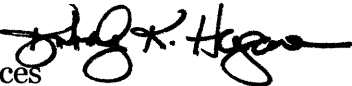


MEMORANDUM

TO: Ralph E. Farr
Vice President Information Systems, Information Services

FROM: Kimberly K. Hagara, CPA, CIA, CISA 
Associate Vice President, Audit Services

DATE: September 27, 2012

SUBJECT: IBM Tivoli Identity Manager Post-Implementation Review
Audit Control Number 2012-027

Attached is the final audit report regarding the IBM Tivoli Identity Manager Post-Implementation Review. This audit will be presented at the next Institutional Audit Committee meeting.

Thank you for your cooperation and assistance during the course of this review. If you have any questions or comments regarding the audit or the follow-up process, please feel free to contact me at (409) 747-3277.

c: William R. Elger
Robert V. Shaffer
Todd A. Leach
Emma L. Ramos
Janelle W. Murphy



The University of Texas Medical Branch
Audit Services

Audit Report

IBM Tivoli Identity Manager (ITIM)
Post-Implementation Review

Audit Control Number 2012-027
September 2012

The University of Texas Medical Branch
Audit Services
301 University Boulevard, Suite 4.100
Galveston, Texas 77555-0150

IBM Tivoli Identity Manager (ITIM) Post Implementation Review Audit Audit Control Number 2012-027

Background

The University of Texas Medical Branch (UTMB Health) initiated the replacement of its legacy identity management system, Information Resources Identity Management (IRAM), in late 2009. IRAM was a custom application developed and maintained by UTMB Health employees. The primary purpose of the project was to provide the institution with a reliable platform for future upgrades and enhancements, to replicate existing IRAM functionality and provide support for UTMB Health's unique access authorization process with a commercially available identity management product.

Identity management products help to automate and centralize the creation, modification, and termination of user privileges. To enhance administration of these different types of access requests, UTMB Health selected International Business Machines (IBM) Tivoli Identity Manager (ITIM) and IBM Tivoli Identity Manager Assistance Services began implementation in early 2010. Since its deployment in February 2012, ITIM access requests for people in, or affiliated with, the institution average over 14,000 per month.

Audit Objectives

The primary audit objective is to assess the achievement of established project goals and objectives for the implementation of the new identity/access management system.

Scope of Work and Methodology

Our scope of work included an assessment of project success, in particular, the extent to which it met its objectives, delivered planned levels of benefit, and addressed the specific requirements as originally defined. Additionally, the scope included identifying lessons learned from this project to improve future system implementations.

The audit methodology included documentation reviews of business requirements, contracted statement of work, project plans, dataflow and design specifications, migration plan, testing scenarios and observations, training materials and reference guides, status meeting minutes and related project communications, strategic plan, capital plan and purchase orders, UTMB Health policies, procedures, and practice standards, and applicable guidance provided by governing organizations. Additionally, we conducted over twenty interviews with a broad group of key stakeholders including business operations and technical support.

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* as promulgated by the Institute of Internal Auditors.

Audit Results

Regulatory Compliance

A number of regulatory and oversight organizations have requirements identifying items for UTMB Health to consider in planning, selecting, funding, controlling, evaluating, and implementing major information technology (IT) initiatives. The Texas Administrative Code 216 (TAC 216) Project Management Practices requires, at minimum, institutions of higher education to approve and publish operating procedures identifying project components and the general use of project management practices. Based on our review, UTMB Health project management practices are in alignment with the TAC 216 specifications.

The Texas Department of Information Resources publishes the Texas Project Delivery Framework Handbook (Framework) to provide the state with a consistent, statewide methodology for project selection, control, and evaluation based on alignment with business goals and objectives. UTMB Health generally complies with the spirit of the Framework and its supporting documents.

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Additionally, UT System developed Policy UTS 140 Enhancing Major Software Projects, which cites the inclusion of various planning and implementation core elements. With enhancements completed during the course of the engagement, the UTMB Health Project Management Practice Standard and IT Governance Process collectively include all core elements and recommended best practices.

Strategic Alignment

All IT projects are essentially business projects and should have a business rationale from inception; therefore, contribution to the achievement of the strategic business plan influences project success. Although the IRAM project was proposed and initiated prior to the current UTMB Health IT Governance process, documentation substantiated the institution's need for system replacement to ensure institutional infrastructure and critical software are current and on sustainable platforms. UTMB Health Information Services (IS) leadership approved replacement of the IRAM system. Although not cited as a specific objective within the IS Strategic Plan, the IS Capital Plan as referenced within the IS Strategic Plan provides specific line item information aligning IT investments with continued institutional needs to repair, renew, and modernize the infrastructure including information systems.

Project Quality

Continuous project assessment increases the likelihood that a project will implement a quality solution that meets the schedule, cost, and scope commitments provided to leadership. Available ITIM documentation indicated the project team extended the implementation timeline to a February 2012 go-live due to issues encountered during initial transition. The initial August 2008 IS Capital Plan included a projected cost of \$250,000, however the final contracted statement of work, and associated purchase orders, reflected a cost of approximately \$287,500. Although the final project actual cost has not been determined, project financials from October 2011 indicated 4% of the project budget remains. With the new IT Governance Process, IS should be able to better identify complete and total final costs for future projects.

Service Performance

Information Technology projects initiated by the institution must ultimately have a positive impact on business outcomes. Business goals and objectives initially outlined in the project proposal and restated within project communications and the statement of work are as follows:

- Provide the institution with a vendor supported platform
- Improve ability to perform system upgrades or enhancements
- Provide centralized identity lifecycle management
- Improve user interface and reporting capabilities
- Provide platform to automate access provisioning in the future

Interviews included key stakeholders representing both technical and operational involvement in the project. These individuals provided perspectives from diverse roles and functional areas within the institution. While responses varied, the majority of end users agreed that although the project did not meet their initial expectations with improvements currently in progress, project goals and objectives would be satisfactorily met.

Lessons Learned

To continually improve processes and increase IT investment success rates, any post implementation review should include a summary of major lessons learned. A careful review of these successes and improvement opportunities allows the institution to benefit from any innovations, enhancements, corrections, or hindrances that occurred during the project. In addition, the review can provide

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valuable information for decreasing costs and risks in future projects. Lessons learned specifically identified during the project review:

Areas of Success or Project Strengths:

- IS responsiveness to address issues quickly (e.g., Access Management, Helpdesk, Training)
- Good project communications supplemented with user-feedback sessions
- Improved interface and functionality, most notably the expanded search capabilities
- On-line quick reference (access) guides

Areas of Opportunity or Improvement:

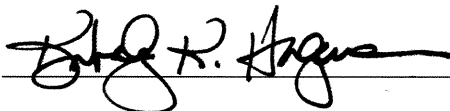
- Confusing navigation (not intuitive, particularly the request access versus account), which is currently being addressed via additional services contracted with IBM
- Non-standard resource naming conventions, which is currently being addressed via additional services contracted with IBM
- More end user participation earlier in the project minimizing the impact to the user community, which the new IT Governance Process will force (i.e., getting it right the first time)
- Training gaps (timing should be closer to go-live to replicate implemented product functionality)

The IT Governance process, implemented subsequent to approval of this project, addresses many of the opportunities identified above in the context of this project, including operational engagement and vendor management.

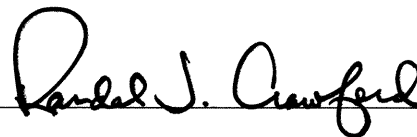
Conclusion

UTMB Health implemented a commercially viable identity management product, replacing a custom unsupported legacy system. Feedback provided by key stakeholders indicated that there were opportunities for improvement in the end product, which Information Services is currently addressing. Additionally, stakeholder feedback reinforces the on-going need for a strong governance process and well-defined requirements at the inception of the project to decrease the risk of project delays and cost overruns. Upon completion of the enhancements currently in progress, the project should achieve stated goals and objectives significantly improving user satisfaction with the new system.

We greatly appreciate the assistance provided by staff within the various business operational areas and Information Services and hope that the information presented in our report is beneficial.



Kimberly K. Hagara, CPA, CIA, CISA
Associate Vice President, Audit Services



Randal J. Crawford, CISSP, CIA, CISA
IT Audit Services Manager