

16-204 Change Management

We have completed our audit of change management. This audit was performed at the request of the UTHealth Audit Committee and was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing*.

BACKGROUND

Significant changes made in the production environment to mission-critical information resources or information resources that contain confidential or sensitive information are subject to approval by the Change Notification Board (Change Board). The Change Board consists of representatives from Data Center Operations and Services, Network Operations, IT Security, and Clinical Technology. Change requests are submitted to the Change Board for approval through the Change Notification system. Other activities such as changes to applications and infrastructure that are not considered to be mission-critical are exempt from approval by the Change Board (each school/area maintains departmental change management procedures governing these changes).

OBJECTIVES

The objective of this audit was to determine whether controls around the change management process are appropriate and functioning as intended.

SCOPE PERIOD

The scope period was July 1, 2015 to June 30, 2016.

METHODOLOGY

The following procedures were performed:

- Verified that policies and procedures for change management exist.
- Selected a combined sample (25) of change notifications and emergency changes and obtained the Change Notification forms. A&AS verified Change Notification forms were properly completed, reviewed and approved by applicable personnel and the Change Board, and results communicated to the appropriate parties. Additionally, A&AS verified that pre-production testing was conducted, backout plans were reasonable, impacts to software and hardware were documented post-implementation, and the status was correctly updated in the Change Notification system.

AUDIT RESULTS

A&AS identified areas of improvement related to change management procedures, approvals, and implementation statuses:

- Two areas did not have established change management procedures. Additionally, the change management procedures for three schools did not meet all requirements per UT System standards.
- Approval by IT contacts was not consistently documented in the Change Notification system.

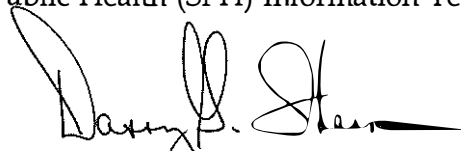
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- In some cases, the post-implementation status was incorrectly recorded in the Change Notification system.

NUMBER OF PRIORITY & HIGH FINDINGS REPORTED TO UT SYSTEM

None

We would like to thank the staff and management within the IT Security, Data Center Operations and Services, Academic Technology, Administrative Technology, Clinical Technology (CIT), Medical School Information Technology (MSIT), Harris County Psychiatric Clinic (HCPC), School of Biomedical Informatics (SBMI) and School of Public Health (SPH) Information Technology who assisted us during our review.



Daniel G. Sherman, MBA, CPA, CIA
Assistant Vice President

MAPPING TO FY 2016 RISK ASSESSMENT

Risk (Rating)	R.22 Limited IT resources result in inadequate testing of system updates and bundle releases. R.84 Software implementations are not effectively implemented, resulting in missed deadlines, increased costs, and change orders.
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AUDITING & ADVISORY SERVICES ENGAGEMENT TEAM

Assistant Vice President	Daniel G. Sherman, MBA, CPA, CIA
Audit Manager	Brook Syers, CPA, CIA, CISA, CFE
Auditor Assigned	Lieu Tran
End of Fieldwork Date	August, 9, 2016
Issue Date	August 31, 2016

Copies to:

- Audit Committee
- Rick Miller
- Amar Yousif
- Dr. William Weems
- Dr. James Griffiths
- Kevin Granhold
- Connie Wooldridge
- Bassel Choucair
- Madhavkrishna Sankhavaram
- Ryan Bien

<p>Issue #1</p>	<p><i>UTS 165 Standard 7: Change Management</i> requires the adoption of change management processes to ensure secure, reliable, and stable operations. The change management process must incorporate procedures for:</p> <ul style="list-style-type: none"> (a) formal identification, classification, prioritization, and request of scheduled changes; (b) identification and deployment of emergency changes; (c) assessment of potential impacts of changes, including the impact on data classification, risk assessment, and other security requirements; (d) authorization of changes and exceptions; (e) testing changes; (f) change implementation and back-out planning; and (g) documentation and tracking of changes. <p>A&AS obtained and reviewed procedures for changes exempt from approval by the Change Board for schools/areas across UTHHealth. Some of these schools/areas included SPH, SBMI, MSIT, CIT, HCPC, Academic Technology and Administrative Technology.</p> <p>We noted two areas (CIT and SBMI [applications]) for which formal change management procedures were not established. During our fieldwork, CIT established formal change management procedures. A&AS verified the change management procedures meet all requirements of <i>UTS 165 Standard 7: Change Management</i>.</p> <p>Additionally, we noted three schools/areas (MSIT, HCPC, SPH) with formal change management procedures that did not meet all requirements (e.g, emergency changes and back-out planning) of <i>UTS 165 Standard 7: Change Management</i>. During our fieldwork, MSIT, HCPC, and SPH updated their change management procedures and A&AS verified they now meet all requirements of <i>UTS 165 Standard 7: Change Management</i>.</p>
<p>Recommendation #1</p>	<p>We recommend SBMI [applications] establish formal change management procedures that govern changes not subject to approval by the Change Board.</p>
<p>Rating</p>	<p>Medium</p>
<p>Management Response</p>	<p>We will establish formal change management procedures that govern changes not subject to approval by the Change Board.</p>
<p>Responsible Party</p>	<p>Ryan Bien</p>
<p>Implementation Date</p>	<p>September 30, 2016</p>

Issue #2	<p><i>ITSOP-005 Change Management Procedure</i> states:</p> <p>“The change requester must identify the areas impacted by the change and the corresponding IT contact(s) and document them in the change notification. The change requester must notify the IT contact(s) of the requested change. The change requester will implement the change only if all identified IT contacts have approved.”</p> <p>A&AS selected a sample of change notifications and verified whether approval was obtained from designated IT contacts. For 8 of the 25 (32%) change notifications in our sample, approval of one or more IT contacts was not documented.</p> <p>Management informed us that certain IT contacts (with representatives on the Change Board) are operating under the assumption that they do not have to approve changes in the Change Notification system as their approval at Change Board is sufficient.</p>
Recommendation #2	<p>We recommend that procedures for reviewing and approving change requests be reviewed by the Change Board and <i>ITSOP-005 Change Management Procedure</i> updated accordingly.</p>
Rating	<p>Low</p>
Management Response	<p>The Change Board will review the change request procedures for reviewing and approving changes and update <i>ITSOP-005 Change Management Procedure</i> if necessary by October 31st, 2016.</p>
Responsible Party	<p>Kevin Granhold</p>
Implementation Date	<p>October 31, 2016</p>

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<p>Issue #3</p>	<p><i>UTS 165 Standard 7: Change Management</i> requires the documentation and tracking of changes in the change management process.</p> <p><i>ITSOP-005 – Change Management Procedure</i> requires the change requester to review and record the final status (Incomplete, Complete, or Cancelled) of each change notification.</p> <p>A&AS selected a sample of 25 change notifications and verified the final status was correctly updated in the Change Notification system. For 3 of the 25 (12%) change notifications in our sample, the final status was incorrectly recorded in the Change Notification system.</p> <p>Management informed us that the Change Notification system does not allow final status to be changed once selected.</p>
<p>Recommendation #3</p>	<p>We recommend that the Change Notification system be updated to allow for the final status to be changed if an incorrect entry occurs.</p>
<p>Rating</p>	<p>Low</p>
<p>Management Response</p>	<p>We have concluded that programing changes to the existing Change Notification System will be necessary to enable the recommended functionality. Due to the time required to perform these programing changes, we have determined that we will comply with the recommendation by February 28th, 2017.</p>
<p>Responsible Party</p>	<p>Kevin Granhold</p>
<p>Implementation Date</p>	<p>February 28, 2017</p>