NORTHERN ARIZONA UNIVERSITY

Internal Audit Department

Facility Services Computer Service Center

July 2015
Report Number FY 15-09

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Northern Arizona University
Facility Services' Computer Service Center
Audit Report
July 13, 2015

Summary

Our audit of Facility Services' Computer Service Center (CSC) is in the Northern Arizona University Annual Audit Plan for FY 2015, as approved by the Arizona Board of Regents Audit Committee. This audit links to NAU's goal of having efficient, effective, and accountable practices. This is the first internal audit of CSC.

Background: CSC resides in and supports NAU's Facility Services Department. It provides hardware, software, server, desktop and application support for the various work units within Facility Services. Specific responsibilities include: deployment and maintenance of IT related projects and systems such as departmental data management and applications, internal server systems, storage and backup systems, the work order management system application, enterprise document imaging, application development and support, network support, departmental and individual web presences and applications, audio/visual/presentation systems, desktop and printer support, and all IT technological staff support and IT related training. CSC also coordinates with the central NAU ITS department which provides and maintains some services to Facility Services, for example hosting the servers running the campus-wide work order and vehicle reservation systems.

CSC has experienced significant turnover in recent months. The new IT system manager of CSC began March 2015 after the position was vacant for six months. In the latter part of 2014, the unit lost two more critical employees, representing an additional 1.75 FTE loss in resources. While both positions have remained vacant due to the campus wide hiring freeze, one FTE was recently authorized to be filled and the hiring process is currently underway. The present staff consists of two full-time staff members who are supported by two part-time student workers and a temporary full-time FTE. The temporary full-time FTE will be eliminated once the approved position is filled. The staff supports approximately 350 computers and mobile systems, 70 printers and peripheral devices, 30 servers, and 325 end users.

Audit Objectives: The primary objectives for this review were to verify that computing at CSC is adequately controlled by determining if:

- ABOR and NAU information security policies are being complied with;
- environmental and physical threats to computing equipment are adequately managed;

- adequate operational and business continuity plans have been developed and implemented.

Scope: The scope of our audit included a review of:

- acquisition and disposal of equipment and software procedures;
- hardware inventory procedures;
- environmental control and fire suppression systems;
- computing policies; and
- backup and contingency procedures.

Methodology: Policies to establish and manage internal control within the CSC unit were reviewed and evaluated. Interviews with CSC personnel were conducted to gain an understanding of the Unit's control environment. A walkthrough of the CSC IT server site was made to verify the safety, security, and environmental risks were being identified and addressed. This included a review of fire suppression equipment, temperature and humidity controls, data backup policies, and redundant power system capabilities.

Conclusion: The newly hired IT manager of Facility Services is aware of the unit's strengths and weaknesses as articulated in his analysis of the IT unit in April 2015 for Facility Services' management. His review identified the following major concerns which are further detailed in the remainder of the report.

1) The unit has no work control structure in place which affects resource scheduling, work prioritization, customer communication, task documentation and reporting.
2) Recent turnover resulted in knowledge gaps and increased workload on staff.
3) There is a lack of standardized IT policies and procedures, including procedures to respond to disaster recovery and business continuity.

Management is supportive of our recommendation and has actively begun working to implement their identified action items.

The control standards we considered during this audit and the status of the related control environment are provided in the following table.

General Control Standard (The bulleted Items are internal control objectives that apply to the general control standards, and will differ for each audit.)	Control Environment	Recommen-dation No.	Page No.
Physical and Environmental Security			
• Data center is adequately secured from unauthorized access.	**Reasonable to Strong Controls in Place**		
• Dedicated server room cooling systems in use.	**Reasonable to Strong Controls in Place**		
• Uninterruptible power supplies are installed for power redundancy.	**Reasonable to Strong Controls in Place**		
• Fire suppression systems are installed and maintained to protect data center.	**Reasonable to Strong Controls in Place**		
Information Security			
• Adequate security policies are in place to minimize unauthorized access to systems and data.	**Reasonable to Strong Controls in Place**		
• Adequate backup policies are in place to minimize the loss of data.	Opportunity for Improvement	1	4
• Adequate policies are in place to ensure regular system updates and patching to maintain security.	Opportunity for Improvement	1	4
Management and Operations			
• Written, formalized business continuity plans.	Opportunity for Improvement	1	4
• Written, formalized operations Manuals.	Opportunity for Improvement	1	4

We appreciate the assistance of Facility Services' IT Systems Manager.

/s/
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Audit Result, Recommendation and Response

1. Facility Services IT should implement stronger internal controls.

Condition: Facility Services lacks many of the internal controls over information technology that should exist. The new IT Systems Manager has identified improvements that need to be made, and is correcting issues as permitted by resources.

The internal control deficiencies include:

- Lack of a control system for IT projects
- Obsolete equipment and software
- Inadequate IT budget
- Inadequate staffing
- Inadequate training for end users
- Lack of policies and procedures for:
    - Disaster recovery and business continuity
    - Change management
    - Problem management

Criteria: NAU departments and functions should employ the services of NAU's centralized IT function when possible. Those IT services and operations that are retained should be properly controlled.

Cause: Facility Services IT has experienced significant staff turnover and has operated with significant staffing, leadership, and other resource constraints.

Effect: Lack of proper internal controls over Facility Services IT increases the risk of:

- Inefficient operations
- Errors and omissions
- Unnecessary disruption of operations when turnover occurs
- Business interruption
- Loss of data

Recommendation: The Facility Services IT Systems Manager should implement the additional internal controls over IT he has already identified, as permitted by the human and financial resources that become available.

Response: The Facility Services IT Team is in agreement with these findings as they coincide with efforts underway to improve the operating environment within the department. The lack of resources is an ongoing concern in light of organizational budget constraints as noted above. Policy, procedural, and work management items will be addressed over the next three to six months, with improvements requiring financial resources being made as budget permits over the course of the fiscal year.

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