



Massachusetts Institute of Technology

# Information Services and Technology Operational Plan for FY2012



Information Services & Technology

# Message from the Head of IS&T



FY2011 was a productive year for IS&T. We began implementing the first year of our three year strategic plan with an emphasis on advancing MIT's mission. In partnership with sponsors and customers, we delivered services and projects that simplified processing and reduced costs for MIT. Special attention was paid to ease of use, reliability, and mobility when implementing systems, functions and services. Enhancements for the MIT community were implemented through service improvements such as online grading, paychecks, and W-2 forms, as well as mobile applications for the iPhone and Android and upgraded wireless coverage across campus. Areas within IS&T worked together, building stronger relationships and beginning to forge a culture of "one IS&T" focused on using technology to make it easier for our community to do its work.

We plan to strengthen our customer focus and build on our progress in FY2012. We will consider the following questions in the course of our day-to-day work: What does "making it easy for our customers" mean in the context of our interactions with members of the MIT community? How can we set expectations and deliver on them more consistently? How can we work with our sponsors and customers toward developing a more seamless service delivery model? How can we enhance self-service in the systems and services we deliver?

IS&T's senior leadership and I have developed department goals to guide our operational plan and link area and individual plans to larger objectives. Under the acronym of "**CORE**," these overarching goals are as follows:

- Improve the **C**ustomer Experience
- Optimize Effectiveness of **O**perations
- Reduce Technical and Security **R**isks
- Engage and Develop **E**mployees

We are developing metrics to improve transparency and measure our progress. With input from many across the Institute, we are redesigning our website and service catalog to make it easier for members of the MIT community to understand and access our services.

Our mission, vision, values, and strategic priorities remain unchanged. Our FY2012 Operational Plan focuses on department and area goals that will help us to achieve our strategic objectives. I am looking forward to working in partnership with members of the community to have a productive and rewarding year delivering services worthy of MIT!

Sincerely,

Marilyn T. Smith  
Head of Information Services and Technology

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# IS&T Vision, Mission, Values and Strategic Priorities for FY11 – FY13

## IS&T Vision

IT is easy: dynamic solutions are available anytime, anywhere to every member of the MIT community.

## IS&T Mission

Advance MIT's mission by providing foundational IT services that make it easy for the MIT community to do its work: communicate, collaborate, and interact with MIT and beyond.

## IS&T Values

Respect  
Responsibility  
Teamwork  
Transparency

## IS&T's Strategic Priorities

- Keep IT **Up and Running**
- Deliver **Services** that are reliable, cost-effective, and constantly evolving to support innovation and future technology
- Strengthen **Customer Connections** and expand partnerships.
- Help MIT interact and make sense of its **Data**
- Develop IS&T's **Capabilities** through broadening of skills and implementation of simple, clear, consistent processes that make it easy to follow through and get things done
- Help our **People** grow: Improve collaboration, responsiveness, and accountability across the organization
- Support cost-effective **Research Computing**



## Roadmaps

Administrative Systems  
Customer Support  
Data  
Education Systems  
Infrastructure  
Mobile

## IS&T Supports MIT Community Initiatives

- 2030 Projects
- Digital MIT
- Global Initiatives
- Massachusetts Green High Performance Computing Center (MGHPCC)
- MIT Energy Initiative
- Transform Education - MITCET

## IT Governance

# IS&T Priority Initiatives by Area for FY2012

<div>IS&amp;T Department Goals</div> <div>C<div>Improve the <u>C</u>ustomer Experience</div></div> <div>O<div>Optimize Effectiveness of <u>O</u>perations</div></div> <div>R<div>Reduce Technical and Security <u>R</u>isks</div></div> <div>E<div>Engage and Develop <u>E</u>mployees</div></div>	<div>Customer Support</div> <div><div><div>Administrative Systems</div><div><div>Delivery Model Improvements</div><div>Hourly Student Appointments</div><div>Enterprise Learning</div></div></div><div><div>Education Systems</div><div><div>Digitize Paper Forms &amp; Petitions</div><div>Modular Learning Management Services</div><div>Online Registration – Phase 2</div></div></div></div>	<div>Administration</div> <div><div>Improve Financial and Procurement Processes</div><div>Develop Communications and Outreach Plan in alignment with our services and customer needs</div><div>Create a Product and Services Retirement Process</div><div>Engage in skills development and succession planning for key roles as part of Talent Management</div></div>
	<div>Data Management</div> <div><div>Reporting and Forecasting Tool (RAFT)</div><div>Engage the MIT administrative community to provide better data and easier delivery of information via the Cognos reporting tool</div><div>Improve Data Practices and Systems Development</div></div>	
	<div>Systems Engineering</div> <div><div>IS&amp;T Service Catalog and Website Redesign</div><div>Mobile Initiatives (Campus Preview Weekend, Libraries, Stellar)</div><div>Improve Test Coverage and Efficiencies through Automation</div><div>Develop Long-term Systems Infrastructure Evolution Roadmap</div></div>	
	<div>Operations and Infrastructure</div> <div><div>Massachusetts Green High Performance Computing Center Optical Network and Project Support</div><div>Network Security – Border Protection, Network Access &amp; Managed User Experience</div><div>Ubiquitous indoor coverage of mobile/cellular services</div></div>	

## IS&T Department Goals for FY2012

- C** Improve the Customer Experience
- O** Optimize Effectiveness of Operations
- R** Reduce Security and Technical Risks
- E** Engage and Develop Employees

## Goals and Activities by Area for FY2012

**Administrative Systems** focuses on enterprise-wide systems (primarily SAP) that are critical to administration at MIT. This area works in partnership with the Vice President for Finance, Human Resources, Facilities, Environmental Health and Safety, and other key community groups to automate manual functions and support business process redesign to achieve a “digital MIT.” Responsibilities include providing and improving systems functionality for Payroll, Benefits, Employee Data, Appointments, Travel, Purchasing, General Ledger, Custodial and Grounds, and other functions. The work of this area is regularly reviewed by the Administrative Systems Policy Coordinating Council (ASPCC) and the IT Governance Committee to which ASPCC reports.

### Goals

- Develop & implement Digital MIT projects and enhancements.
- Advance a more consistent user experience for new projects (e.g. Enterprise Learning, SAPwebSS).
- Complete the Administrative Systems Roadmap and get approval from ASPCC & IT Governance Committee.
- Retire legacy applications and advance solutions that reduce customization.
- Improve Administrative Systems service delivery through initiatives that optimize operations, complete support and enhancement requests more effectively, and improve project execution and planning.

### Activities

- Execute and implement Digital MIT-identified projects (e.g., Enterprise Learning, Hourly Student Appointments, Appointment Process Redesign).
- Provide attachment capability for Appointment Process Redesign.
- Retire EHSweb application.
- Define a technology migration roadmap for SAPweb and SAPwebSS applications.
- Plan and focus resources and work into day-to-day operations, support & enhancements, project execution, discovery & planning. Implement resource-planning worksheet and assign ownership and maintenance. Identify resource risks and develop a mitigation strategy. Augment staff with consultants to help manage workload and learn new work skills.
- Deliver agreed on day-to-day operations initiative improvements (e.g. Documentation, automated job scheduling, monitoring, roles & responsibility alignment, etc.).
- Deliver agreed on support & enhancement initiative improvements (e.g. reduce backlog, improve delivery, etc.).
- Identify and remove barriers in delivering projects, support and enhancements, and day-to-day operations.

**Education Systems** focuses on enterprise-wide educational systems including student systems and course management systems (Stellar). Systems include Learning Management Systems, Student Gateway, MIT Student Information System (MITSIS), Financial Aid, Admissions, and systems supporting other student, faculty and course-based activities. Key sponsors are the departments reporting to the Dean for Undergraduate Education (DUE), the Dean for Graduate Education (DGE), and the Dean for Student Life (DSL), as well as the MIT Council on Educational Technology (MITCET). The work of this area is reviewed regularly by the Student Systems Steering Committee (SSSC) and the new IT Governance Committee to which SSSC reports.

### Goals

- Digitize paper processes.
- Develop multiple platform interfaces to business applications.
- Provide a common user experience for new applications.
- Manage technical risk.
- Provide opportunities for career growth.

### Activities

- Digitize paper forms and petitions.
- Implement Online Registration – Phase 2 providing an enhanced set of advising tools and registration process.
- Create modular learning management services that support teaching and learning at MIT.
- Implement change management process.
- Develop service level agreements.
- Provide opportunities to use training.
- Partner with HR to define concrete career paths and positive definitions.

**Data Management** pulls together functions from across IS&T to enhance the value of information at MIT. The IT@MIT Working Group recommended that far more emphasis be placed on improving the way in which we provide management information to support our business and the creation of this area helps IS&T move in that direction. The role of this area is to work with the MIT community on the development and execution of plans, policies, and practices to collect, protect, deliver, and make better use of the Institute's data and information assets. Key responsibilities: reporting and analytics; metadata management; business intelligence; data modeling and administration; data access management and security; managed data services; and data governance. Plans and decisions for the work of the Data Management area are reviewed regularly by ASPCC.

### Goals

- Improve IS&T data practices.
- Improve infrastructure environments.
- Improve user self-service.
- Improve customer-focused and customer-facing processes.

### Activities

- Rollout of Cognos to improve reporting infrastructure.
- Implement RAFT – Phase II/III.
- Perform tool discovery to make implementation of the front-end of Managed data services easier.
- Explore RAC, virtualization, Oracle 11g for high availability databases.
- Develop a plan for global initiatives (short term/long term).
- Conduct data focus groups to increase community engagement.
- Explore document management systems for enterprise use.
- Extend roles integration.
- Participate in/lead to development of SAP infrastructure enhancements: batch scheduler, monitoring enhancement, landscape adjustments, process integration (interfaces), Open Text (IXOS) upgrade, disaster recovery, SAPwebSS/SAP-ESS evaluation, support pact enhancements (regulatory).

**Systems Engineering** supports application development and promotes interoperability of MIT's applications and systems. This area is a consolidation of complementary functions including Quality Assurance, Technical Services, Web Services, Mobile Computing, Departmental Consulting and Applications Development (DCAD), Training, Kerberos Development, Software Release Management, and Interface Design.

### Goals

- Enrich the MIT community experience by providing the right services, how they want it, when they want it, and where they want it.
- Increase automation and self-service.
- Develop Long-term Systems Infrastructure Evolution Roadmap.

### Activities

- Implement IS&T services catalog and website redesign to make it easier for the community to find and understand our services and the products we support.
- Develop and enhance mobile applications:
  - Mobile Stellar
  - Mobile campus preview weekend
  - Mobile libraries
  - Advanced mobile maps
- Run an experiment to explore if Drupal (IS&T's content management system) should be offered as a service.
- Develop a software release process and a service sunset process.
- Improve quality test automation acceleration.
- Release Kerberos 1.10.
- Create online training for MIT enterprise applications.
- Improve the knowledge base.
- Expand development capacity.
- Conduct a skills inventory.
- Conduct a time inventory.
- Develop user experience principles.
- Select a job scheduler tool.

**Customer Support** provides an entry point – a front-door into IS&T – for help with IS&T products and services. This area aims to be responsive and proactive, ensuring a positive customer experience with IS&T products and services. The Usability and Accessibility Team works with development teams to make IS&T and MIT services easy to use for all community members. They also operate an adaptive technology lab for students and advise on adaptive solutions outside the lab. The Faculty and Student Experience Team works closely with groups like the Office of Educational Innovation and Technology (OEIT) in the Department of Undergraduate Education, to nurture innovative partnerships and advocates for IS&T services that meet the specific needs of the faculty and students. The Help Desk and associated customer service groups aim to provide easy access to a comprehensive collection of support services including general computing and telephony help, self-service knowledge base, accounts and authorizations, hardware and software repair, and distribution of volume and site licensed software.

### Goals

- Streamline service through process improvement and automation in alignment with best practices such as ITIL.
- Align services with customer expectations by expanding hours and channels for support and applying new technologies where appropriate.
- Strengthen relationships with the community to capture, clarify and respond to our customers' feedback.
- Partner with IS&T on assuring a positive customer experience by focusing on usability, accessibility, service support readiness, and customer expectations.

### Activities

- Streamline Help Desk Walk-ins experience by replacing paper processes with a self-service iPad/mobile application for opening tickets with basic problem and contact information.
- Implement some ITIL standards and demonstrated usability/accessibility best practices that streamline workflow and improve end results.
- Measure and report on incident and problem trends that identify product enhancement opportunities.
- Expand hours and channels for support by promoting increased mobile access. Add chat and/or forums. Expand to have some high-volume evening/weekend hours. Offer satellite in-person help at key times.
- Align services with customer expectations. Conduct survey and gap analysis of key service expectations against current service delivery. Use information to develop Service Level Agreements (SLAs), service improvement plans, and service metrics.
- Increase self-service options. Identify how to provide self-service where options currently do not exist. Create links in service catalog to self-service options.
- Experiment with application of new technologies to our work. Expand use of iPads/mobile interfaces.
- Partner with Faculty and Students to improve their computing experience. Redesign 1-2 public computing clusters to facilitate use of laptops and small group work. Partner in 1-2 student innovation projects. Participate in strategic planning under way to rethink IT-enabled learning spaces across campus.
- Strengthen communications and collaborations with other IT service providers or valued partners (IT Leaders, IT Partners, Sloan STS, Lincoln Lab ISD, Libraries, and Facilities).
- Capture and amplify the voice of the customer. Listen through a variety of channels (quarterly focus groups, surveys, tickets, and in-person conversations. Monitor and report on results of actions.
- Clearly define and market services offered by Customer Support to project teams within IS&T. Continue outreach by the Accessibility and Usability Team. Continue service support readiness efforts, OLA negotiations, and knowledge-base article creation.
- Define multiple models for support, to facilitate efficient and appropriate response to different types of projects.

**Operations and Infrastructure** provides MIT's foundational technologies, such as the network, email, calendaring, data centers, and servers. This area enables delivery of services, provides communication and collaboration services, and advances computing support services in partnerships with departments, labs, and centers. Key responsibilities include network operations; network installation (including support of key construction projects across campus); server and system administration; distributed IT support of desktops and servers; desktop virtualization; security systems and services; and research computing support. The work in this area is reviewed regularly by the IT Governance Committee.

### Goals

- Maintain and operate MIT's Network and infrastructure, data center facilities, and a robust and secure managed end-user environment; support MIT's compliance activities; and provide services that encourage a sustainable and efficient user environment.
- Provide a next-generation optical infrastructure to support MIT's computational research, distance education and disaster recovery initiatives; continue to offer the network speeds necessary to support MIT's leading-edge computational research; and support the work related to the MGHPCC project.
- Monitor and meet Institute needs for network storage.
- Provide ubiquitous indoor coverage of mobile/cellular services.
- Provide outstanding customer support in Onsite Support Services, Community Support and Outreach, Managed IT Support Services, and IT Deployment and Maintenance Service.
- Provide a robust, feature-rich communications infrastructure supporting MIT's research, education and administration, built upon a diverse set of messaging, voice and video technologies, including Cisco TelePresence.
- Develop infrastructure platform for reliable web, email, calendaring, VoIP, and other services to become available "anywhere, anytime for any member of MIT community."
- Provide a full range of IT services, systems and support to help MIT:
  - Protect its data assets, to ensure that data systems and data use are compliant with relevant federal and state law and regulations, and with applicable contractual obligations.
  - Remain compliant with relevant federal law and regulations with regard to U.S. Copyright Law, with particular attention to requirements resulting from Digital Millennium Copyright Act (DMCA) and Higher Education Opportunity Act (HEOA) legislation.
  - Ensure the computing environment remains as safe, secure, confidential, private and usable as needed by the MIT community (including Network Infrastructure; Data Center & System Administration; Distributed Information Technology Resource; Unified Communication Services; and Risk Management).

### Activities

- Continue evolving the Infrastructure Roadmap & develop a roadmap for optimal digital identity life-cycle management.
- Enable network technology upgrades, including wiring and wireless upgrades, Telephone and Data Center renovations and upgrades, and deployment of network equipment for buildings.
- Assist with IS&T Projects (e.g. Exchange 2010 migration, Office 2010, desktop encryption, scanning tool for PII.)
- Implement an inventory management system and processes (Altiris).
- Utilize VMware View thin client model.
- Increase communications, internal improvement efforts, and outreach support for IT Security Systems and Services.
- Review plans for disaster recovery and business continuity and execute already-known components within FY12.
- Implement IT service management (ITSM change management).

**Administration** includes Communications, Finance, Human Resources, Project and Process Management, and general administration. In support of the operational areas of IS&T, administration works closely with the Associate Directors, managers, and staff in IS&T to develop standard work processes to improve consistency of project and service delivery; streamline accounting and administrative processes to make it easier for IS&T to measure, manage, and account for our services, and to provide transparency through communications to our community and staff.

### **Goals**

- Improve communication and outreach to customers and IS&T staff.
- Keep IS&T staff informed and aware of the needs of our customers.
- Support and help drive process redesign across IS&T to improve reliability and efficiency of service delivery.
- Determine long-term direction of project management to improve consistency and reliability of project delivery.
- Simplify administration reporting and processes to free up time to help support operational work.
- Engage employees through the development of skills that align with the direction of our customers' work.

### **Activities**

- Develop and implement a communications/outreach plan to keep members of IS&T and our customers aware of products, services and any changes/enhancements that impact their work.
- Work collaboratively with Customer Support to develop process for sharing customer survey feedback with IS&T staff.
- Define and develop internal procurement function to maximize savings and work with central procurement to improve efficiency.
- Rollout Project Management and Business Analysis (PMBA) templates through a community of practice.
- Create a product and services retirement process.
- Create a simplified version of the Performance Appraisal form.
- Create a portfolio of products and services that can be stored in a searchable database.
- Develop a building maintenance schedule to address issues early.
- Identify and simplify financial and HR processes to improve effectiveness.
- Implement a targeted career development program and a succession plan as part of the Talent Management Plan.