AITS Strategic Plan
March 2009
http://www.aits.uillinois.edu

Introduction

This document describes the department of Administrative Information Technology Services (AITS), our strategic goals, objectives, standards, services and associated metrics and measures. The plan provides a means for AITS to work collaboratively with our University constituents to create more efficient and effective administrative IT services.

There are four major components of work within AITS: operations and maintenance, ITPC projects, work requests and AITS projects. Within these four areas, AITS has strengths in application development and testing, deployment, project management, enterprise architecture, data center operations, security, and consolidated help desk and PC support. AITS has developed expertise in these areas through operational management, that is, our managers and directors perform hands-on IT work in addition to their administrative responsibilities. Our strategic plan uses these strengths to determine the balance of the four components and create metrics to ensure that our future infrastructure and services are organized for maximum efficiency.

The core of our services is the SunGard Banner Enterprise Resource Planning (ERP) software. Our experience with the Banner system continues to expand, and AITS can now create our own modifications to Banner rather than relying entirely on SunGard. At present, the University does not use all of the functionality included in Banner; therefore, we will strive to utilize more of the functionality that we already own as we evolve the University's enterprise systems. Our goal is to eliminate some of our vendor expenditures and facilitate rapid and inexpensive changes to the systems and services, keeping in mind that modifications to our systems is generally the final alternative if policies cannot be changed or existing services cannot be used effectively.

To complete our strategic objectives, it is important to replace our core hardware systems this calendar year (2009). The current enterprise servers that power Banner are seven years old and will be at end-of-life in May 2010. Outside of not retaining our employees, not maintaining our infrastructure is the largest threat to our success.

While is it difficult to quantify the effects of funding over time, AITS has increased efficiency over the past 14 years. Between 1995 and 2008, the number employees and students supported per AITS staff member increased from 370 to 580. Over that same period, funding has increased 7% while the funding per employee and student has decreased 4%. Also during this time, the Consumer Price Index (CPI) increased 46%. While this budgetary weakness has reduced agility, it has created significant efficiency in AITS.

During 2009, the University's administrative review will develop a plan to create additional efficiencies throughout the university. To fully utilize this opportunity, it is important for AITS to publish clear service metrics. Of particular importance are project prioritization, project success rate, distribution of work hours across AITS, vendor maintenance annual escalation, efficiency of data center equipment, intrusion prevention, mean time to resolve production issues, service desk

satisfaction, system and service availability, developed software ROI, employees retained, quantity of data and databases, and security incidents.

AITS recognizes that administrative information technology is used by every student and employee and that administrative information technology supports the University's strategic plans. In 2008, AITS reviewed all elements of the University and campus strategic plans and determined which projects have supported the plans. Our current strategic IT plan is based on the gaps found between our projects and the plans. As we continue to work on our objectives, we will increase the quality and quantity of the communication with our constituents. Additionally, committees and decision-making that were once internal to AITS will include our customers in the process. The end result is that we will continue to develop new software tools that transform the administrative services of the University.

AITS uses a wide range of technology solutions, but not all of these solutions can be considered standards. We will continue to document our standard processes and services on the AITS website and work with customers to use the standards whenever possible. We will use standards to be more agile and to deliver bottom-line improvement for the University. This will allow both AITS and the campuses to minimize redundancy and develop products faster.

Overview of Administrative Information Technology Services

Administrative Information Technology Services (AITS) employs approximately 180 individuals and delivers information technology systems and services that support the University of Illinois' administrative processes across all campuses. AITS is a University-wide resource for administrative computing, applications support, applications development and data management. AITS supports over 250 applications, 410 servers, 250TB of raw storage, 350 TB of backup media, approximately 35,200 employees and 71,000 students across all three campuses with their administrative information technology needs.

AITS' mission is to deliver appropriate, cost-effective information technology systems and services that support the administrative processes and strategic goals of the University and its various units; provide leadership on administrative information technology best-practices; and collaborate with the campus-based computing organizations on policies and standards that optimize and secure the University's administrative information technology resources.

AITS:

- provides selection, implementation, and maintenance support for packaged and self-developed applications at the University of Illinois.
- creates and maintains internal and external interfaces for University enterprise applications.
- provides data management for University enterprise applications.
- provides data center services, including disaster recovery, for hosted University applications.

- provides 7 day-a-week, 24 hour-a-day Service Desk/Operations support for University enterprise applications.
- facilitates University desktop and enterprise applications training with internal and external service providers.
- collaborates with other UA units and campus-based computing organizations on policies and standards that optimize and secure University information technology resources.

AITS supports the SunGard Banner Enterprise Resource Planning (ERP) system. This system includes Student Administration, Student Financial Aid, Human Resources / Payroll and Finance modules, along with associated purchased applications, locally-developed components or custom vendor-developed components.
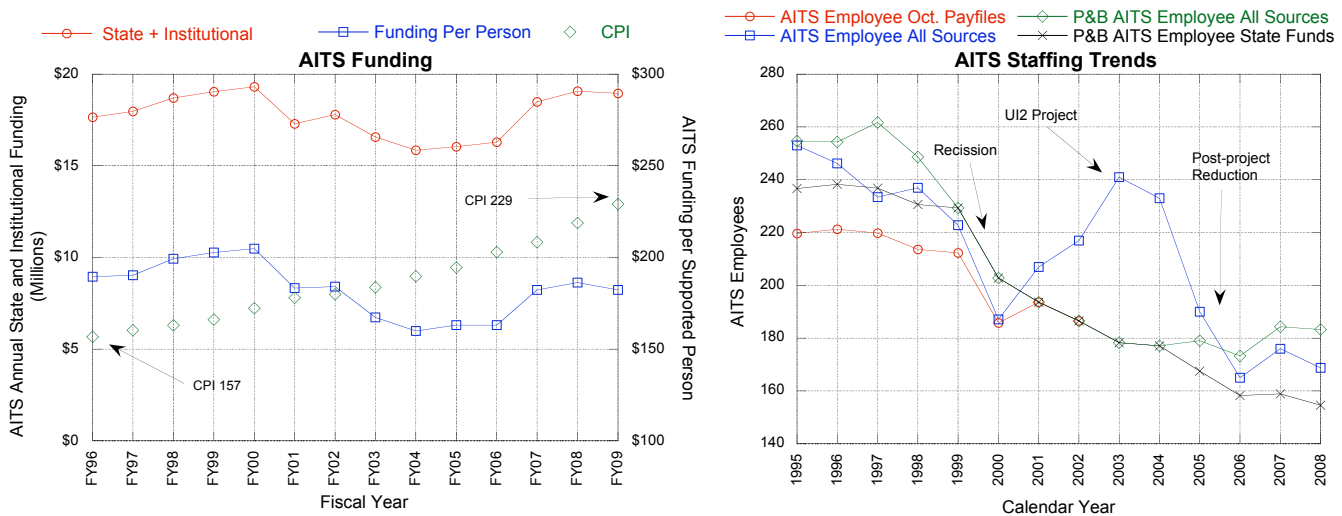
Throughout the past 14 years, the state and institutional funding for AITS has remained relatively constant. The third component of funding, the self-supporting budget that is recovered from chargeback to other departments for services, has fluctuated considerably between zero and $5M, and is not shown in the graph (above, left). Over the past few years, the self-supporting funds have remained nearly constant at about $1M, and this is the intent for the future. The cost per supported person, that is the University's employees and students, has declined slightly since FY96 in spite of a 46% increase in Consumer Price Index (CPI).

In contrast to the budget, the AITS staffing has continued to decline over the past decade, with the exception of an employment spike due to the UI Integrate project. This demonstrates that as the cost of technology components has continued to rise with the CPI over the years, for example hardware and software, AITS has offset these increases with staffing decreases. Specifically, maintenance costs have risen about 26% between FY07 and FY09. The end result is that AITS much more efficient than it was 14 years ago; however, additional gains in efficiency will be increasing difficult to find.

The AITS website is http://www.aits.uillinois.edu, which has a listing of services and presentations on AITS and the ITPC process.

How do quality enterprise IT systems and services make a better university?

This plan assumes that there are certain University services that are delivered most efficiently as enterprise services through a central organization. In general, our plan supports the following ideas, which we believe help create a better IT environment at the University.

1)   Enabling change and adapting to institutional needs and strategies
2)   Creating operational efficiencies through standards and economies of scale
3)   Providing information for shared decision making
4)   Supporting shared governance and thoughtful policy discussion

What are enterprise IT systems and services?

Generally, assets and functions that are not unique to the mission-critical functions of the campus/college/department should be part of an enterprise strategy. At the University of Illinois, AITS is not the only provider of enterprise services but is a key component of many them. Typically, enterprise systems will include:

- Enterprise architecture
- Computing devices (mainframes, servers, desktop devices and peripherals)
- Networks
- Enterprise-wide applications
- Maintenance and service desk functions for common hardware and applications
- Standards for other computing devices (desktop), operating systems, common applications and software
- Enterprise data management/architecture
- Enterprise data storage and archival

Mission and Vision

AITS supports the mission of the University, which is to *"transform lives and serve society by educating, creating knowledge and putting knowledge to work on a large scale and with excellence".* AITS uses the mission and vision statements of our parent organization, Planning and Administration (PA). The statements of mission, vision and values describe our purpose and guide our services to the University community.

Mission statement: To be a source of competitive advantage and value for the University of Illinois by providing a wide range of information solutions and services to the University's campuses, operating units, and external stakeholders.

Vision statement: We will be recognized and actively sought out as a strategic partner for the University of Illinois' campuses, operating units, and external stakeholders by providing a wide

range of information solutions and services that are accessible, timely, accurate, and responsive to customer needs. Our diverse units will collaborate with each other, the campuses, other operating units, and external stakeholders to proactively identify opportunities and threats, mitigate risks, plan future initiatives, and solve problems. We will be known for our integrity and unyielding dedication to customer service.

Values

AITS incorporates all of the PA values and added two additional value statements that relate to innovation and leadership. Everything we do will be driven by a focus on results and the following values:

People – People are our most important asset. We will recruit, develop, and retain highly skilled staff at all levels in our organization through a wide variety of professional development activities and opportunities. In everything we do, we strive to reinforce the value we place on people in our organization.

Information – Information in all its forms is our currency and the source of underlying value we provide to the University. We view it as an asset to be verified, analyzed, disseminated, and protected appropriately. Information is built on a foundation of data but also includes context, interpretation, and focus. At its foundation, true information is organized around human roles, responsibilities and needs, not management of technology systems.

Customer Satisfaction – We strive to provide the highest level of service possible to our customers based on their needs and our capabilities.

Continuous Improvement – We demonstrate a continual effort to improve job-related knowledge, skills, and performance through both formal training and individual study with the overall intent of enhancing service to our customers. We identify and share lessons learned from both our successes and failures.   We proactively seek and identify ways to improve personal and team performance.

Integrity – We are forthcoming, truthful, ethical, and sincere in our words and actions. We keep our promises.

Accountability – We take responsibility for our individual works as well as the management and stewardship of the University information resources and other assets entrusted to our care.

Transparency with Security – We will provide appropriate levels of both transparency and security in our activities. We recognize that these forces can be competing and we commit to balancing them when necessary. We will continually look for ways to enhance both, challenging old standards and common practices.

Safety – We will create and sustain a safe environment. This includes safety with regard to our stewardship of information and traditional elements of personal safety, as well as the ability to express ideas in a professional and appropriate manner, and in an environment of inclusivity.

Stewardship – We consider both the long-term well-being of the University and the short-term imperatives facing it in the decisions we make, the actions we take, and the advice we offer to other leaders across the University.

Leadership – Using the resources available to us as individuals and as a department, we create ways for everyone to contribute to our objectives of anticipating customer needs, providing innovative, cost-effective and sustainable solutions, and delivering reliable systems and infrastructure.

Innovation – We reward innovation and creativity and support continuous learning through training and collaboration. We aspire to be an information technology leader and provide best practice technology solutions and services, balancing the critical need for operational stability with innovation and risk taking.

Original AVP Job Description Goals and Objectives, March 2008

The new Associate Vice-President for Administrative Information Technology Services was hired in March 2008. Within the first 12-18 months, the AVP will be expected to meet the following goals and objectives:

- Will have developed and gained approval on a strategic plan and vision for AITS that will be consistent with the organization's goals and objectives

- Will have become fully integrated into the management team and be perceived as a solid team player that has credibility and integrity. Will be a regular contributor to the discussions at management meetings.

- Will have maximized systems' capabilities and developed a very service oriented team.

- Will have effectively evaluated all direct reports and made any necessary changes in staff, establishing a stable organization that is supportive of staff and offers career growth and development opportunities to aid in retention.

Difference Between Goals and Objectives

Goals are broad, general, or abstract and difficult to measure.
Objectives are narrow, precise, tangible or concrete and can be measured.

Difference Between Performance Standards, Metrics and Measures

Metrics are the standard units of measure or a key performance indicator.
Measurements are the quantification of the metrics and always contain uncertainty.
Performance standards are the stated objectives of the measured metrics.

Strategic Goals

1. Identify opportunities to implement best practices to ensure high value, cost effective administrative IT solutions for our customers

2. Develop and expand our administrative IT system infrastructure to improve administrative business functions and facilitate access to enterprise data for our departmental partners.

3. Improve service delivery capabilities, enhance service delivery management, implement improved metrics to demonstrate results and promote organizational transparency, and create new and effective forums for customer communication.

4. Leverage talent and develop pools of synergy in order to increase workplace productivity and enhance its ability to deliver high quality solutions to address the administrative computing needs of the University of Illinois.

Strategic Objectives

The AITS strategic objectives are created through discussions with our customers, and they are refined by internal conversation within AITS. Each objective has a different priority, and the priority changes throughout the year depending on environmental factors such as funding, urgency, University needs, vendor partnerships and human resource availability.

Each of the strategic objectives below involves documenting the need, idea, policy, procedure, methodology, technical infrastructure and eventual outcomes for each objective. The descriptions are intentionally short, and additional information is provided within the AITS intranet (https://pbsharepoint.ui.uillinois.edu/departments/aits/) or at the AITS website (http://www.aits.uillinois.edu/).

- *Use What We Own:* Increase functionality of enterprise systems by specifically using more of Banner delivered functionality and eliminating as many costly modifications as possible.
- *Enterprise Architecture:* Formally document the outcomes of the Enterprise Architecture Committee to provide assistance in collaborating with AITS to access enterprise data.
- *Information Management:* Create a roadmap for the future state of obtaining, storing, validating, moving, using and disposing of data.
- *Proactively Expose Banner Data:* Provide consistent and straightforward methods for departmental applications and third-party applications to utilize authoritative Banner data.
- *Equipment and Server Space:* Determine the most efficient locations and configurations for primary and secondary (BCP) data centers. Consolidate any applicable equipment, including by equipment of others throughout the University.
- *People:* Preserve employment to the highest extent possible. Discussions related to the reallocation or reduction of staff should focus on impact analysis for services provided by AITS.
- *AITS Progress Report:* Refine and complete the 2009 progress report, ensuring that the report is relevant to the University.
- *Identity Management and Login Credentials:* Unify identity management into a single logical and effective infrastructure.
- *Vendor Interaction:* Leverage partnerships with our vendors to maximize benefit to the University and minimize costs.
- *Differentiate AITS and ITPC:* Create clearer distinction between the work performed by AITS as internal projects and maintenance and those projects specified by the ITPC process.
- *Measuring Progress:* Document all relevant AITS metrics and provide regular updates and analysis of the metrics.
- *Emergency Preparedness:* Ensure the BCP plan is effective and is practiced regularly. Create a short checklist for emergencies.
- *Communication and Expectation Management:* Complete and publish a communication plan including publications, media, schedule and constituents served.
- *Production Level Services:* Document and publicize our most robust and standards-based processes at the AITS website.
- *Security:* Review, revise and ensure compliance with all AITS and University security policies and procedures.

- *Policy Ownership:* Ensure that every policy relevant to AITS has a champion and a caretaker.
- *Get Students Involved:* Provide opportunities for students to assist AITS through direct involvement or through college faculty.
- *Green IT:* Create our statement of environmental sustainability.
- *IT Governance:* Extend the governance model for ITPC to include the entire spectrum of customers from faculty end users to administrative department executives and all points in between.
- *VSL consolidation:* Create options for consolidation of vacation-sick leave reporting, relying more heavily on Banner
- *Position control:* Determine IT consequences for HR reporting, policies and procedures resulting from an increasing interest in position control.
- *IT@Illinois:* Participate in and contribute to the Urbana campus's initiative.
- *AITS History*: Document the past 30+ years of AITS history.
- *Document Management:* Create University standards for document imaging, storage, use, retention and disposal. This is a specific subcategory of Information Management.
- *Use Clarity to Study AITS:* Use Clarity data to analyze contribution of workload throughout AITS to assist in the planning process.
- *PCI Compliance:* Review and revise PCI-related policy and assist the University with compliance for PCI policies and procedures.
- *Management-level Processes:* Review and revise management and operational policies within AITS. Document unwritten policies and procedures within AITS.
- *HR Front End:* Review and document the HRFE process and integrate lessons learned into AITS policies and procedures.

Standards Description

The standards used within AITS describe how we comply with University policies, industry best practices or specific internal operations. By documenting these standards, each person within AITS can use the standards, and our customers can understand better how we approach operations. The standards listed below are the most relevant in our daily work within AITS, and each of these standards and business practices will be defined and available at the AITS intranet (https://pbsharepoint.ui.uillinois.edu/departments/aits/) or at the AITS website (http://www.aits.uillinois.edu/).

- Employee performance appraisal
- Purchasing
- Administrative application inventory
- Banner modifications
- AITS software and services, current vendors, applications and configuration
- AITS customer services
- AITS committees and collaboration
- SDLC
- CMDB
- ITIL
- Security policy
- Security practice
- Data center operations
- Data center engineering
- PC acquisition, disposal and support
- Server management
- Database management
- Deployment
- Enterprise data integration
- EAC
- Business process analysis
- Application development
- Quality assurance
- Service-oriented Architecture (SOA)
- Event-oriented Architecture
- Enterprise Information Management/Architecture
- Software as a Service (SAAS)
- Enterprise Content Management (ECM)
- Content Management (CMS)
- Document Management (DM)
- OpenEAI
- Change Data Capture (CDC)
- Project Management Life Cycle (PMLC)

Services Description

These are the specific services that AITS offers, and each service will be described on the AITS website at http://www.aits.uillinois.edu. The services are divided into three categories: 1) infrastructure to directly support the information assets, 2) infrastructure to extend existing functionality and 3) business applications used support a specific function.

Core Infrastructure used to run and manage the University's information assets, e.g., operating systems, database management systems, message brokers, version control software, application servers, monitoring infrastructure etc. AITS supports these infrastructure components for external clients and they are used internally within AITS..

- AppScan
- Appworx
- BEA Weblogic Application Server
- Change Control Process
- Citrix
- CVS (Concurrent Versions System)
- Data Beacon
- EAS (Enterprise Authorization System)
- IBM Lotus Domino
- iBuy
- LDI (Luminis Data Interchange)
- Linux Operating System (and related services)
- Load Runner
- Luminis Portal
- Microsoft Exchange
- Microsoft IIS Application Server
- Microsoft SQL Server
- MySQL Database Server
- Nelnet
- Oracle
- Oracle Application Server (OAS)
- Oracle CDC (Change Data Capture)
- Oracle Streams
- SiteScope
- SonicMQ
- Tomcat
- Unicenter Service Desk
- Unimon
- Unix Operating System (and related services)
- uPortal
- Upside
- Urchin
- ViewDirect
- Windows Operating System (and related services)
- What's Up
- Oracle SLM

Extended Infrastructure purchased or built to help AITS and our clients build or extend existing functionality. Services such as OpenEAI, SharePoint, Security Application (secapp), LDI, REPTPROD and Drupal fall into this category.

- Banner Forms
- Banner Self Service
- Banner Xtender Systems
- Benefits Pended
- Business Objects
- Change Control Process
- Clarity
- Codebook
- Drupal
- Informatica
- OpenEAI
- Parameter Editor
- Quick Test Pro
- REPTPROD
- RightFax
- Runner Address Verification
- Security Application
- SharePoint
- SunGard Workflow
- ViewDirect

Business applications and services that the University develops or purchases by either AITS or a departmental partner that address a specific business function supporting the strategic goals of the University. Examples of these software packages include AdAstra, PITR, Test Score Loader, MediEase, Apply Yourself and Banner. AITS supports these products for our clients.

- AdAstra
- ALAS
- Altiris
- CAPS
- CAS
- Apply Yourself
- Attribute Maintenance
- Axiom/OCR for Anydoc
- Charities
- Collections Application
- Campus Recreation

- Contract Documents System (CDS)

- Contractor Annual Prequalification
- Cross Foapal
- DARS
- DARWin
- Desire2Learn
- Evisions
- FABWeb
- Famis
- FCPWeb
- Fringe Benefit Assessment
- Fringe Benefit Encumbrance
- Grant Loader
- GFAS
- History Makers
- HR Pay Adjustment Authorization
- HR Pay Mass Change
- iBuy
- Infinet (UI-Pay)
- InfoEd
- Involuntary Deduction
- ITD Processes
- MAP Calculation Application
- MediEase
- Notification of Appointment (NOA)
- Payroll Accruals
- P-Card
- PEAR (Protected Email Attachment Repository)
- Pending Degree List
- PHD/COS (payroll History Database/Change of Status)
- PITR (Personnel Information Transmission Report)
- PMUTracker
- PNP (Proficiency and Placement)
- PRMS (Personnel Registry Mgt System)
- PRZM
- Retro Pay
- SACS (State Appropriation Control System)
- Salary Planner
- SalePoint
- SAS
- SciQuest eProcurement
- Secure Solution Engineering
- Security Risk Assessment
- Security Vulnerability Scanning
- State offset
- State Rule Code
- State Salary Encumbrance
- Systems Penetration Testing
- TBC/TCE (Test Based Credit/Transfer Credit Extract)
- Test Score Loader
- Time Ticketing
- Tuition Waiver
- Tuition Waiver Eligibility
- Undergrad Guaranteed Tuition
- Work Study
- Java Payment Client (JPC)
- Talisma

Key Metrics and Performance Standards

AITS established and began collecting baseline measurement data during FY09 in order to better measure performance trends and validate outcomes and improvement as we implement our strategic objectives. The relevance, frequency of measurement and custodian of each of the performance standards is documented in Appendix A.

Administration
- Budget and expenditures
- Staffing level

ITPC Projects
- ITPC Projects – One Page Summary
- Project Status Summary
- ITPC Funding Analysis
- ITPC Projects Performance Analysis
- Project Timeline Summary
- AITS Resource Projection Summary - quarterly
- ITPC Project Prioritization Summary - quarterly

Time Reporting
- One page summary – monthly
- Detail by person, by organization - monthly

Customer Satisfaction Metrics
- TAM/ESC Production Support - monthly
- TAM/ESC Work Requests - monthly
- ITPC Projects – starting 1/09 - quarterly

Other
- Global Campus Program Status Package – weekly/monthly
- AITS Project Prioritization Summary - quarterly
- Open/Closed Work Requests Summary - quarterly

Portfolio Management Office
- # of projects PMO is engaged on
- # of metrics provided to customers
- % of projects measured for customer satisfaction
- % of projects on budget
- % of projects on schedule
- # of training sessions provided
- # of points of scheduled communication with the campus community
- % of projects tracked
- % of projects following PMLC

ADSD

- Number of issues/projects by severity
- Number of issues/projects by type
- Categorization of issue/project resolution
- Issue resolution time
- Accuracy of release
- Projects (defined by unit) per month/year
- Reusability of components
- Accuracy of documentation
- Hours per project/project type
- Hours by client/department
- Hours per Banner upgrade (or other major upgrades)
- Defect analysis
- Change request analysis
- Work request analysis
- Analysis of effectiveness of SDLC and other standards, guidelines, and procedures
- Number and source of requests for services that require an immediate shift in priorities and resources
- Number of internal AD efforts that are put on hold or are not started due to business priorities
- Reduction in hours internally and externally as a result of current work
- Request and sync message statistics
- All report changes
- Number of databases and servers
- Quantity of data
- Quality of data
- Tickets/requests opened and closed
- Post-implementation quality analysis
- Security requests processed
- Action line issues filled and resolved
- Quantity of documentation posted
- Client meetings attended and facilitated
- QA tool utilization
- University processes supported
- On call performance
- Categorization of system aborts

COE

- Availability
- Usage by system/service
- Outage and notification survey
- Number of issues/projects by severity
- Number of issues/projects by type

- Categorization of issue/project resolution
- Issue resolution time
- Customer satisfaction
- Unplanned outages by system/service
- Patches, upgrades and modifications installed
- Patches, upgrades and modifications backed out
- Batch requests
- Module and chain execution
- Service desk monthly stats, calls, cases, wait, abandoned etc.
- Service requests (all AITS)
- Password resets
- Service desk current published stats
- Production scheduling change control, migration and batch processing
- Rollouts
- Change management
- Release management
- Meeting attendance
- Age of supported equipment by department
- Quantity of users and equipment supported by department
- Help Desk Institute customer satisfaction comparison
- Storage by application and department
- Records and images by application and department
- Processor and memory utilization

Security
- Requests by source by type
- USC notifications
- Time to completion
- Login comparison
- Report utilization
- Processing errors
- Inactivity termination