



## **ASU Change Management Process**

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# 1 Executive Overview

This document describes the Change Management Process for Technology Systems at Arizona State University (ASU).

The goal of the Change Management process is to ensure that standardized methods and procedures are used for efficient and prompt handling of all Changes in order to minimize the impact of Change-related Incidents upon quality of service and consequently to improve the day-to-day operations of the University. This is done through a formal process of recording, assessing, authorizing, scheduling and effectively communicating changes to ASU's technology systems.

This document outlines the process and establishes the responsibilities of the parties involved.

The ASU Change Management Process undergoes regular revisions. For the latest version please see [URL \(TBD\)](#).

For further information, please contact the Associate Vice President in charge of Operations, Bob Nelson, at [bob.nelson@asu.edu](mailto:bob.nelson@asu.edu).

## 2 Change Management Process Notes

### 2.1 *Dramatis Personae*

Five groups play roles in the ASU Change Management process.

- University Technology Council (UTC) – described in Section 4
- Technical Advisory Group (TAG) – described in Section 5
- Change Management Team (CMT) – described in Section 6
- ASU Help Desk
- Service Owner

### 2.2 *Change Type*

Changes to ASU technology systems are classified into four types based on the magnitude of risk that they present to system operation. For example, most changes to the technology system are conducted as a matter of course and have a low likelihood of disrupting operations or significantly impacting the user experience. Other changes are more extensive in scope or affect critical systems in new ways. Such changes require a greater level of oversight and as such should be subject to a greater level of communication and discussion. A third class of changes arises in response to unforeseen conditions and must be attended to immediately, often without broad consultation due to the urgency of the situation. Nevertheless, such changes must be accurately recorded so that their impact can be properly assessed in hindsight.

The ASU Change Management process classifies each Change based on its level of risk as either:

- Pre-approved,
- Low impact,
- High impact, or
- Emergency

The risk classification affects the timeline of the Change, the notifications that must be sent, and the review and closure processes to follow.

#### 2.2.1 *Pre-Approved Changes*

Pre-approved changes are considered routine. They will proceed to the scheduling phase immediately.

Pre-approved changes do not require authorization by the CMT but must still be logged and available for review.

#### 2.2.2 *Low Impact Changes*

Minor changes affect relatively few clients or are expected to cause minimal impact.

Minor changes require authorization by the CMT and notification of the TAG and the UTC, as well as proper notification of affected groups of faculty, staff or students.

#### 2.2.3 *High Impact Changes*

Major changes affect or have the potential to affect large numbers of clients, involve risk to the normal operation of significant technology systems, or require lengthy outages of critical systems.

Major changes require authorization by the CMT and the notification of the TAG and the UTC. Major changes may also involve notification of all staff or students and may require authorization by the Technology Prioritization Sub-committee of the University Executive Committee.

#### 2.2.4 *Emergency Changes*

Emergency changes are those undertaken in the event of an unforeseen circumstance in order to restore the normal operations of ASU technology systems. Due to the urgent nature of these changes, they are not able to follow the standard change implementation timelines or notifications.

Emergency changes will be reviewed by the CMT post-implementation and will be available for review and comment by the TAG and the UTC.

### 3 The University Technology Council

The UTC advises the University Technology Officer in the use of technology to advance the goals of the New American University. To articulate and prioritize the technology needs of ASU and coordinate technology development throughout the institution. Its members consist of the chief technology advisors to the members of the President's Working Group 1, spanning all aspects of the University mission.

As part of the ASU Change Management process, the UTC serves in an advisory capacity for the review of proposed High Impact Changes and receives notification of scheduled Low Impact Changes and the outcome of every type of managed Change.

### 4 The Technology Advisory Group

The TAG advises the UTC in the detailed implications of proposed Changes and provides the UTC with feedback on the current state of technology systems as they affect the various customer constituencies within the University.

The members of TAG are chosen by the members of the UTC to provide detailed technical expertise within the respective units that UTC members represent.

As part of the ASU Change Management process, the TAG serves in an advisory capacity to the members of the UTC, helping those members frame constructive reviews of proposed High Impact Changes. The members of TAG also receive notification of scheduled Low Impact Changes and the outcome of every type of managed Change.

### 5 The Change Management Team

The UTO Change Management Team (CMT) assesses proposed changes to classify them according to their risk and impact.

The members of the CMT represent the various organizational areas of the University Technology Office and include:

- Shawn Bryan (Change Manager) – Application Support
- Dave McKee – Network Operations
- Terry Hinton – Data Center Operations
- Jack Hsu – Systems and Security Operations
- Mary Covington – Customer Care
- Robin Manke-Cassidy – Development
- Darren Kahus – Database Support
- Jon Finley – Information Security

Based on their own experience and the advice of domain experts, the CMT through regular meetings will review Requests for Change submitted by the various units of the UTO, the TAG, and the UTC to classify, approve, schedule, and notify as appropriate.

#### 5.1 CMT Meetings

The CMT will meet weekly to perform authorization, review and closure of pending RFCs or as needed to ensure timely response to urgent issues.

The CMT meeting time and location is available on the ASU System Health site (<http://systemhealth.asu.edu>), as well as the RFC form for submission of change requests and the deadline for consideration prior to each meeting.

##### 5.1.1 Agenda

The weekly CMT meeting will be chaired by the Changer Manager and will follow a standard agenda.

- Authorization
  - Discuss pending RFCs and approve or reject them
- Scheduling

- Schedule approved changes
- Ensure the Change Calendar is updated
- Notifications
  - Ensure all approved RFCs receive proper notification
- Emergency RFC Review
  - Conduct post implementation reviews of any emergency changes
- Closure
  - Close all outstanding completed RFCs
- Review
  - Review failed changes
  - Improve the ASU Change Management Process

### **5.1.2 Ad-Hoc Meetings**

An ad-hoc CMT meeting may be called when required for urgent changes. This may be conducted via email if required.

### **5.1.3 Quorum**

For IT infrastructure changes, a quorum of four CMT members must be present in order to authorize any RFC. In the absence of a quorum, all changes may be deferred or referred to the University Technology Officer or his designee.

## **5.2 Authorization**

RFC authorization requires the unanimous assent of all CMT members. Should a unanimous decision be unachievable, an RFC may be referred to the University Technology Officer or his designee for a final decision.

## **5.3 Notification and Review**

As part of the ASU Change Management process, the CMT is responsible for ensuring that the proper notification procedures for each class of Change are followed. The CMT is also responsible for monitoring comments, responses, and reviews of proposed High Impact Changes to ensure that the proposed Change can accommodate the expressed concerns of members of the UTC.

The notification and review processes for each class of Change are as follows:

### High Impact Notifications

#### *Proposal Stage*

For changes that the CMT classifies as High Impact, a *Notification of Proposed Change* (see Appendix I) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

In their advisory capacity, UTC members with concerns or reservations can post their comments on ASU System Health or contact the University Technology Officer by email. In the normal course, High Impact Changes will not be scheduled until UTC members' concerns are addressed to their satisfaction.

TAG members should express their concerns, comments, and reservations through their respective UTC member.

The University Technology Officer reserves the right to implement any proposed Change by overruling the concerns or exceptions taken by any member or members of the UTC. Decisions of the University Technology Officer may be appealed to the University President.

#### *Scheduled Stage*

Once a High Impact Change is scheduled, a *Notification of Scheduled Change* (see Appendix II) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

#### *Post Implementation*

Once a High Impact Change has been implemented, a *Notification of Change Implementation* (see Appendix III) will be sent to each member of the UTC and the TAG and will be posted in the appropriate

section of ASU System Health (<http://systemhealth.asu.edu>).

**Low Impact Notifications**

*Scheduled Stage*

When a Low Impact Change is scheduled, a *Notification of Scheduled Change* (see Appendix II) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

*Post Implementation*

Once a Low Impact Change has been implemented, a *Notification of Change Implementation* (see Appendix III) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

**Pre-Approved Notifications**

*Scheduled Stage*

When a Pre-Approved Change is scheduled, a *Notification of Scheduled Change* (see Appendix II) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

*Post Implementation*

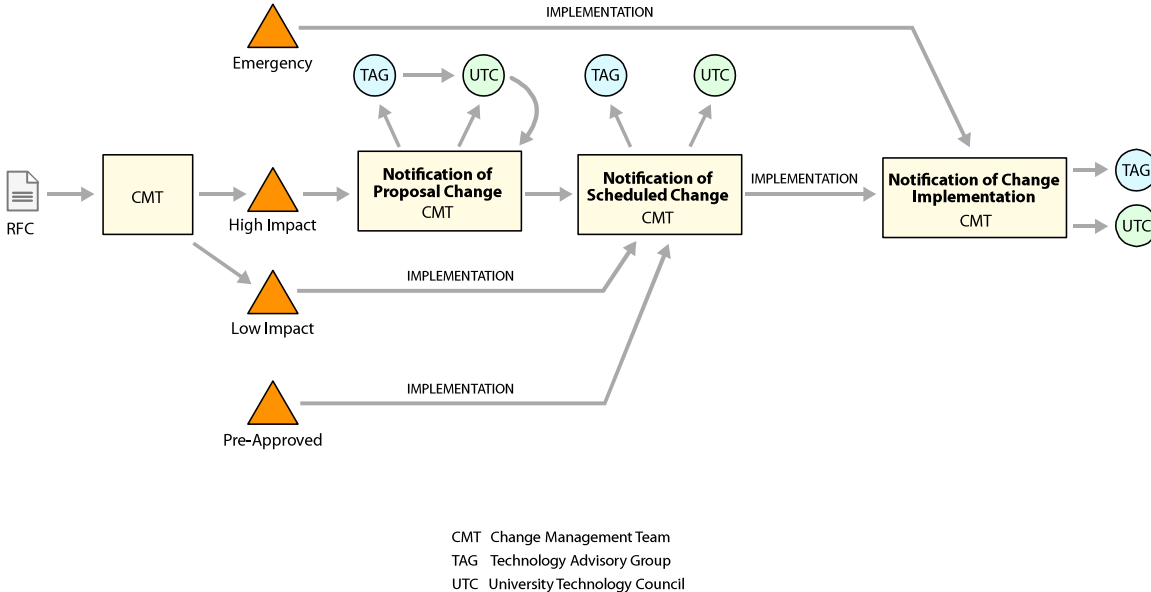
Once a Pre-Approved Change has been implemented, a *Notification of Change Implementation* (see Appendix III) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

**Emergency Notifications**

*Post Implementation*

Whenever an Emergency Change is implemented, a *Notification of Change Implementation* (see Appendix III) will be sent to each member of the UTC and the TAG and will be posted in the appropriate section of ASU System Health (<http://systemhealth.asu.edu>).

Fig. 1: **Notification Flow for ASU Change Management Process**



## 6 CMT Process Overview

The following sections include information on the steps the CMT will follow in reviewing RFCs, assessing their risk and impact, scheduling them, reporting on their outcome, and delivering the prescribed notifications. A full set of workflow instructions containing step-by-step details is also available.

Many steps of the process are automated through the use of Remedy. Where appropriate the automations used have been noted.

### 6.1 Initiation / Recording

Proper recording of changes is essential. Changes are submitted electronically via the Request for Change form in Remedy, either by the Requestor or by the CMT.

RFCs include the following information:

<b>Initiator</b>	The person or group requesting the change should fill in their user code. All communications with the Initiator will then be made by email.
<b>Service affected</b>	Choose from the list of services provided. This allows Remedy to identify the Owner and stakeholders of the Service that are to be consulted and given the opportunity to take part in the RFC assessment.
<b>Requested Date &amp; Time</b>	This indicates the date and time on which the Initiator wishes to implement the change. Both date and time are required to assess the impact of outages.
<b>Critical Date</b>	In most cases the requested date will become the implementation date. The exceptions to this are when the request conflicts with a higher priority change already in the system or when another critical date is indicated by the assessment. The critical date should be the date by which this change <i>must</i> be implemented. It will be used to resolve scheduling conflicts only.
<b>Change Description</b>	Describe the requested change in detail providing as much information as required for other staff to understand and make an appropriate assessment. This change description should include details of the implementation plan, if appropriate.
<b>Reason for Change</b>	Describe the benefit to the University that the proposed Change will provide.
<b>Who will this change affect?</b>	The RFC Initiator should provide their assessment of the impact of this change. <ol style="list-style-type: none"> <li>1. Which clients will be affected?</li> <li>2. Which services be affected?</li> <li>3. What staff and resources will be required for the implementation?</li> </ol>

	The CMT will ensure appropriate representatives from this list are advised of the change and allowed an opportunity to provide their assessment.
<b>Length of Outage</b>	If there is to be an outage associated with this change, please indicate which systems will be out, what the length of the outage will be, and what its impact will be. Approximations should be accompanied with some explanation.
<b>Back Out Plan</b>	If the change implementation fails, what plans have been made to reverse the change? These plans should be comprehensive, as in the case of a failed change, where they will be reviewed by the CMT to identify areas for improvement.
<b>Change Type</b>	Indicate the type of RFC: Pre-Approved, Low Impact, High Impact, or Emergency
<b>Notification Plan</b>	In addition to the required change notifications (NPC, NSC, NIC), describe what messages must be sent to end users, by whom, and by what methods (email, website, etc).

## 6.2 Configuration Management

Upon RFC submission, the Changer Manager will ensure the appropriate configuration records for the systems and/or services affected by the RFC are updated. This includes the identification of all relevant stakeholders who will then be given the opportunity to assess the RFC and also ensure our configuration records are well maintained.

Changes to configuration data should also be supplied to the Change Manager for update following the implementation of all RFCs.

Responsibility for updating the relevant configuration records lies with the Change Manager, although the Service Owner and Initiator will play an important role.

## 6.3 Authorization

RFCs are reviewed by the CMT during the weekly meeting or by special arrangement if the RFC is designated urgent. These reviews will be based upon the collected assessments made by CMT members and will balance the expected benefits of implementation with the business and technical risks identified, the urgency of the change and the predicted impact on clients or University operations.

Following review, the CMT will classify RFCs as Rejected, Low Impact or High Impact.

- RFCs classified as Rejected are not authorized to proceed.
- RFCs classified as Low Impact will be authorized by the CMT and scheduled.
- RFCs classified as High Impact are forwarded to the UTC for review and comment. TAG members also receive notification to allow them to advise their respective UTC members. Once the review period is completed and comments and concerns of the UTC members are addressed, the CMT will authorize and schedule the amended RFC.

For an RFC to be authorized, the CMT must approve it unanimously. If a unanimous decision cannot be reached, the RFC will be referred to the University Technology Officer or his designee for a final decision.

Following the CMT meeting the appropriate RFC will be updated, setting its status to Approved or Rejected and specifying any points noted by the CMT during deliberation.

Rejection of an RFC will notify the Initiator, the CMT and the Service Owner.

No unauthorized RFCs will be implemented. The decisions of the CMT can be appealed to the University Technology Officer or his designee.

## **6.4 Scheduling**

Proper scheduling is important to ensure change implementations do not conflict and cause undue impact on the University operations.

The Change Calendar is published at ASU System Health (<http://systemhealth.asu.edu>). This is the definitive source of change schedule information.

Scheduling is the joint responsibility of the Initiator, the Service Owner and the Change Manager.

## **6.5 Implementation**

From a change management point of view, the implementation of the change should follow the plans provided as part of the RFC.

Success or failure of the implementation must be promptly reported to the ASU Help Desk, as must any known issues created by the implementation. Following the scheduled date of implementation, an email message is sent to the initiator requesting a status update to ensure this happens.

On the requested implementation date, a problem record is automatically created within Remedy. This allows all incidents attributed to the Change implementation to be recorded efficiently and provides raw data for the Change review phase.

The Initiator has responsibility for ensuring the implementation follows the suggested plan and that back out plans are implemented if required. They are also responsible for ensuring appropriate staff is available to assist with implementation, when and if required.

## **6.6 Review**

All Changes that fall into the following categories are reviewed:

- Failed changes
- Changes that exceeded the specified outage window
- Emergency or urgent changes
- Changes causing unexpected or unreasonable incident volumes

Changes falling into these categories will be passed to the Change Manager, who will ensure appropriate investigations take place, circulate a written report, and facilitate discussion to ensure any improvements to the process or to the implementation can be identified and actions are taken towards resolve.

All stakeholders and relevant Service Owners will be requested for information pertaining to the impact of the RFC upon their operations and will also receive a formal review report at the end of the process.

CMT members are responsible for appropriate review of changes and identification of improvements or additional safeguards to ensure future successful change implementation.

## **6.7 Closure**

The formal process of RFC closure is the final step of the Change Management process. CMT members will close all RFCs formally at the normal CMT meeting following any review or discussion required.

The Change Manager has the formal responsibility for RFC record closure.

### **6.8 Change Process Metrics**

Each step of the process has associated metrics that allow the process quality to be monitored and improvements to be identified. Example metrics include:

- Time to assess
- % failed changes
- Number of assessments per RFC
- Impact as per incidents recorded
- Number of successes & failures
- Number of changes related to a problem fix