

Final Report Executive Summary:

AITS Change Request Submission and Preparation Process Improvement

Business Case

The AITS Deployment team coordinates the Change, Release and Configuration Management processes for AITS, which handled 1,850 requests for changes to enterprise applications and infrastructure in FY13. End users depend on these processes to ensure stability and availability of the systems they use to perform their job functions at the University of Illinois. Defects in these processes can impact end users by delaying performance enhancements, functionality enhancements or bug fixes they required, by not providing sufficient time for end users to prepare for the changes, or by causing an unexpected or extended outage of the system. Further, defects such as lack of preparation and/or inconsistencies during preparation of a change request submission can cause additional work on the part of both the AITS Deployment team and the teams deploying the change to production. This can also result in reduced lead time to prepare and review a change request affecting impact analysis, testing, verification of content needed for audit compliance and alignment of AITS staff needed to implement the change, delays in deploying the change to production, and an increased risk of effort needed to address issues at the time of the production deployment and unplanned production outages.

Overall, the sponsor hopes that a result of addressing the insufficient preparation will be a reduction in the number of change requests deemed high-priority due to late submission or late first level approval by area manager. The sponsor would like to increase the level of consistency in documenting the changes as well as procedures for staging the change artifacts and coordinating the production release, including the allocation of resources for testing and deploying changes. The sponsor would also like to address concerns raised by employees involved in the process by ensuring that roles and responsibilities for process steps are well defined and understood by all involved parties.

Goal

The goal of this project is to reduce the percentage of change requests that have missing or incomplete information by 12%. This project will strive to clearly and completely outline what items need to be staged and what information is needed by the staff deploying the change and make the instructions readily available to all staff.

Approach

Mapped the change, configuration and release management activities. Created SIPOC diagrams to capture the release management activities performed by the various deployment teams. Gathered issues from project team members as well as held Issue Discovery meetings with additional AITS staff. Discussed issues and causes with AITS project team. Identified opportunities for improvement and brainstormed potential solutions. Developed transition action plan to prioritize potential solutions, assign owners to tasks, and establish a timeline.

Outcome

Identified 7 recommendations that will clearly delineate the roles and responsibilities of those involved as well as the items and information needed to successfully release changes into production. Implementing the recommendations will save all AITS staff time by outlining the steps for all parties involved and detailing what information needs to be provided. In addition to saving time on incomplete change orders, this project would reduce the time spent submitting information, coordinating the release activities and the production implementation of all change orders. The estimated total possible time savings for this project is 5945 hours per year. Suggested future AITS initiatives to address items that were not in scope for this project.

Key Findings

- **Roles and responsibilities of requesting, coordinating and implementing a change are unclear**
- **Redundancy in the information submitted for a change control**
- **Lack of comprehensive standards for how to provide information for the various types of release management activities**
- **Deployment team resources follow different standards which impact release activities**
- **Easy to read change control and/or release management training documentation is not easy to find**
- **Inconsistency with manager development sign off before approving a change control**
- **Confusion regarding coordinating security changes**
- **Problematic functionality and questionable value of certain Change Order form fields**

Improvement Recommendations

1. **Develop a ReadMe file template and determine what change orders are exempt from ReadMe files.** Add consistency to the use of readme files for change requests, both in content and usage.
2. **Create a To-Be Process Flow that clearly outlines the roles and responsibilities of those involved in the process.** Clearly identify roles and responsibilities for requesting, coordinating, and implementing change requests, including when deployment coordinators play a more active role and what is expected of requestors when deployment coordinators are not as involved.
3. **Work with AITS managers on the responsibilities of the CCA approver step within the change and release management processes.** Ensure consistent reviews of change requests are taking place early in the process, reducing the number of issues or rework when changes are released.
4. **Add fields to the Change Order form.** Clearly identify key information regarding the change, who is/should be involved, and any important considerations for timing of release.
5. **Review, evaluate and update existing Change Order documentation. Create guides or training as needed.** Provide staff with job aides and reference documentation, eliminating confusion and increasing consistency.
6. **Develop an interactive change order web form asking smart questions based on inputs.** Reduce the amount of time required to submit change requests and reduce confusion by eliminating unnecessary questions and using a single form for submissions.
7. **Propose an internal AITS project to address the lack of coordination between the various AITS teams and the security-related tasks they perform.** Reduce confusion regarding security reviews and requirements for change requests.

Implementation of Recommended Improvements

The recommendations were divided into a 4 phase solution action plan. Phase 1 is currently underway with a completion date of May 27, 2016. Phases 2 and 3 are scheduled for completion by November 25, 2016. Phase 4 is a larger development initiative that would need to be scoped to identify tasks and timeline.