Office of the CIO IT Strategic Plan

UNIVERSITY OF ILLINOIS
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FY 13 – FY 16

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Next revision during
FY 16 in conjunction
with the AITS strategic
planning cycle

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OFFICE OF THE CIO IT STRATEGIC PLAN

This document outlines the current information technology (IT) strategies and initiatives for the Office of the Chief Information Officer. The goals in this document were developed collaboratively with people throughout the University to support the guiding principles of saving time, improving communication and transparency for IT services, fostering ease of use, improving data and analytical capabilities, collaborating throughout the University, and supporting IT governance and planning. Project plans have not been developed to meet most of the goals outlined here, and the purpose of this document is to help provide a means collaboratively develop specific shared initiatives, associated metrics, and ongoing modifications to the goals and objectives.

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

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Chief Information Officer
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Statement of Purpose

Help provide services and coordination to assist IT professionals and constituents throughout the University.

This document outlines the information technology (IT) strategies and initiatives for the Office of the Chief Information Officer at the University of Illinois. The goals in this document were developed to support the guiding principles of saving time, improving communication and transparency for IT services, fostering ease of use, improving data and analytical capabilities, collaborating throughout the University, and supporting IT governance and planning. Many of the goals rely on collaboration with units throughout the University. Project plans have not been developed to meet most of the goals, and this document provides a means collaboratively develop specific initiatives, associated metrics, and ongoing modifications to the goals and objectives.

Mission

To provide coordination for enterprise-wide information technology services within the University, and help ensure the quality, transparency, customer orientation, and timeliness of information technology services in support the University's mission.

Vision

To be an engaged partner within our University to plan, implement and operate relevant and cost-effective enterprise IT services for our constituents while helping to build a sense of University-wide community within the IT profession.

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Guiding Principles

An IT strategic benefits from guiding principles or themes. These themes are pervasive throughout an IT strategic plan, and the individual objectives and initiatives could be viewed through one or many of these themes. Throughout the planning process to develop this plan, a number of recurring themes emerged based on conversations with individuals and stakeholder groups.

Save Time

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 have more time to teach and perform research. Staff 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.

Speed to Service

Besides save timing for our users, the time to deploy service 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.

Improve Communication and Transparency for IT Services

Communication between users and information technology professionals is paramount because users define their academic and business objectives and needs and IT collaborates with appropriate IT services to facilitate meeting those objectives.   IT users are informed and aware of the processes and people who provide the services they need. It must be easy to find both central and local IT help and services. IT governance processes exist to provide a representative voice for users in making major IT investments, defining IT priorities, and providing performance feedback related to current services.

Ease of Use

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 are 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.

Improved Data and Analytical Capabilities

Our information systems process and produce a tremendous amount of data and information on an ongoing basis. These data should provide insight into everyday transactional information, but more importantly, should enable monitoring and performance measurement of our most important strategic goals. Information technology professionals must understand and fulfill data and information needs to support student success and campus success.

This may take the form of tools that help the University:
- Identify broken or inefficient business processes
- Measure learning outcomes and improve student success
- Assist faculty in the research process
- Understand the effectiveness of outreach programs
- Measure customer satisfaction and service levels

Collaboration

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 facilitate shared decision-making, prioritization of initiatives, and the implementation of new and improved services.

IT Governance

It is vital that IT investment choices are guided by stakeholders, support academic and business strategies, and ensure mission-critical items receive the highest priority. IT governance promotes the intelligent use of resources, providing a shared, rational, and transparent framework for the selection and prioritization of IT investments. IT governance groups exist at all campuses, university administration, and at the enterprise level. These governance groups provide planning leadership for IT at the campuses and university. As representatives for the end users of IT, the governance groups must partner with constituents to describe user priorities and how IT can help them fulfill them. IT governance, in partnership with IT users and providers, should be an integral part of the planning process.

Mission Support

The University of Illinois has several published statements regarding its mission, and some of these are reproduced below. Information technology can both directly and indirectly support the mission of the University, and there are hundreds of IT professionals throughout the University that help provide services in every aspect of the University.

The University of Illinois is among the preeminent public universities of the nation and strives constantly to sustain and enhance its quality in teaching, research, public service and economic development.

The University of Illinois will transform lives and serve society by educating, creating knowledge and putting knowledge to work on a large scale and with excellence.

To create a brilliant future for the University of Illinois in which the students, faculty and staff thrive and the citizens of Illinois, the nation and the world benefit, a future in which the University of Illinois is the recognized leader among public research universities in: teaching, scholarship, service, engagement, public service, economic development, arts, culture, global reach, and athletics.

Objectives and Initiatives

Governance support

- Provide support for IT governance groups

- Host annual IT Governance Summit to bring together IT governance participants and constituents to discuss governance process topics, IT strategic planning, and improvements to the governance processes

Planning support

- Provide a Framework for IT Strategic Planning to be utilized as a planning tool for campus and unit plans

- Provide support for the voice of IT during campus and university strategic and integrated plan development

- Provide support for IT strategic planning processes

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Policy support

- Coordinate or participate in the development and implementation of recommendations for IT policies at the University

- Implement policy management framework based on collaborative recommendations

RIMS support

- Provide central support for Records and Information Management Services at the University

- Develop and provide records and information management policies and procedures, solutions, assistance, and training

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 stakeholders 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.

Objectives and Initiatives

Develop a risk profile for obtaining and using IT services that is well known throughout all level of the University and favors innovation and speed-to-market.

- Document several recent IT procurement processes to understand workflow and risk assessment

- Work with University Counsel, Risk Management and Purchasing to help streamline and publicize improved IT procurement processes

Provide security services and a security and privacy architecture that serves as a robust and secure foundation for information technology resources.

- Help document security and architecture throughout the University

- Develop a five-year services and architecture plan

Protect sensitive information of all University stakeholders.

- Document and compare policies, procedures, and architecture for all types of our most sensitive information

- Add tools and services that continue to protect our most sensitive information while ensuring a consistent risk profile for data move across campuses or buildings.

Develop and implement University security policy and procedures.

- Perform a gap analysis between existing policies, standards, and procedures and a formal benchmark.

- Create a process for collectively evaluating new policies and procedures to minimize differences, speed time to implementation and minimize administrative burden

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Implement the risk management program for information security and privacy including appropriate mitigation plans.

- Ensure that training and assistance are available for understanding risk and responsibilities at all levels of the institution

- Ensure that mitigation and incident response policies and procedures are in place and tested regularly

Comply with all applicable laws and regulations regarding information security and privacy.

- Continue to work with departmental offices and stakeholders to increase awareness of laws and regulations related to information security and privacy, for example HIPAA.

- Develop a compliance profile to assess our current compliance effectiveness

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.

Objectives and Initiatives

Decrease the time to market for IT solutions.

- Document the time to delivery of different types and sizes of IT projects

- Initiate a cross-campus group to develop recommendations for decreasing the time to market for IT solutions

Create fast and ready access to IT products and services throughout all levels of the University.

- Facilitate more RFP processes that increase access to commercially available cloud computing services

- Document the most important products and services and how easy it is for our constituents to use them and why it is easy or difficult

Provide reliable, high performance network services.

- Facilitate the design and implementation of the enterprise-wide network creating the seamless integration of university networks to improve efficiencies, improve the inter-campus communication, and reduce cost

- Coordinate seamless wireless access for campus constituents including infrastructure, usability, customer service, and printing

- Facilitate partnerships with other higher education institutions in the Internet2 consortium in order to utilize breakthrough services for educators and researchers

- Collaborate across campuses to improve measurements and metrics for network services

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Provide comprehensive Identity and Access Management architecture and services for the University to provide a cornerstone solution to manage the creation, maintenance, and use of digital identities.

- Coordinate implementation of 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:
    - o Single sign-on
    - o Provisioning
    - o Authorizations
    - o Affiliation
    - o Business Intelligence
    - o Authentication
    - o Federation

Provide robust, accessible and cost efficient data center, storage, backup and business continuity/disaster recovery services including data security along with physical security.

- Facilitate shared data center services across all campuses

- Coordinate the development of strategy and implementation of new storage and backup services that can be utilized to meet differing business requirements

- Participate in the implementation of storage solutions including physical security for highly secure high-risk data

- Help document our unified video/audio/web conferencing services

Provide mobile strategy that meets the vision of the infrastructure and overall strategic plan.

- Coordinate the development of standard techniques, architecture, and frameworks for mobile application development. Coordinating these efforts will help provide a more seamless suite of applications for students, faculty, and staff.

- Help enable the right services for administration on the mobile platform

Provide unified communications services (email/calendar/voice) to the University community.

- Help document current unified communications services and compare to cloud-based solutions

- Coordinate the integration of unified communications services with identity and access management

IT Human Resources

Information Technology Professionals at the University are our most valuable IT asset. These people provide front-line support to students, faculty and staff and are responsible for the day-to-day IT operations at the University. They are also responsible for fulfilling the strategic objectives and initiatives as outlined in this plan. Information technology professionals are aware and committed to the mission, vision and goals of the University. To that end they proactively engage in networking in order to exchange ideas, methodologies and leverage the expertise of their colleagues from central, college and unit level IT groups. IT professionals throughout the University share common characteristics. The University will strive to recruit, retain and develop the best IT talent.

Objectives and Initiatives

Increase the speed to hire IT professionals throughout all levels of the University.

- Document the current efficiency of hiring IT professionals throughout the University

- Partnering with Human Resources, initiate a cross-campus group to develop recommendations for increasing the speed to hire IT professionals

Recruit talented people to provide IT services that meet and exceed the needs of faculty, students and staff.

- Implement changes to the new employee on boarding process focused on:
    o Getting IT staff up to speed quickly
    o Connect them to initiatives, processes and groups at the University of Illinois and campus level
    o A consistent on-boarding process to ensure the experience is the same

- Develop a mostly-standard, yet speedy, recruiting approach for IT professionals

Retain IT professionals by creating opportunities within units and departments that enrich their careers.

- Improve the ability to easily transition between organizations

- Improve the ability to promote and compensate based upon performance

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- Focus on Internal-to-enterprise-wide searches where appropriate (similar to internal-to-campus) to retain human capital within the University

- Assess IT professional satisfaction and develop actions based on feedback

Provide professional development opportunities to IT professionals to help expand their technical skillset as well as their leadership qualities.

- Provide leadership training programs for the IT professional community (such as the IT Leadership Program/Workshop, EDUCAUSE Management Institute, EDUCAUSE New IT Managers Program, etc.)

- Proactively connect IT Professionals to the academic missions to promote IT services that are "in sync" with campus and University goals

- Provide access to mentoring and coaching programs with other IT professionals

- Provide IT professionals with opportunities for ongoing skills development and enhancement

Provide an environment which facilitates the exchange of information and build environments where professionals can network, share tools, and work together on solutions.

- Encourage IT professionals to participate where applicable in local, system, regional, national and international networking opportunities such as:
    - ITPF – IT Professionals Forum
    - IT Caffeine Break
    - IT governance
    - Midwest EDUCAUSE, MS Tech, EDUCAUSE, SCUP, CIC, etc.

- Encourage IT professionals to collaborate with cross department/unit/campus SME groups to develop, recommend, and provide expertise on technology topic areas

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.

Objectives and Initiatives

Provide improved communication and information to the University community to enhance awareness and increase usage of IT Services.

- Provide and coordinate improved central and local web resources for finding IT services and support

- Provide improved opportunities for customer self-service to find the services and information they need

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

- Coordinate improved training to new employees, faculty and students regarding the IT services available and support pathways

Improve the selection and implementation of new technologies with an approach that is fundamentally about good communication and building relationships.

- Develop and implement an approach focused on:
    - building relationships & listening; mutual understanding of needs & opportunities
    - selection & implementation as collaborators
    - communicate to improve awareness and full utilization of services

- Improve IT customer relationship management at the university and campus levels via coordinated efforts in this area

Offer effective online collaboration environments for a wide variety of purposes.

- Inventory collaboration platforms utilized at the University

- Analyze the use of collaboration platforms for different uses and develop recommendations for improving the shared use of these platforms

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Offer a suite of integrated information, communications, and design services for developing robust online and print communications for the University, its constituent parts, and people.

- Coordinate the availability of Web CMS(es) to
  meet various needs with significant Web Design
  templating and customization capability for
  ease of use and quick turnaround

Collaborate with partners internal and external to the University to provide information technology services that will support the goals of the University and these constituent groups.

- Collaborate with internal partners including:
  - University and campus leadership
  - Researchers
  - Students

- Collaborate with external partners including:
  - Government
  - Peer institutions
  - Community
  - International
  - Consortia
  - Alumni
  - Industry
  - Vendors

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.

Objectives and Initiatives

Increase the speed to purchase IT products and services at all levels throughout the University.

- Document the time to purchase IT products and services at the University

- Partnering with OBFS, initiate a cross-campus group to develop recommendations for increasing the speed to purchase IT products and services at the University

Create a transparent, sustainable and responsible funding model that supports the University's information technology and telecommunication needs, creates new and improved services, and fosters innovation

- Utilize the IT governance bodies on the campuses to provide prioritization for IT service initiatives

- Utilize IT portfolio management where beneficial to better understand, allocate, and report on IT resource usage and project and service performance

- Implement tools and services to better understand IT spend at the department, college, campus, and university levels

- Improve measurement of return on investment for IT

Utilize our IT in the most energy-efficient manner to minimize energy costs when possible. Leverage IT services to facilitate energy conservation in other operations.

- Implement cloud services where appropriate to avoid local infrastructure and hosting costs

- Pursue paperless initiatives via process improvement, workflow applications, and alternate print elimination strategies

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- Implement End Point management solutions to remotely manage end user power consumption when possible

- Consolidate data centers where appropriate to reduce space and power consumption

- Collaborate to provide video conferencing solutions to reduce local and long-distance travel
- Coordinate the availability of thin client services to allow for utilization of lower power desktop machines for users while providing for all required functionality

- Pursue "lights out" opportunities

- Implement technology services to measure energy consumption and savings

- Implement energy stewardship campaigning related to IT assets

- Recycle surplus IT related assets to extend their useful lives for other purposes or properly dispose of and reuse their materials

Utilize information technology to increase efficiency and optimize university administrative processes to reduce the university operational cost.

- Simplify HR processes in order to save costs and improve customer satisfaction

- Provide business process improvement shared services and other shared services

- Coordinate implementation of the IT recommendations of the Administrative Review & Restructuring initiative

- Consolidate redundant administrative services

Develop boilerplate documents and procedures for purchasing IT products and services and for utilizing the services within the University.

- Work with OBFS and IT professionals to develop boilerplate documents and procedures for the most common purchases of IT products within the University

- Document processes and procedures to make it easier to assess acceptable risk in purchasing and using IT services

Develop "bench strength" by completing RFP processes for needed IT services so that all departments can utilize the contracts with little effort.

- Complete the RFP processes in order to make contract IT services and resources widely available for all University departments as needed

- Provide support to departments to easily locate and acquire IT services utilizing these University contracts as needed

IT Governance

It's vital that IT investment choices be guided by stakeholders, 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 stakeholders (teaching, research, outreach, and administrative functions) 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 stakeholders 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.

Objectives and Initiatives

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

- Continue assisting with the development of university IT governance groups

- Improve communication of IT governance activities

- Pursue cross-coordination of campus and university subgroups when appropriate based on subject

- Assist IT governance groups to recommended levels of ITG maturity as they evolve

Promote and support the strategic IT planning process.

- Implement and ongoing strategic IT planning process that includes:
  o Alignment and integration with other plans
  o Involvement of IT governance groups
  o Communication
  o Connection to university and campus leadership
  o Funding strategic IT initiatives

- Document the lifecycle for IT planning integration with campus and university strategic planning

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Appendix A

IT Governance Committees at the University of Illinois

University of Illinois

University Technology Management Team
Chair: Walter Knorr, Vice President, Chief Financial Officer and Comptroller

University of Illinois at Chicago

IT Governance Council
Co-Chairs: Pete Nelson and Terri Weaver

IT Governance Council Subcommittee for Administration
> Chair: Dibyen Majumdar

IT Governance Council Subcommittee for Education
> Chair: Saul Weiner

IT Governance Council Subcommittee for Infrastructure and Security
> Chair: Mike Kirda

IT Governance Council Subcommittee for Research
> Chair: Annette L. Valenta

University of Illinois at Springfield

Academic Technology Committee
> Chair: Chung-Wei Lee, Chair, LAS

The Provost Team
> Chair: Lynn Pardie

Dean's Council
> Chair: Lynn Pardie

ITS Management Team
> Chair: Farokh Eslahi

University of Illinois at Urbana-Champaign

IT Governance Committee
> Chair: Paula Kaufman

IT Governance Subcommittee for Administration
> Chair: Nancy O'Brien

IT Governance Subcommittee for Information Security/Privacy
> Chair: Abbas Aminmansour

IT Governance Subcommittee for Outreach
> Chair: Ann Abbott

IT Governance Subcommittee for Research
> Chair: John Hart

IT Governance Subcommittee for Teaching & Learning
> Chair: Nick Burbules

IT Governance Committees at the University of Illinois, *continued*

University Administration

Information Technology Priorities Committee (ITPC)

    Chair: Michael Hites, SAVP and Chief Information Officer, University of Illinois

ITPC Business Intelligence / Performance Management Subcommittee

    Chair: Aaron Walz, Director of Decision Support, AITS

ITPC Human Resources Subcommittee

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

University Administration IT Council

    Chair: Michael Hites, SAVP and Chief Information Officer, University of Illinois

ITPC Cross-functional Group

    Chair: Michael Hites, SAVP and Chief Information Officer, University of Illinois

ITPC Finance Subcommittee

    Chair: Gloria Keeley, UA, Assistant Vice President for Administrative Services

ITPC Student Subcommittee

    Chair: Mike Kamowski, UIC, Director of the Office of Student Systems Services

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Appendix B

IT Unit Strategic Plans

University of Illinois at Springfield

Information Technology Services (ITS)
> http://www.uis.edu/informationtechnologyservices/about/splan.html

University of Illinois at Urbana-Champaign

Campus Information Technologies and Educational Services (CITES)
> http://www.cites.illinois.edu/about/cites-stratdocs.html

University Administration

Administrative Information Technology Services (AITS)
> http://www.aits.uillinois.edu/cms/One.aspx?portalId=909813&pageId=910166