

AITS Strategic Plan for FY 16 – FY 18



Save Time • Improve Ease of Use • Improve Speed to Service
Deliver Targeted and Pervasive Information • Collaborate

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AITS STRATEGIC PLAN FOR FY 16 – FY 18

Introduction

This document outlines the information technology (IT) strategies and initiatives of Administrative Information Technology Services (AITS) at the University of Illinois. It is designed to be a three-year IT plan that evolves with collaborative input along side other strategic plans throughout the University. The planning process that produced this document utilized the University of Illinois IT Strategic Planning Process Framework developed in FY 12 as a primary input to planning.

The goals in this document were developed to support the strategic directions of saving time, fostering ease of use, improving the speed of delivery of IT services, delivering targeted and pervasive information for users, and collaborating throughout the University. Many of the goals rely on collaboration with units throughout the University.

I am grateful that many people from across the University have contributed to the development of this plan, and I hope to continue to receive your input.

Comments, questions, and other feedback regarding this document are welcome at any time.



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Statement of Purpose

This document describes the department of Administrative Information Technology Services (AITS), our strategic directions, goals, and initiatives for supporting the University of Illinois. It is designed to be a three-year strategic IT plan that evolves with collaborative input along side other strategic plans throughout the University. This plan provides a means to work collaboratively with our University constituents to create more efficient and effective IT services supporting university business processes.

Mission

We provide a wide range of administrative information technology solutions and services to the University community that are accessible, reliable, accurate, efficient, and responsive to customer needs. We collaborate to proactively identify opportunities, manage risks, plan future initiatives, and solve problems by leveraging all of our information technology resources and knowledge. We continually measure and evaluate our services in order to optimize them for the University community.

Vision

To be an engaged partner within our University community to advance the institution's mission and administrative functions. We will provide information technologies and services that will balance the need to be innovative, collaborative, and easy to use while also being reliable, predictable, and relevant to the University community who utilize them.

Values

Everything AITS does will be driven by a focus on successful results and the following values:

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. Leading by example, we will continually look for ways to enhance data driven decision-making, challenging old standards and common practices.

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. We encourage and support our staff members as they work towards the right solutions for the University.

Customer Satisfaction

We strive to provide the highest level of service possible to our customers based on their needs and our capabilities. We work within our means to develop the best solutions for our customers.

People

People are the University's most important asset. We will create and sustain a safe environment for them. We will invest in our staff members at all levels in our organization through a wide variety of development activities and opportunities. We encourage staff members to be proactive in career development and planning and furthering their formal education.

Integrity

We are forthcoming, truthful, ethical, and sincere in our words and actions. We keep our promises. We build and maintain trust between colleagues across the department and are invested in each other's success.

Learning

We continually learn from working with our customers, fellow employees, partners at the campuses and University Administration, and our peers in industry and higher education. We value our customers' insight, experience, and expertise.

Changes in Environment Since Last Strategic Plan

Since the current plan was developed in 2012 a number of things have changed for the University, campuses, and AITS. As well, the information technology needs of faculty, students, and staff that AITS supports have changed. Some of the changes include:

- Increased demand for mobile and cloud services (mobile +200%)
- Increased IT security threats and risk on almost all fronts
- New and evolving technologies offering new possibilities for users
- New strategic plans developed at all campuses
- New IT strategic plans developed at all campuses
- Campus IT Governance in place and operating at all campuses
- Impending reduction in financial resources to support university customers

The AITS Strategic Plan for FY 16 – FY 18 reflects this changing landscape through its goals and initiatives. The top issues affecting information technology in higher education have evolved quickly over the past three years since the last AITS strategic plan was created. EDUCAUSE annually publishes its Top Ten IT Issues derived from research by leaders in higher education IT. The last published Top Ten list for 2015 has changed dramatically from 2012. Of the top ten items listed, seven of ten were not included on the list from three years prior. This rapid evolution requires constant planning, research and development, and redirection of resources to meet these challenges. The current EDUCAUSE Top Ten IT Issues includes (items not on 2012 list in *red*):

1. Hiring and retaining qualified staff, and updating the knowledge and skills of existing technology staff
2. *Optimizing the use of technology in teaching and learning in collaboration with academic leadership, including understanding the appropriate level of technology to use*
3. Developing IT funding models that sustain core service, support innovation, and facilitate growth
4. *Improving student outcomes through an institutional approach that strategically leverages technology*
5. *Demonstrating the business value of information technology and how technology and the IT organization can help the institution achieve its goals*
6. *Increasing the IT organization's capacity for managing change, despite differing community needs, priorities, and abilities*
7. Providing user support in the new normal—mobile, online education, cloud, and BYOD environments
8. *Developing mobile, cloud, and digital security policies that work for most of the institutional community*
9. *Developing an enterprise IT architecture that can respond to changing conditions and new opportunities*
10. *Balancing agility, openness, and security*

The University is under increasing financial pressures to be as cost efficient as possible. Central IT is the greatest cost reduction engine in the university, and it helps create and preserve high quality business functions throughout the University. The University of Illinois serves 78,540 students and has 33,067 employees

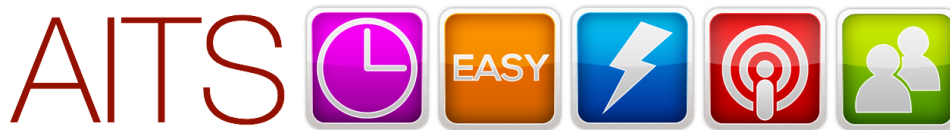
providing its teaching, research, engagement and economic development mission. This mission requires a \$5.5B budget and millions of business transactions every year, and AITS supports these transactions in the most efficient manner possible. In terms of enabling the business of the University, how efficient is efficient and what overall benefit should a central IT department provide? To answer, Gartner has analyzed data from the Bureau of Labor Statistics. They show that the labor productivity of an organization must increase about 2.7% every year to remain competitive. They also show that 70% of this productivity comes from the application of IT to improve productivity of everyone associated with the organization. Further, Gartner explains that as organizations become larger (around \$10B in revenue), they provide operational IT at the larger scale and spend about 3% of revenue on operational IT as compared to 5% for smaller organizations. Based on these data, AITS must assist the University to realize \$66M in annual labor productivity increases required to keep pace with the competition and help recover part of the \$110M difference between 3% and 5% of revenue by providing services at the enterprise level.

AITS is undergoing a transition towards Activity Based Costing (ABC) in order to better define and cost the services provided to university customers. The table below demonstrates how these services can be defined by either a customer-focused or more traditional IT functional lens. By moving towards ABC, AITS will better demonstrate the services provided to customers and the direct cost and consumers of those services. For example, from the ABC analysis performed in FY 13, it was identified that 83% of AITS supports core university business processes

By Function for faculty, staff and students General and administrative services		By IT Function General and administrative computing; Co-investments and shared infrastructure		
Ongoing Services	Student Services Financial Aid Processing Registration and Records Recruiting and Admissions	Professional Services <i>(some may be fee-based)</i> Business Process Improvement Consulting Data Visualization Identity and Access Management Mobile Application Consulting Project Management Records and Information Management Security and Compliance Consulting Workflow Development Consulting Security Provisioning Server Hosting Quality Assurance Web Services Consulting Workstation Management	Application Services Application Administration Application Development Application and Website Testing Data Visualization Distributed Hosting Document Management Enterprise Application Integration Enterprise Data Warehouse Enterprise Batch Scheduling Service Desk Management Web Content Management System	Professional Services Business Process Improvement Shared Services Change Management Service Database Services IT Portfolio Management Release Management Risk Management and Business Continuity Planning Records and Information Management Services
	HR Services Benefits Payroll Recruiting and Hiring		Network and Desktop Services Backup Management Collocation Services Desktop Support Storage Management System Monitoring, Alerting and Availability	Security and Access Services Authentication and Authorization Services Directory Services Firewall Services Information Security Consulting and Support Remote Access and VPN
	Financial Services Accounts Payable Accounts Receivable Contract Management eProcurement General Ledger Management Inventory Accounting Travel Expense Reimbursement			
	Research Services Research Administration Management			

Strategic Directions

Based on current state as described above, the AITS strategic directions will be utilized to guide our work to address challenges and opportunities for our customers. The AITS strategic directions are statements indicating the specific strategic areas that AITS will focus on in supporting the University’s mission and our responsibilities as an organization. These strategic directions align with our mission and vision and focus our efforts to fulfilling these. In pursuing these strategic directions, the strategic goals and initiatives in the next sections serve as actionable broad and specific plans that AITS will pursue in order to fulfill our stated strategic directions. AITS’s strategic directions for FY 16 – FY 18 are:



Save Time • Improve Ease of Use • Improve Speed to Service
Deliver Targeted and Pervasive Information • Collaborate

Save Time

Improve and add services that increase productivity for faculty, students, and staff.

One of the foremost goals of employing information technology resources is to save time for our users. When IT services allow people to perform tasks and processes more efficiently, it preserves their time to dedicate to other valuable tasks. At the University, this means that students have more time to study and participate in student life activities. Faculty members have more time to teach and perform research. Staff members can better support faculty and students when IT helps improve efficiency.

Preserving our time through IT services takes many forms. Systems are implemented to reduce administrative overhead, and everyone should be able to efficiently access the services available with minimal searching and with a single electronic identity. It should be easier to interact with information of all forms throughout the University, and creation of knowledge should be automated as possible.

Improve Ease of Use

Improve the usability of AITS services.

Customers are increasingly interested in the availability of a portfolio of basic and expanded information technology services. All of the IT services that are deployed at the University should be designed and maintained with an emphasis on the user’s perspective of being easy to use. When services are not easy to use, or too complex, there is a disconnect between our users and providers of information technology, which usually results dissatisfied customers.

As we build or purchase new services to meet user needs, IT ensures that these services have a number of key usability characteristics such as:

- Familiar, consistent, and understandable terminology
- Easy to read and navigate
- Easy to learn and become easy to use
- Compliant with all accessibility standards
- Information is easy to find
- Suitable performance and load times
- Clear path for support

As a general rule, if services cannot meet these criteria, it may not be in our best interests to pursue them. In some instances, ensuring these criteria are met will make services more difficult or time consuming for IT units to maintain; however, the overriding concern is that it is better to constructively utilize the time of IT professionals if there is a net improvement in services for the end user and the University.

Improve Speed to Service

Improve the time to delivery of AITS services.

In addition to ensuring services are easy to use, the time to deploy services needs to decrease. This multifaceted issue includes planning, purchasing, human resources, development, testing and risk assessment. Each of these components influences how long it takes to get service in the hands of those who need them. In addition to our own processes, the state and federal governments also have compliance regulations that drive the speed to deployment. We must work creatively within our given constraints with an eye toward accelerating deployment. We cannot become an agile university without changing the speed to service.

Deliver Targeted and Pervasive Information

Provide for strategic, widespread use of our data.

We have different kinds of customers for the information we provide, with a variety of different information needs. We need to expand our toolset and infrastructure so that we – and the other information providers who rely on us – can serve each of these needs using the right data and the most appropriate technology.

We need to work aggressively to make information more pervasive across the University community. We will do this by continuing to build out the Data Warehouse environment as the University's central repository for integrating and publishing data from enterprise systems, providing a comprehensive source for administrative data, as well as helping customers supplement enterprise data with local data. We will proactively identify information gaps and address them ourselves or advocate and partner with other information producers to get them addressed. We will also focus on improving adoption of information solutions.

Collaborate

Build and strengthen relationships throughout the University based on mutual trust.

Collaboration is a foundational element of the everyday lives of the student, faculty, and staff of the University. All three of those groups collaborate amongst their peers and others across the University and worldwide. The methods and tools for collaboration continue to grow as digital capabilities expand constantly. Information technology provided by the University must enable collaboration, while increasing the ease and efficiency of the collaboration, and not cause more work in order for people to collaborate.

Another important area of collaboration is the partnership between IT professionals, IT governance committees and processes, and the constituents that these groups serve. Close collaboration between these groups is essential to facilitating shared decision-making, prioritization of initiatives, improving the performance of IT, and the implementation of new and improved services. We must also collaborate actively with our colleagues and vendors from outside of the University in order to more efficiently support our vended services and provide leadership among our peers in leading product development direction.

Strategic Goals and Initiatives

The AITS strategic goals were created through discussions with our customers, and are refined by internal conversation within AITS. We utilize our strategic directions as described earlier, to guide development of goals that support and align with these directions. Most organizations need to successfully accomplish many goals to achieve their mission. Some of the goals presented have not yet been prioritized or resourced and represent stretch goals that will be pursued as resources are available and other goals are satisfied.

Strategic goals have an outcome that is measurable and achievable within a specific time frame. One, which is subordinate to the mission, yet supports the overall business purpose by addressing an aspect of it. We utilize the SMART model for evaluating Strategic Goals as demonstrated below.

Each goal 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. The strategic goals are pursued through our initiatives. Initiatives are operational in nature and achievable within an expected timeframe and available resources. There may be multiple initiatives for a strategic goal.

Example of a Strategic Goal and respective Initiative:

Begin feasibility study for the replacement of the Banner ERP system.

GOAL: Begin feasibility study for the replacement of the Banner ERP system.	
S = Specific	Yes, take steps to evaluate business processes and ERP market as a component of feasibility study
M = Measurable	Request for information complete
A = Attainable	Yes
R = Realistic	Yes
T = Time-bound	RFI issued and completed by February 28, 2019
Strategic Directions Supported	Save Time, Improve Ease of Use

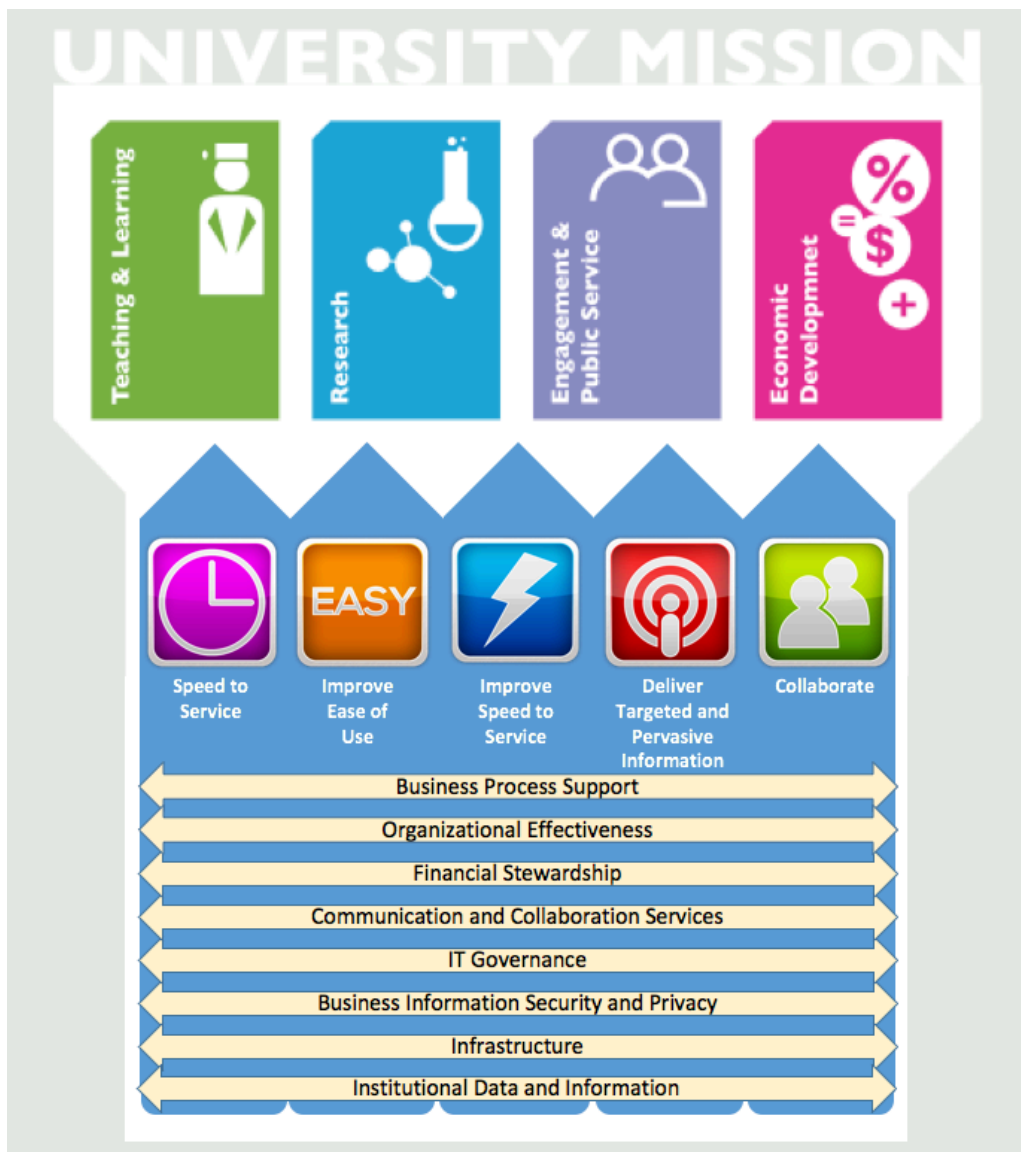
Initiatives

- Examine differences of ERP implementation processes between classic 'late 1990s/2000s' system versus current and future cloud systems.
- Evaluate the ability of the University of Illinois to redesign business processes to most efficiently utilize multi-tenant ERP cloud services.
- Examine the ability to replicate complex business processes in current ERP market system offerings.
- Create Request for Information for next Enterprise Resource Planning (ERP/Currently Banner) System Replacement.

Mission Activities and Strategic Directions

On the following pages, this plan discusses AITs’s strategic goals towards providing services and support for University business processes. These goals are organized by topics that are supportive of the University’s mission activities. These goals are further focused and aligned to the AITs strategic directions.

The diagram below demonstrates that AITs has designed its strategic directions to support the mission activities of the university. Our strategic goals and initiatives are designed to provide support to business processes and people across the university. The SMART goals and initiatives in this plan are organized by the type of support provided to the university such as Business Process Support, Infrastructure, and Business Information Security and Privacy.



Business Process Support

IT systems and services support business processes in areas such as student services, finance, human resources, facilities, advancement, and research administration to support the mission activities of the enterprise. It is important that our IT investments improve efficiency and effectiveness and are informed by faculty, staff, students and alumni.

Goals and Initiatives

1.1 Promote and support collaboration and community source initiatives to leverage tools we've already built and provide a healthy environment where systems and people can more easily work together and communicate.

1.1.1 Reduce application redundancy and leverage the development work of others across the enterprise. Applications developed by edge units can be leveraged by other departments and colleges across the campus and university instead of being repeatedly redeveloped or purchased. A basic model has been completed and now needs to be published. AITS could provide the infrastructure and offer services and cost recovery where a need exists.

1.1.2 Create and deploy a service to provide a web services registry as well as a common repository for applications, enterprise message objects, and community source development initiatives with an improved governance structure and marketing.

1.1.3 Develop, enhance, and improve our data integration services including community data definition and integration standards and how they are implemented.

1.2 Systems and services that support university business processes will be designed with easier contemporary standards for ease of use to improve user experience and minimize the training burden on the university.

1.2.1 Create a Design and User Experience Service (DUXS) area at AITS with dedicated resources that will assist AITS staff as well as other university departments with implementing user experience design standards. This group would be responsible for but not limited to documenting design standards and guidelines, prototyping, developing style guides, and providing a consistent look and feel for university applications.

1.2.2 Staff increased maintenance and support load arising from the implementation of new user requested applications and services, e.g. HR Front-end, iBuy, PARIS, Nelnet, Upside, Common Application (UIC), and TEM. Provide resources to counter decreased headcount available for user requested new software applications and services. One-time funds received in FY14 only partially addressed the increased load.

1.3 Eliminate unnecessarily redundant systems.

1.3.1 Continue and improve the Application Review Process that inventories IT systems to identify areas for further analysis related to system or service collaboration or redundancy. Perform analyses and prepare recommendations for reducing redundant systems.

1.3.2 Create an action plan to reduce or consolidate redundant systems and services.

1.4 Increase customer satisfaction through better metrics and communication of services.

- 1.4.1 Identify requirements and KPI's to measure satisfaction of support and services.
- 1.4.2 Create a committee or empower a customer-facing unit to define feedback loops and conduct focus groups, surveys, and customer interviews.
- 1.4.3 Accurately reflect our services and allow for clear and concise communication of our services to customers.
- 1.4.4 Establish new delivery channels such as Bomgar, instant messaging methods, etc. to provide additional method of support.

1.5 Improve/implement tools and services that facilitate improved efficiency and effectiveness of departments across the University.

- 1.5.1 Evaluate and redeploy, augment, or replace the Xtender document management system with a new tool, which can address the needs for more advanced functionality across the full life cycle of a business process. Xtender is lacking in many critical functions above its original purpose for the “capture and conversion” of paper documents into electronic copies for processing.
- 1.5.2 Create a Document Management Service Center at AITS with dedicated resources to assist units with their document management needs. This may provide additional automation opportunities as well (Workflow, FormBuilder, etc.).
- 1.5.3 Investigate options to support enterprise document management tools in support of office business processes that will allow better sharing of information and reduction of duplicate storage.
- 1.5.4 Create a SitePublish Web Content Management System Service at AITS with dedicated resources that will offer assistance and consulting services for web site hosting and related web services for UA and other campus units.
- 1.5.5 Perform an analysis of AITS internal processes with a goal of proposing and implementing improvements. Analysis should focus on areas such as: Internal communication; Duplication of effort; Different priorities; Different processes; Educating on what we do and collaborate on common practices and processes; Recognizing areas of overlap; Improve workflows and business process analysis.
- 1.5.6 Implement a set of Research Management and Administration systems and integrations to eliminate redundant systems, share data, and provide an easy to use portal for principal investigators (PI Portal). These systems will focus to increase administrative productivity, reduce faculty workload and provide data for better analytics and additional positive exposure for research outcomes.
- 1.5.7 Develop and implement a front-end for the service desk product to improve user self-service functionality.
- 1.5.8 Participate with the University of Illinois Foundation and Alumni Association on the Advanced Technology Upgrade Initiative.

1.6 Begin feasibility study for the replacement of the Banner ERP system.

- 1.6.1 Examine differences of ERP implementation processes between classic ‘late 1990s/2000s’ system versus current and future cloud systems.
- 1.6.2 Examine the ability to replicate complex business processes in current ERP market system offerings.

1.6.3 Evaluate the ability of the University of Illinois to redesign business processes to most efficiently utilize multi-tenant ERP cloud services.

1.6.4 Create Request for Information for next Enterprise Resource Planning (ERP/Currently Banner) System Replacement.

1.7 Collaborate with individuals and groups with process improvement theory and execution expertise to provide more opportunities for projects, training and other BPI Shared Service programming.

1.7.1 Establish relationships on each campus with process improvement theory and execution experts, including faculty, leveraging their knowledge and experience to develop opportunities for additional education and outreach.

1.7.2 Establish relationships with those leading relevant student-based groups (e.g., Illinois Business Consulting on the Urbana campus) and faculty, providing opportunities to incorporate students on BPI Shared Service projects and activities.

1.8 Raise awareness of and participation in process improvement initiatives and opportunities throughout the University.

1.8.1 Develop a forum for regularly promoting process improvement activities, showcasing successes and sharing lessons learned.

1.8.2 Develop a program to increase the number of skilled process improvement facilitators and analysts at the University.

1.8.3 Establish a network of functional subject matter experts to assist in improvement BPI efforts, providing guidance and sharing best practices.

1.9 BPI Shared Service will seek opportunities with other higher education institutions, through organizations like the Network for Change and Continuous Innovation (NCCI) in Higher Education, to collaborate on process improvement initiatives.

1.10 Provide business process improvement services to the University that result in improved efficiency and effectiveness of departments across the University.

1.10.1 Develop a comprehensive process improvement training program and toolkit designed to promote unit directed process improvement initiatives and increase the process capability levels across the University.

1.10.2 Train 200 University of Illinois staff per fiscal year on the concepts and techniques of process improvement initiatives.

1.10.3 Double Business Process Improvement Shared Service project capacity by developing and leveraging BPI Shared Service volunteers.

1.10.4 Deliver \$4 million return on investment per year on Business Process Improvement Shared Service projects and related efforts.

Organizational Effectiveness

AITs' people are its most important asset. AITs promotes a fair, equitable, and positive environment through high quality, innovative human capital strategies. We work collaboratively to build and sustain a culture of engagement which allows us to hire, grow, and retain a talented workforce dedicated to the AITs and University missions. It is our vision that each AITs employee clearly understands how s/he contributes to the organization's success and health. We have a clear sense of organizational purpose, and together we provide a culture of growth and development where excellent performance is the goal and expectation for everyone. We strive to provide the type of environment employees seek for their career home because it is an awesome place to work. The stories of our success are told by high productivity, high retention, and positive morale.

Goals and Initiatives

2.1 Provide leadership, direction, and guidance for the strategic initiatives that enable AITs to hire, grow, and retain a talented workforce that's highly motivated and committed to achieving organizational objectives.

2.1.1 Document, communicate, and implement a plan for continual improvement and enhancement of the AITs culture, positioning AITs as an employer of choice within the University of Illinois.

2.1.2 Actively involve AITs managers, leaders, and employees in initiatives to improve the AITs environment, culture, and/or workplace practices/processes.

2.1.3 Provide employee forums for open discussions about matters affecting the workplace experience.

2.1.4 Act as a catalyst for ongoing organizational conversations relating to the importance of leadership and employee support for and participation in people-related initiatives on AITs' ability to achieve its objectives.

2.1.5 Share ongoing workplace initiative updates with AITs staff at business meetings and via other communication mechanisms.

2.1.6 Encourage active cross-sectional participation by identifying champions and establishing committees to recommend and implement initiatives to improve the AITs culture/work environment.

2.1.7 Provide relevant information to increase awareness of cultural aspects and support its continual integration for improved organizational health.

2.1.8 Assess performance against strategic initiatives and provide quarterly strategic plan status updates.

2.2 Continually improve people-related programs and practices and the processes required to support them.

2.2.1 Professional Development: Create and implement a professional development strategy that utilizes both traditional/formal and informal development, thereby supporting employees' and managers' ongoing professional development and strengthening their skills and contributions throughout their careers.

2.2.2 Performance Management: Utilizing existing HR systems and resources developed for supervisors and employees, move performance management beyond appraising past performance to providing continual feedback to develop employees' future potential/capability and help supervisors develop related skills and abilities.

2.2.3 Recognition: Create and implement recognition programs, both formal and informal, to recognize employees and reward them for work and behaviors that support/further the mission, goals, values and initiatives of AITS.

2.2.4 Engagement: Analyze engagement survey results, share results at the division and group level (where available), create action plans to address concerns and improve on strengths, act on findings and implement group action plans to enhance the AITS work environment. We will show results over the next 18-24 months before planning to conduct a follow-up survey to measure the effect of implemented actions.

2.2.5 Process Improvement: Work toward designing, implementing, and assessing employee and workplace practices by the standard of how well they help (1) employees develop and (2) the organization achieve its objectives. Focus on long-term solutions by examining business processes associated with current practices and implementing changes designed to save time and improve ease of use, speed to service, and collaboration. Assess the results and continue to refine.

2.2.6 Strategic Workforce Planning: Hold workforce planning strategy discussions at each Leadership Team meeting. Focus on current and future workforce needs to support the budgeting process; support strategic initiatives; project organization-wide staffing needs; anticipate and plan for employee development; deploy staff and organize work; manage organizational culture; and anticipate and manage risk.

Financial Stewardship

The University needs to realize the most value for its IT investment. Information technology is utilized to create efficiencies in business processes by automating operational functions. IT is also utilized to provide business intelligence to help us analyze performance and inform decision-making. An important aspect of utilizing IT is determining how we fund IT and understand how we spend our IT dollars.

Goals and Initiatives

3.1 Create and maintain FY16-FY18 Financial Plan.

- 3.1.1 Create a budget scenario for each fiscal year and manage adjustments throughout each FY as needed.
- 3.1.2 Provide for strategic workforce planning which takes into consideration human capital needs and requests, strategic plan, salary increases, promotions, new hires, and reductions if required.
- 3.1.3 Support organizational procurement initiatives by incorporating new required procedures for new laws and policies.
- 3.1.4 Support strategies for cost recovery and cost effective options.
- 3.1.5 Provide financial status information as appropriate through existing communication channels of quarterly meetings, SharePoint updates, and internal newsletters.
- 3.1.6 Provide financial status information to external groups in the form of reports and presentations.
- 3.1.7 Utilize Activity Based Costing and IT portfolio management to better understand, allocate, and report on IT resource usage and project and service performance.
- 3.1.8 Examine and improve the funding model for AITS

3.2 Pursue opportunities to provide productivity increases or cost reductions to the University via enterprise IT initiatives.

- 3.2.1 Utilize enterprise IT for business processes to provide productivity increases for university constituents.
- 3.2.2 Measure and report on productivity increases to university constituents via enterprise IT support of business processes.
- 3.2.3 Look for opportunities where outsourcing or insourcing reduces cost, reduces risk, increases customer services/satisfaction.
- 3.2.4 Partner with other organizations to investigate offering shared services to the university community that are cost-effective.

3.3 Pursue new revenue opportunities where they are beneficial and cost-effective to the University.

- 3.3.1 Offer consolidation of decentralized commodity services at a lower overall cost to the University based on providing those services at scale.

3.3.2 Partner with university and campus units to develop large strategic information systems that provide broad benefits, return on investment, and further the accomplishment of strategic and operational goals.

3.3.3 Provide fee-based IT services where these services provide cost effective options to department that need temporary or permanent services that are not available with their own resources and outsourcing from outside the university is cost prohibitive.

3.3.4 Seek opportunities with other state higher education institutions to share or host commodity services among multiple institutions.

3.3.5 BPI Shared Service will expand fee-based services, providing units able to cover costs with more timely services for a fraction of the cost of similar services offered in the external marketplace.

Collaboration and Communication Services

Students, faculty, and staff communicate in increasingly rich and sophisticated ways in order to collaborate with one another, to expand the reach and impact of our efforts, and to promote the University and its programs. As the pace of change grows and through a new kind of relationship with IT, the University will be able to leverage the interest and excitement of students, faculty and staff in making use of the latest technologies.

Goals and Initiatives

4.1 Provide business relationship/development management services to improve relations with constituents.

4.1.1 Complete and publish a communication plan including publications, media, schedule and constituents served.

4.1.2 Actively solicit performance feedback from constituents and transparently address areas of concern.

4.2 Provide the right tools and environments to facilitate collaboration and remove barriers.

4.2.1 Establish both physical and virtual spaces conducive for increased collaboration.

4.2.3 Provide desktop training to enhance the knowledge of areas that we are already familiar with.

4.3 Collaborate with other IT groups across the university to provided new and improved services.

4.3.1 Implement a training management system to be utilized for training and tracking staff, students, and faculty for job-related development and certification purposes. An ITPC project is in progress.

4.3.2 Analyze and develop a support and ownership model for all shared services. Where new resources are required for AITS, identify the source of new resources or the associated tradeoff with current services.

4.3.3 Implement a solution or an interface to integrate Banner with various learning management systems. This integration is used to simplify the management of class registration and grades between the various systems. An ITPC project has been approved but is awaiting vendor software.

IT Governance

It's vital that IT investment choices be guided by customers, support enterprise strategies, and ensure the most important items receive the highest priority. IT governance (ITG) promotes the intelligent use of resources, providing a shared, rational, and transparent framework for the selection and prioritization of IT investments. ITG processes exist at all university campuses and within university administration. These processes will continue to evolve and leverage one another in order to influence IT strategy and resource investment at the University. Effective ITG processes will help foster a positive and trusted partnership with the institution's customers to collaborate on achieving the institution's strategic plan through the use of IT resources. A core tenet of ITG is the transparency it can bring. It will provide a process to coordinate with the institution's customers to prioritize efforts most likely to achieve the desired benefit and tactically deliver value through the effective and efficient allocation of resources towards those efforts.

Goals and Initiatives

5.1 Promote and support IT governance that is empowered, accountable, and transparent in order to better support the mission activities of the University.

- 5.1.1 Participate on the University of Illinois Information Technology Leadership Team and its subcommittees including the Security, Business Intelligence/ Performance Management, Shared Services Governance Group, and Common Architectural Vision committees.
- 5.1.2 Continue participation with the UIC IT Governance committees.
- 5.1.3 Continue participation with the UIS IT Governance committees.
- 5.1.4 Continue participation with the UIUC IT Governance committees.
- 5.1.5 Work with the UA IT Council on an ongoing basis to collaborate with our UA partners.

5.2 Perform a periodic assessment of the Information Technology Priorities Process.

- 5.2.1 Complete the FY 15 ITPC Annual Report.
- 5.2.2 Collaborate with ITPC participants and customers to design an ITPC review engagement. Leverage current artifacts and 2007 review process.
- 5.2.3 Perform the ITPC review engagement. Have ITPC approve the review findings and recommendations.
- 5.2.4 Implement approved ITPC review recommendations.

5.3 Promote and support Information Lifecycle Governance principles to ensure that records and other information assets created and used to support the mission activities of the University are easily identified, effectively protected and retained for as long as they are needed, and securely deleted, purged or transferred to the University Archives at the right time.

- 5.3.1 Develop inventories of systems and repositories containing records and other information assets that have retention requirements or clear business needs.

5.3.2 Coordinate and collaborate with others interested in establishing good guidance for managing the varied levels of the University's information assets.

5.3.3 Support the deployment and easy use of centralized digital repositories and physical storage facilities for housing information assets particularly those that are essential to the business need of the department or otherwise have retention requirements.

5.3.4 Participate in opportunities to affect changes to State and University rules and policies that will increase our ability to be transparent, accountable, and provide for trustworthy management of the University's information assets.

Information Security and Privacy

Information in all its forms is our currency and the source of underlying value we provide to the University. There is a significant value associated with our intellectual assets and institutional data that require substantial measures to protect. Safeguarding university information, assets, and customers allows the University to concentrate on mission activities and operations. These efforts include improving the overall security and privacy of information at the University, appropriately balancing risk with safeguards, and ensuring security and privacy measures are appropriately supported, funded and implemented within the University.

Goals and Initiatives

6.1 Improve audit and compliance capabilities.

- 6.1.1 Manage internal and external audit engagements, including coordination, remediation of open findings, and communication with various groups including senior management, human resources, information technology groups, and the security working group.
- 6.1.2 Develop HIPAA compliant infrastructure within the University. Provide recommendations for HIPAA procedures to users and facilitate formal approval process from data owners.
- 6.1.3 Develop FERPA compliant infrastructure within AITS Data Center. Provide recommendations for FERPA procedures to users and facilitate formal approval process from data owners.
- 6.1.4 Implement ongoing compliance monitoring. Develop and track compliance checkpoints for security and other identified compliance areas.
- 6.1.5 Continue to identify training gaps for existing employees, provide security training to new employees within University Administration, and provide training pursuant to active audit findings.

6.2 Protect user and administrative accounts from theft and exploitation by attackers.

- 6.2.1 Reduce likelihood of phishing attacks within UA by enabling active phishing prevention software (TAP), providing DNS blocking of malicious sites based on reputation services, and attempting to phish employees to identify additional training needs.
- 6.2.2 Implement multi-factor authentication for privileged administrative accounts, including remote access.
- 6.2.3 Implement multi-factor authentication for existing AITS applications, including Banner Forms to address a finding from internal audits.
- 6.2.4 Implement multi-factor for new IAM authentication infrastructure.

6.3 Prevent installation, spread, and execution of malicious software on user and infrastructure platforms.

- 6.3.1 Improve tracking of repairs for viruses detected on workstations and servers.
- 6.3.2 Engage in risk reduction for workstations patching practices. Monitor compliance, set thresholds, and identify systems and software absent from necessary maintenance.

6.3.3 Evaluate workstation anti-virus software. Determine whether advanced malware detection, workstation IPS/IDS, and other threat detection enhancements are needed beyond today's SCEP implementation.

6.3.4 Install remote Desktop environment for Java and IE Enterprise Mode.

6.4 Enhance network monitoring apparatus to further discover and alert upon potentially compromised accounts and computing systems.

6.4.1 Investigate additional network intrusion detection for UA employee offices and the AITS Data Centers.

6.4.2 Monitor network data outflows using distributed collection points at UA employee offices and the AITS Data Center. Aggregate flow data in reporting console for reporting and alerting.

6.4.3 Refine log collection practices to identify necessary logging data, provide central storage, and to ensure adequate retention.

6.4.4 Implement log correlation functionality based on an evaluation of desirable commercial products, an understanding of readily available internal alternatives, and a balance of operational resources versus business objectives and requirements. Include dashboards for reporting such as authentication and user to IP identification.

6.5 Prevent the unintended, unnecessary, or unauthorized flow of data from trusted computing systems and networks.

6.5.1 Implement 802.1X authentication for UA employee office networks.

6.5.2 Move sensitive servers to private network zone, thereby preventing the possibility of unintended direct Internet contact.

6.5.3 Eliminate sensitive data from servers in public zone, either through removal, or by migrating sensitive data to private network zone.

6.5.4 Tighten firewall to align with currently active audience. Implement secondary firewall controls in ISP boarder routers.

6.6 Enhance protection mechanisms for sensitive information stored within computing systems.

6.6.1 Identify high-risk users of sensitive information in University Administration and deploy data discovery and management capability on user platforms to aid users in managing their sensitive data.

6.6.2 Implement sever compartmentalization plan to prevent access to sensitive/trusted servers from untrusted platforms and untrusted sources.

6.6.3 Implement secure Administrative IT desktops environment to mechanically separate inherently risk prone activities from trusted system access.

6.6.4 Formally refresh data classification by system, application, database, and/or user. Also serves to provide input to initiatives 6.5.2 and 6.5.3

6.6.5 Obfuscate and remove highly sensitive production data from non-production systems. Document, quantify, and communicate business reasons where practices require such storage.

6.6.6 Expire Sensitive Data from Systems by identifying useful lifecycle for sensitive record attributes and obfuscate or remove attributes or entire records when they are no longer required per business requirements.

6.6.7 Improve record retention and data destruction/archiving practices by coordinating with RIMS to define and adopt base document management practices within AITS.

6.6.8 Enhance encryption practices for data at rest and in transit by enabling encryption for all systems to transmit or store highly sensitive information or document exceptions, costs, and potential timelines for later implementation.

6.7 Detect or attempt to actively exploit vulnerabilities of infrastructure computing systems.

6.7.1 Enhance vulnerability scan remediation process by continuing to refine, perform, operationalize, and broaden risk reduction practices based for Nessus and AppScan vulnerability assessments.

6.7.2 Expand penetration testing capability by exploring partnerships with other groups and vendors to perform testing. Utilize resulting data as input to further risk reduction proposals.

6.7.3 Perform anti-denial of service response plan and simulation exercise by confirming that ISPs are ready and prepared to interface with AITS in case of denial of service attacks upon enterprise system services.

Infrastructure

The University requires a foundational infrastructure of reliable information technology resources on which other systems and services depend. These infrastructure services must maintain a superior level of performance and reliability in order to support the mission of the University while being cost-effective, scalable, and accommodating to changing needs and technologies. The University will strive to provide a reliable world class high-performance network infrastructure to all campus buildings that allows for all users to access needed resources. The infrastructure should support the needs of both wired and wireless users for faculty, staff, students and guests.

Goals and Initiatives

7.1 Provide infrastructure and facilities in order to deliver highly available and redundant enterprise level class systems.

- 7.1.1 Understand and strategize replacement of the M9000 enterprise hardware in 2015 - 2019.
- 7.1.2 Improve engagement with the Enterprise Architecture Committee (EAC) and integrate with AITS to expose the value of EAC.
- 7.1.3 Continue to provide high quality data center services by identifying and replacing infrastructure and facility components that are nearing end-of-life or can provide greater capacity, stability and security through newer or better technologies.
- 7.1.4 Provide enterprise-class Database Administration and Hosting services. Departments that currently host their own Oracle or SQL Server databases could leverage enterprise class servers, storage area network (SAN) and highly experienced DBA resources thus freeing up resources on their end for their own initiatives. By utilizing standardized processes across all of our clients we are able to support a large number of databases with a small number of DBA staff. AITS can provide Development, Test, Quality Assurance (QA), Production and Business Continuance (BCP) database environments with 24x365 emergency on-call DBA support. Other notable services include backups, point in time restoration of databases (if needed), cloning of databases to non-production environments, an auditable production change control process, monitoring, and upgrades and patching of the database software.
- 7.1.5 Implement the Identity and Access Management Project. The goal of this project is to implement an IAM solution to address the University of Illinois need to manage Identity and Access issues. Components of the implementation will include: Single sign-on, Provisioning, Authorizations, Affiliation, Business Intelligence, Authentication, and Federation.

7.2 Identify and implement new technologies and products to enable AITS to bring state of the art services to our clients.

- 7.2.1 Establish a Kickstarter-like method as a way for people to submit ideas for further planning and funding.
- 7.2.2 Invest in and implement a test-bed or environment that can be used for proof of concepts.
- 7.2.3 Investigate cloud infrastructure services for short-term proof of concept initiatives.

7.2.4 Develop strategic partnerships with university organizations to remove barriers to implement new technologies.

7.3 Leverage ITS enterprise services to support campus systems that have expanded from localized edge and campus solutions to university solutions.

7.3.1 Migrate support of applications such as Box from campus units to existing ITS departments using existing models and infrastructure to achieve a 20 – 40% support cost reduction.

7.3.2 Leverage ITS data center space to provide high availability server location services to campus departments and support initiatives such as Data Center Shared Services ultimately reducing the number of data center spaces across the university.

7.3.3 Offer enterprise level services such as video conferencing to campus units which could not utilize these services without the support of ITS and the cost savings achieved through economies of scale of an enterprise service.

7.3.4 Provide access to campus departments to enterprise level products such as Service Desk Manager, CMDB, Bomgar, Knowledge Base, etc. that can bring enterprise class products to departments which provides both cost savings as well as improved end-user experience through consistent use of service management products.

Institutional Data and Information

There are a number of different types of administrative data at the University. These data and information must be organized, formatted, and stored in a manner that makes them accessible where needed via the appropriate services or interfaces required to make them useful for different purposes. Decision makers and other information consumers at all levels of the University will have timely access to consistent, reliable, information that is relevant for their operations, analysis, and management needs. AITS both supports these needs directly, and provides infrastructure to enable information producers in other offices to produce their own information solutions. Wherever possible, we work in partnership with other central offices to provide information consumers with a seamless set of products and services to meet their information needs.

Goals and Initiatives

8.1 Make the Data Warehouse environment a more comprehensive source of administrative data by extending it to include Local and Institutional Data.

8.1.1 Establish policies and procedures for uploading local data, and promote this service to appropriate customers.

8.1.2 Continue to extend the Data Warehouse environment by including data from at-least 10 other enterprise systems (via ITPC projects).

8.1.3 Complete the Institutional Data Collections project and work with partners to identify additional data sets to publish, using Institutional Standard Answers as the driver where appropriate.

8.2 Improve the ease of use, understandability, and appropriate use of enterprise data by updating the Data Warehouse metadata.

8.2.1 Improve documentation and metadata for Standard Reports.

8.2.2 Determine approach for helping information consumers and producers identify the best way to get data.

8.3 Enable Self Service Business Intelligence (BI) for the University community.

8.3.1 Identify needs of the University for Self-Serve BI functionality.

8.3.2 Provide training for teams and users to take advantage of Self-Service BI functionality.

8.3.3 Pilot new features of Self-Service to develop an effective BI service model allowing users to step up from building reports to building analytic tools like dashboards, data visualization that can be shared with appropriate audiences.

8.4 Perform customer segment analysis to provide targeted Business Intelligence (BI) services.

8.4.1 Research and analyze customer segmentation on usage of our BI services.

8.4.2 Define customer segmentation of usage categories that will provide enhanced BI services.

8.4.3 Identify strategy to retain existing customer segments and service offering groupings.

8.4.4 Identify strategy to market and expand customer segments by service offering(s).

8.4.5 Implement and manage an ongoing customer service model to support enhanced BI service.

8.5 Perform universe (semantic layer with business representation of data in Business Objects) maintenance on existing set of Business Objects universes to simplify and improve user experience.

8.5.1 Identify scope of effort, including universes impacted, and changes needed to simplify user experience with Business Objects.

8.5.2 Define, prioritize, and develop new Business Objects universe specifications for long-term maintenance.

8.5.3 Implement technical and process improvements to Business Object universes for a better user experience.

8.6 Update Development Process for Business Intelligence (BI) and Data Warehousing (DW) solutions.

8.6.1 Review development process improvement documentation delivered in previous research efforts on BI and DW solutions.

8.6.2 Determine approach for updating the BI and DW development methodology to best meet stakeholder needs.

8.7 Develop a service model for AITS and user developed dashboards.

8.7.1 Complete an internal inventory current dashboard tools and create capabilities matrix.

8.7.2 Create training documentation around dashboards and visualization to support current and future users.

8.7.3 Develop initial service models for dashboards by defining tools, customer expectations and support options.

8.7.4 Deploy service model for dashboards and visualizations.

8.8 Improve Data Mining & Predictive Analytics skills to build team capabilities for future work supporting university processes in this area.

8.8.1 Study and assess state of the art practice and technology for Data Mining and Predictive Analytics.

8.8.2 Build team knowledge in data mining and predictive analytics techniques through professional development and projects.

Appendix A

IT Governance Committees for AITs work

Academic Affairs Planning Committee (AAPC)

Chair: Christophe Pierre, VP of Academic Affairs, University of Illinois

Information Technology Priorities Committee (ITPC)

Chair: Michael Hites, Senior Associate Vice President and Chief Information Officer, University of Illinois

ITPC Business Intelligence / Performance Management Subcommittee

Chair: Dimuthu Tilakaratne, Assistant Vice President of Decision Support, AITs

ITPC Human Resources Subcommittee

Chair: Tony Kerber, UA, Senior Director of HR Information Systems Strategy

RIM Policy Advisory Committee

Chair: Joanne Kaczmarek, Director, RIMS and Archivist for E-records, UA, UIUC

Business Process Advisory Group (BPAG)

Chair: Kelly Block, Assistant Vice President for Portfolio and Process Management, AITs

ITPC Cross-functional Group

Chair: Kelly Block, Assistant Vice President for Portfolio and Process Management, AITs

ITPC Finance Subcommittee

Chair: Gloria Keeley, UA, Assistant Vice President Admin Services

ITPC Student Subcommittee

Chair: Rod Hoewing, UIUC, Interim Registrar

University Administration IT Council

Chair: Michael Hites, Senior Associate Vice President and Chief Information Officer, University of Illinois