Program Summary

DoIT supports and provides the infrastructure and custom development for NIU’s core financial systems:
- PeopleSoft Financial Management (PS-FMS) provides financial information to over 200 NIU departments and over 4,400 cost centers. This is the foundational system for the Division of Finance for Accounting, Accounts Payable, Accounts Receivable/Billing, Budget, and Procurement.
- Custom software for sponsored grants is integrated with PS-FMS and manages over 530 grants.
- Blackboard Transact is the billing engine for OneCard, supporting 3.4M transactions each year and providing purchasing services with designated vendors and facilitates access to on-campus programs, sporting events and buildings.

There are approved, but unfunded, business cases to implement Procure-to-Pay and PeopleSoft-Grants. These two projects will replace outdated software, reduce manual data entry errors, and comply with federal and state regulations.

Criterion 1: Importance to University Mission / Operations

Importance to Mission

While financial systems are not directly attached to the teaching, learning and research activities at the heart of a university, no institution that must wisely accept and spend taxpayer money can do so without a robust financial system. This program configures, customizes, and supports the enterprise-class financial applications that streamline operations and save the valuable time that must be dedicated to providing a high quality educational environment.

Importance to Operations

Financial data management is essential to any organization and NIU’s financial systems provide the framework for making informed data driven decisions. Moreover, state and federal reporting requirements depend on the accuracy and availability of the financial systems. PeopleSoft-FMS is used by all 213 university departments and its more than 4,400 cost centers manage the university’s $425M budget (FY15).

NIU licenses these PS-FMS modules: Asset Management, Accounts Receivable Billing, Contracts, General Ledger, Grants, Payables, and Project Costing. The system incorporates data from distinct operational entities and through shared data provides the foundation for business process efficiencies.

As the campus ID card system, the OneCard application has a near universal reach on campus. Every student and staff member uses their OneCard to access campus resources. In addition, approximately 40 vendors partner with the NIU’s OneCard office to provide debit card purchasing services.

NIU should fund the Procure to Pay and Grants projects, consolidate to a single card system, mandate the development of a lock standard, mandate the implementation of web-based value loading for OneCard, mandate opening access to view and edit your own Assets, mandate a different approach to asset inventory, mandate auto-delivery of PeopleSoft reports.

Program Portfolio

Without the framework of the integrated financial system, the university financial data would be stored in separate systems. With an integrated system, however, information flows through Procurement, Accounts Payable, Billing and Receivable, Accounting and the Budget office seamlessly:
- Departments provide data to Procurement for purchase orders and to Accounting for import into the General Ledger.
• Business managers across the university have access to accurate and consistent financial reports and online budget information.
• Users can track expenditures against authorized budgets and view open encumbrance balances and purchase orders.

**Question: 1.4 Program Synergy** – Discuss any synergy the program’s functions have with other units on campus.

As the enterprise accounting system, the financial systems integrate with other enterprise systems to provide reliable source data: Human Resources, Student Administration System, OneCard. While DoIT manages the financial system implementations, maintenance and development projects, the data and process owners use these foundational tools and applications to facilitate all business operations throughout the university.

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**Criterion 2: Quality / Effectiveness**

**Functions and Services**

DoIT is responsible for ensuring the university financial systems function properly and provide a stable, reliable and highly available 24/7/365 environment for NIU’s business operations. Over 300 staff conduct business in PS-FMS with over 280,000 logins annually. In any given week, nearly 2,000 financial processes are run and 11,400 financial reports are distributed to departments, colleges and divisions. In 2014, DoIT developers received over 150 new programming tasks to process data requests, manage system customizations, resolve bugs, design, develop and maintain custom programs. In addition, DoIT managed a campus-wide project to upgrade both the underlying PeopleTools architecture and PS-FMS. Additionally, NIU has licensed the Grants, Contracts and Project Costing modules for several years, but has yet to implement them. Currently grants are tracked in stand-alone and aging Microsoft Access databases, then manually entered into PS-FMS. This practice is inefficient and risky, allowing for double data entry, reporting deficiencies, and potential non-compliance with federal and state regulations for grant management. NIU also licenses, but has not implemented, Hyperion for budget creation and tracking. Instead, NIU continues to use complex Microsoft Excel spreadsheets for budget development and review. Business cases for immediate implementation have been approved but are unfunded.

**Measures of Quality**

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

• The PeopleSoft Sub-Committee governs the implementation, enhancement and efficient use of enterprise administrative systems including approving system-impacting customizations, establishing priorities and allocating resources.
• The Financial Management System Operations Committee identifies and manages programming projects, priorities, and system support.

Quality and accountability in any financial 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-FMS 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-FMS availability is 98%. This does not meet any professionally accepted standard but the number remains low because functional offices do not want to test on Sundays, extending the outage windows during every upgrade.

3. In 2015, the Mean Time to resolve Blackboard Transact (OneCard) incidents was 10 hours. The PS-FMS average was 22 hours.

Quality Improvement

DoIT recognizes the need for continuous service improvement and is committed to maintaining a high standard of support. Programmers work closely with functional data owners to ensure business needs are met and a DoIT training initiative ensures that staff skills stay abreast of current technology. Improvement projects include: developing system maintenance schedules, enhancing reporting capabilities, implementing licensed modules, identification and removal of duplicate systems, and continuing dialogs with Oracle to reduce staff time (infrastructure support) while improving reliability and response time.

Criterion 3: Productivity / Efficiency

Scope of Program

DoIT supports NIU’s campus-wide financial systems through configuration, customization, and support of the Blackboard Transact billing engine for OneCard, spreadsheets for grant management, and the PeopleSoft Financial Management System (PS-FMS) modules for Accounts Receivable, Asset Management, Billing, Contracts, General Ledger, Grants, Payables, and Project Costing. 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 152 new project and task requests in addition to upgrading PeopleTools.
• database administrators that manage application and Oracle database tuning, backups, web and application servers, and application administration including maintenance and problem resolution. PeopleSoft DBA’s manage over 3,500 active tables in the FMS 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): a forum for universities to discuss best practices and participate in Oracle/PeopleSoft education sessions. NIU is consistently in the top 25% of HEUG schools with regard to system maintenance, application and PeopleTools versions.

By comparison with the Student system, the functional offices that use PS-FMS are relatively disengaged from the professional development and product advisory groups that guide offices who use PeopleSoft. This is a contributing factor to the slower adoption and lower product maturity in this area.

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. A different perspective is that every PeopleSoft module needs its own primary developer. We are below that level now, making it impossible to have adequate coverage during vacation/sick time or when attrition happens.

In comparison to the chart below, Emory University has 9 PS-FMS developers and 1.5 application DBAs.

Cost and Revenues

This is not a revenue generating program. Staff costs have decreased by 1 developer who has not yet been replaced. Oracle/PeopleSoft 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 their Exalogic engineered system to replace the web and application server hardware.

Funding for this service is split between DoIT and other, external funding sources. External funding for portions of this service including, but not limited to, backing up the data have been removed making replacement of hardware 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 Financial Management System (PS-FMS) interfaces with several external organizations including the Internal Revenue Service, the State of Illinois, and the Illinois Board of Higher Education (IBHE). The system must be at a current level of maintenance in order to produce the annually changing IRS-required 1099 and 1042 reporting. The State of Illinois also requires record retention policies that have an effect on system storage requirements and asset retention as well as system interfaces and delivery requirements. Grants processing must adhere to grant specifications and the system must be able to respond to data management needs and reporting requests. Finally, the financial systems undergo regular external audits and must be available with access and reporting requirements met to facilitate the needs of the audit.

Internal Demand

Internal demand originates with the university constituents who require system access, initiate programming requests and generate reports.

- All NIU departments and their 4,400 cost centers rely on more than 11,400 weekly reports to facilitate their operations.
- Custom software for sponsored grants is integrated with PS-FMS and manages over 530 grants.
- Blackboard Transact is the billing engine for OneCard and generates approximately 3,400,000 transactions each year.
- There is great demand for expanded and simplified access to financial reporting.

Criterion 5: Opportunity Analysis

Cost Savings Opportunities

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.

Implementing workflow within PS-FMS will reduce the time delay that currently exists with manual paper based approvals. Delivered workflow functionality and frameworks have not yet been configured and implemented. A pilot Procure to Pay project beginning January 2016 will utilize workflow and distributed data entry.

Implementation of the currently licensed Grants, Project Costing and Contracts modules will improve the end to end processing of the over 440 grants. Integration with Info Ed and moving post-award processing to the PeopleSoft Grants module will reduce time spent on reporting, eliminate dual entry in PS-FMS and ancillary antiquated Microsoft Access databases thus saving time and reducing the risk of old unsupported systems failing.

Implementation of the currently-licensed Hyperion solution for budgeting and strategic planning will provide a robust analytic and reporting environment for the university budget processes.

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.

Moreover, 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**

NIU should consider further consolidation of processing, removing much of the approval and review processes from divisional and college offices and centralizing them in processing centers. In addition, thresholds for acceptable risk can assist functional offices in reducing their operational burden. While not an IT issue per se, deciding that we don’t need to review receipts for reimbursable expense under some number means that central finance units will have more time to implement business process improvements using technology we already own but have never implemented.