meeting.

6.10.1 Date change reviewed

The Change Coordinator will update the RFC form with the date the RFC was reviewed prior to closure.

6.10.2 Review information

The Change Coordinator must review all implemented changes after a predefined period has elapsed. This process may still involve CAB members; change management may look to them for assistance in the review process. Change reviews may be tabled at CAB meetings, for CAB members' information and to agree any follow up action that may be needed. The purpose of such reviews is to establish that:

- The change has had the desired effect and met its objectives
- Users and customers are content with the results, or to identify any shortcomings
- There have been no unexpected or undesirable side effects to functionality, availability, capacity/performance, security, maintainability etc.
- The resources used to implement the change were as planned
- The implementation plan worked correctly (so include comments from the implementers)

- The change was implemented on time and to cost as budgeted
- The Backout plan functioned correctly, if the Backout plan was implemented

Where a change has not achieved its objectives, the Change Coordinator (or the CAB) should decide what follow up action is required, which could involve raising a revised RFC. If the review is satisfactory or the original change is abandoned, the RFC should be formally closed in the logging system.

6.10.3 Closing a change

The Change Coordinator needs to ensure that the status of the RFC needs to be changed to **COMPLETED** on the **CLOSE** tab to complete the process (Normal Major, Normal Minor, and Emergency changes). For Standard changes, they will be kept open in an **IN PROGRESS** status in order to allow the logging of all occurrences of this procedure.