Program Summary

DoIT supports and provides the infrastructure and custom development for NIU’s student administration system known collectively as MyNIU. Over 55,000 students, applicants, faculty and advisors conduct business in MyNIU with over 5,000,000 logins annually.

- The PeopleSoft Student Administration System (PS-SA) provides core functionality for student financial billing, disbursing financial aid, advising, application processing, managing course rosters, grade records, and transcripts.
- Through Self-Service, students register for classes, pay bills, view and accept financial aid, use their admissions checklists, and accept offers of admission.
- The MyNIU Portal provides a single site to access campus systems and provides information regarding campus events, calendars and deadlines.

Criterion 1: Importance to University Mission / Operations

Importance to Mission

The student administration systems provide the foundation for teaching and learning at NIU. From the initial receipt of a student’s application to registering for classes to advising appointments that are so critical to student retention, these systems streamline the business of attracting, retaining and graduating students from a high quality educational environment.

Importance to Operations

The student administration system touches every student, applicant, faculty number and academic department and acts as the authoritative system of record for the student record. Student data is essential to the organization and these systems provides the framework for making informed data driven decisions. Moreover, coordinated business processes have been implemented to improve efficiencies and allow for more effective student support.

Program Portfolio

As the system of record the student system is the enterprise tool that assists faculty and staff support the business of managing a student’s education. Without the framework of the integrated student administration system, the university’s diverse student data would be stored in separate systems. With an integrated system, however, information flows through Admissions, Records and Registration, Financial Aid and the Bursar’s Office seamlessly:

- Faculty and staff have access to manage course attendance and grade rosters.
- Faculty and advisors manage rosters, attendance, grades, student records, requirements and schedules through the Faculty and Advising centers in MyNIU.
- Students have a single location where they may accept the offer of admission, register for classes, view their grades, pay bills and accept financial aid.

Notably absent is a set of enterprise class systems for supporting academic advising.

Program Synergy

The enterprise-class student administration system integrates data from distinct operational entities and through shared data management promotes the collaboration which provides the foundation for business process efficiencies. The student administration system fully integrates with other enterprise systems to provide reliable
source data: Blackboard, Housing and Dining, Financial Management, Institutional Research, and Human Resources. While DoIT manages the student system implementations, maintenance and development projects, the data and process owners use these foundational tools and applications to manage the entire student lifecycle from admissions to graduation and beyond.

Additional integrations include the Student Success Collaborative (EAB), Hobsons Customer Relationship Management (CRM) system for Enrollment Management, CollegeNet applications, and Terra Dotta for NIU’s Study Abroad Program.

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**Criterion 2: Quality / Effectiveness**

**Functions and Services**

DoIT is responsible for ensuring the student administration system functions properly and provides a stable, reliable and highly available 24x7 environment for NIU’s operations.

- Over 55,000 students, applicants, faculty and advisors conduct business in MyNIU with over 5,000,000 logins annually.
- In 2014, more than 24,000 new freshman and new transfers applied to NIU.
- In 2014, over 14,800 students received financial aid and more than 27,837 current and former students requested unofficial transcripts.
- In Fall 2014, 20,481 students generated 92,796 enrollments for 4,910 class sections.
- In 2014, developer and database administrator resources responded to over 215 new programming tasks to process data requests, manage system customizations, resolve bugs, design, develop and maintain custom programs in addition to upgrading the PeopleTools architecture and implementing four maintenance bundles.

With increased volume of requests and enhancements and only 5 PS-SA developer resources, requests are fulfilled only as DoIT staff become available. These requests include notifications to waitlisted students, system generated email communications, web service interfaces, and activity guides. Larger projects are also awaiting resources, including HR/Student real time person data integration and creating automated repeatable test scripts.

**Measures of Quality**

An IT governance structure approves and prioritizes projects, providing direction and acts as auditing bodies to assure projects align with NIU priorities.

- PeopleSoft Sub-Committee: governs the implementation, enhancement and efficient use of enterprise administrative systems including approving system impacting customizations, establishing priorities and allocating resources.
- Student Information System Operations: identifies and manages programming projects, priorities, and system support including upgrades and maintenance.

Quality and accountability in a student administration system is critical:

1. Applications must be current, supportable and comply with federal and state regulations.
2. System availability is measured against both planned and unplanned downtime.
3. Mean Time to Resolve (MTTR) is measured by the time between the reporting and the resolution of an incident.
4. Number of incidents reported per application.
Evidence of Quality

1. PS-SA is current and supportable. Moreover, security roles are reviewed, approved and assigned to assure separation of duties; documented programming standards and approval procedures promote best practices; and audited testing is completed during all upgrades.
2. PS-SA availability is 99%.
3. The great majority of support tickets for PS-SA are requests and not incidents. In 2015, there are only 23 documented incidents.

Quality Improvement

Improvement projects include: a complete visual overhaul of the MyNIU portal interface, integration with the upgraded 25Live classroom scheduling system, developing system maintenance schedules, enhancing the MyNIU mobile app, improving reporting capabilities, and continuing dialogs with Oracle to reduce staff time (infrastructure support) while improving reliability and response time. Governance committees identify and remove duplicate systems and ensure that system enhancement requests are aligned with NIU priorities.

Criterion 3: Productivity / Efficiency

Scope of Program

DoIT supports NIU’s campus-wide implementation of the PeopleSoft Student Administration System (PS-SA) and the PeopleSoft Portal (PS-PA) that together comprise the MyNIU system. NIU currently licenses modules for: Admissions, Academic Advising, Campus Community, Financial Aid, Student Financials, Student Records, and Transfer Credit. NIU has also implemented Shared Access and developed custom bolt-on extensions for self-service orientation registration and payment, PAL peer tutoring registration and emergency contact self-service pages. DoIT also supports the complex architecture of web servers, databases and application servers that underlie these enterprise-class systems.

The DoIT support team includes:

- system analysts/programmers that support the software development lifecycle including analysis, design, programming, testing and production support. During 2014 this team received more 215 new project and task requests in addition to upgrading the PeopleTools architecture and implementing 4 maintenance bundles.
- database administrators that manage the application and Oracle database tuning, backups, web and application servers, and application administration including maintenance and problem resolution. PeopleSoft DBA’s manage over 3,990 active tables in the SA database.
- server administrators that manage the operating systems on the engineered system hardware.
- access management staff that apply security roles to users.
Productivity Comparison

NIU is an institutional member of the Higher Education User Group (HEUG) and consistently in the top 25% of HEUG schools with regard to system maintenance, application and PeopleTools versions.

- NIU has representation from Admissions and Records and Registration on the Product Advisory Group (PAG) that advises Oracle and sets the strategic direction for PS-SA.
- At recent HEUG conferences, DoIT staff were asked to present on custom Financial Aid and Student Financials development and using automated test scripts to prepare the training database.
- DoIT staff also conducted a HEUG Education webinar on automating account provisioning.

Resource Comparison

NIU's current staffing level allows it to keep current with maintenance, a priority, but we are not staffed to support business improvement initiatives.

Many schools use technical consulting services to perform upgrades, maintenance and implementation of large and specialty projects. NIU has always implemented these initiatives internally, thus saving money but reducing capacity for custom programming and enhanced feature requests.

In comparison to the chart, Emory University with only 13,000 students has 9 student system developers and 1.5 application DBAs.

Cost and Revenues

This is not a revenue generating program. Staff costs have decreased by 1 FTE who has not been replaced. Software licensing costs remain constant with negotiated caps of a 0% uplift for FY2014 through FY2020. Additionally, a negotiated 0% uplift on hardware support runs from FY2016 through FY2020.

Hardware refreshes are regularly required to replace obsolete and aging servers that are no longer supported. In 2011 NIU purchased Oracle’s Exadata hardware for the production and development databases and Oracle’s Exalogic engineered system to replace the web and application server hardware.

Funding for this service is split between DoIT and other NIU funding sources. Some of this external-to-DoIT funding has been removed, making hardware replacement and data protection uncertain. DoIT will pay $180,000 extra this year to have extended maintenance on backup solutions that are past their life cycle.
Criterion 4: Internal & External Demand

External Demand

The PeopleSoft Student Administration System (PS-SA) interfaces with several external organizations including the Department of Education and the National Student Clearinghouse. In addition Institutional Research receives extracts of student system data and uses that data to produce national reporting including the Delaware Student, US News & World Report, IPED’s enrollment and degree conferment reports, IBHE cost studies and the Data Book.

The system also provides access to applicants prior to their acceptance at NIU and allows students to share online access with their parents or designees who then have access to their student’s information including schedules, grades and bills.

Internal Demand

Internal demand originates with the university constituents who require system access, initiate programming requests and generate reports. For example, DoIT received a request to fulfill a requirement of the Higher Learning Commission for accreditation.

- All faculty are required to log into MyNIU and navigate to custom pages to record course activity statistics and upload syllabi for accreditation review.
- Blackboard Analytics requires daily exports to populate the data warehouse that Academic Analysis and Reporting relies on for reporting and analysis.

Development staff are also required to respond to increasing data and custom report requests and configure new system functionality to support increasing regulatory compliance requirements. For example, the need for a method to gather and retain course activity documentation for accreditation purposes began as a custom program request for the creation of a student system bolt-on to collect and retain very specific course activity statistics and documentation.

Many other NIU business systems receive data from the student system through integration and interfaces. These include the Blackboard, eDirectory, Educational Advisory Board, Financial Management systems, Housing and Dining, Human Resources, Institutional Research, and the OneCard system. This program provides the analysis, design, coding and delivery of these interfaces.

Criterion 5: Opportunity Analysis

Cost Savings Opportunities

Current automated processes include automated account provisioning via eDirectory for access to the MyNIU Student Center. This automation saves hundreds of staff hours it would take to provision accounts for more than 20,000 applicants each year. Auto-Decision is another custom program requested by and created for Admissions. Based on specific admissions criteria, Auto-Decision automatically generates admissions offers and assures a 3-day turnaround from application to acceptance to qualified applicants.

Additional cost savings can be realized by implementing automated testing for maintenance and upgrades. Defining and developing baseline test cases that are repeatable and can be run automatically will eliminate hours of testing by functional users thus freeing them to work on other priority projects.
Further integration with the PeopleSoft Human Resources System will eliminate duplication of person information that is maintained separately within HR and Registration and Records. This will also provide a single site for university personnel that must now communicate with both departments to update personal information.

Implementation of the currently licensed Data Warehouse will provide a robust analytic and reporting environment and not duplicate and they are each needed for different types of data. This project is awaiting governance approval and funding.

*Future Revenue / Resources*

This is not a revenue generating program.

*Improvement Opportunities*

As mentioned above, we have the ability to operate in maintenance-mode only. The university must decide whether it needs to change the way it does business, particularly in its central offices. If the answer is yes, then additional functional and technical staff are needed in equal measure in order to redesign and implement business processes in the central systems.

Development of a university business practice for centralized approval and review of all software system purchases would minimize the redundancy of licensed system functionality and reduce costs. A concerted effort to review all licensed business systems and cross reference functionality would unearth redundant features and eliminate the need for duplicate systems and the expense of supporting the hardware, software and man hours needed to operate those systems.

*Opportunities in the Field*

Current staffing levels are not sufficient to expand services to improve support and respond to implementation requests for additional features including an enhanced mobile presence, activity guides, workflow, work centers and notifications.

A continued commitment to training is needed to stay current with technology. Current and upcoming projects which will require training include upgrading the database, implementing Exalogic, performing the next PS-SA and PeopleTools upgrades, and implementing a data warehouse.