Introduction

The Information Services and Technology (IS&T) Advisory Council issued its final report in August of 2012, and challenged IS&T to develop an administrative systems roadmap. As a first step in enabling the Institute to realize the Executive Vice President and Treasurer (EVPT) vision of simplified administrative processes and higher levels of administrative excellence, the roadmap will provide a framework for prioritizing and addressing the backlog of work and pent-up demand for systems development.

A framework for decision-making

The roadmap presented in response to this challenge is a pragmatic framework that will guide decision-making about critical systems development to support the wide range of administrative processes for the MIT community. This framework provides criteria for evaluating and prioritizing the 75+ currently known projects and for judging the value of future work as yet unknown. Three overarching criteria align with five guiding principles that support the EVPT vision. In addition, readiness and time to market inform timing for project scheduling. Together, these criteria and principles will support our governance structures (ASPCC, CASP and ITGC) in considering funding opportunities. This will also provide a foundation for sound reasoning and help guide difficult decisions about deferring projects with value that may lack the priority or the readiness needed to assure successful results.
Criteria applied to each project

Guiding Principles

1. **Transforming community experiences** – Administrative systems enable process simplification with intuitive interfaces and user-centric approaches that meet community needs.

2. **Supporting Institute initiatives** – Systems meet the needs of emerging Institute directions and support international engagements.

3. **Cross-functional and holistic approaches** – Technology systems are approached holistically, crossing functional areas, with development of scalable components that fit into an overall plan for the future.

4. **Laying the foundation for the future** – Foundational work that impacts multiple systems, enables future technology approaches, and promotes integration is critical to maximizing future success.

5. **Stewarding Institute resources** – Systems fulfill MIT's needs for maintaining a sound control environment, meeting compliance requirements, and responding to mandated changes.

Timing

1. **Readiness** – Is there consensus? Is the work defined? Have dependencies been addressed? Can it deliver quick hits or be broken into phases?

2. **Readiness** – Are key resources available? Are there competing priorities?
Administrative Systems Roadmap

Guiding the development of IT systems that advance MIT’s administrative excellence FY2013-FY2016

### Guiding Principles
- Used to prioritize
- Community impact weighted highest

#### Timing
- Based on readiness gates

#### Effort
- Resources, funding, ...

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<table>
<thead>
<tr>
<th>Timing</th>
<th>Guiding Principles</th>
<th>Effort</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Overall Priority with 2x weight impact to community</td>
<td></td>
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<tr>
<td></td>
<td>Resources, funding, license fees, ...</td>
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</tbody>
</table>

**Program 1**
- Project 1
- Project 2, ...

**Program 2**
- Project 1
- Project 2, ...
- Program ...
Approach to the work

Recognizing the significant number of projects and the complexity of the overall body of work, the 75+ individual projects (see appendix) have been assembled into 11 broader programs, which are further described in the appendix. Considering projects within the broader programmatic areas enables a holistic approach to interconnected processes and systems, and meaningful evaluation of foundational work that crosses functional areas.

1. Application Infrastructure
2. Appointments
3. Buy to Pay
4. Coeus
5. Effort Tracking & Management
6. Employee Experience
7. Campus stewardship
8. Financial Management & Control
9. International
10. Reporting
11. User experience

The administrative systems roadmap framework is complemented by innovative approaches to systems development. Knowing that increased productivity is demanded in order to begin to address the backlog of work, IS&T is experimenting with rapid prototyping as an interactive way to expedite requirements gathering and project scoping. This approach has proven to be a particularly effective way to clarify and inform how to best fulfill community needs. Rapid prototyping has been a powerful tool in enabling discussions with end users and examining alternatives for systems development. With a renewed focus on the user experience and meeting community needs, prototyping provides a visual understanding for users and allows developers to gather relevant input early in the development process with expectation of enhanced outcomes. The user experience program works across all administrative systems programs to champion and advance the user experience dimension of systems we deliver.
Achieving the vision

The body of work comprised by the 11 programs and the underlying 75+ projects will support the realization of the EVPT vision of one administration working together seamlessly to sustain the MIT mission and enable emerging opportunities.

The IS&T Advisory Council report describes the lack of integrated systems, the difficulty administrators encounter in completing daily work, and the array of software, each with a different look and feel.

A member of the Assistant Deans group commented: “The administrative side of the house is depressed because we don’t get what we need.”

A member of the Assistant Deans group commented: “I constantly have ten windows open at once because of all the different software.”

Another commented: “Each system is designed to support particular needs, each with a different look and feel.”

“There is no common foundation across systems, often reinvent the wheel.”

It is envisioned that by pursuing the administrative systems roadmap the following highlighted accomplishments will be realized, and the all too frequent comments referred to above will become a thing of the past. One of the most critical elements to achieving this vision is the successful launch of a person-centric user portal (Elana) that promises to provide information for the user in a personalized, timely, intuitive and interactive way.
Highlight of accomplishments

By the end of fiscal year 2014:

• The employee experience will be enhanced with release 1 of the “Elana” portal, which will include the hiring experience application, an access point for learning experience curated pages and notifications. This release will also replace SAPWeb and the Employee Self Service gateways with a person centric and configurable portal (Elana) that includes a consolidated inbox that will reduce unwanted email.
• Virtually all of 40,000 employee appointments will be fully processed electronically. Supplemental faculty compensation will be automated, serving as a demonstration of how IS&T can enable the automation of forms that are particular to a subset of the MIT community.
• The Department of Facilities user interface will be modernized, replacing the building services tab on SAPweb with a simple and transparent system for requesting and tracking service requests.
• The user centric mapping service will be implemented with release 1 and 2 deployed.
• The latest version of Kuali COEUS will be installed.
• COGNOS will be fully deployed across all of the reporting subjects, enabling the discontinuation of support for Brio Query if desired.
• RAFT for financial reporting and forecasting will be available for use by the MIT community.

By the end of fiscal year 2016

• Additional releases of Elana will allow administrators to work in an environment where ten windows are no longer required to perform daily work.
• Buying at MIT will be much more Amazon-like.
• An effective and interconnected system for effort tracking, including cost sharing and faculty effort planning, will be implemented.
• Managing money at MIT will be easier for Principal Investigators and DLC administrators as a result of advances in COGNOS, RAFT, Inbox consolidation and the presentation of information through the “Elana” portal.
• MIT will be better able to support international engagements with core systems handling foreign currency.
# Administrative Systems Roadmap

Guiding the development of IT systems that advance MIT’s administrative excellence FY2013-FY2016

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications infrastructure</td>
<td>Automate job scheduling, expand application-monitoring, recovery, upgrade platform used to interchange data with other applications and vendors, and open application programming interfaces.</td>
<td>SAP job scheduling</td>
<td>EDI / Data Interchange upgrade</td>
<td>APIs to administrative systems</td>
<td>HARA / In memory Energy Discovery</td>
</tr>
<tr>
<td>Appointments</td>
<td>Enhance the 3 applications (API, Hourly Student Adept, Grad Student Adept) and their integration with payroll, finance and reporting that support entry, validation, routing, approvals of faculty, staff and student appointments.</td>
<td>Appointment Process Redesign 3.0</td>
<td>Supplemental Faculty Comp. Implementation</td>
<td>Faculty Summer Sessions</td>
<td></td>
</tr>
<tr>
<td>Buy to Pay</td>
<td>Replace or improve processes that support over $1B in annual spending built on a platform of SAP, SciQuest and SAPweb.</td>
<td>Spend Analytics</td>
<td>Spend analytics</td>
<td>Buying Experience Discovery</td>
<td>Buying Experience Implementation</td>
</tr>
<tr>
<td>Coeus</td>
<td>Upgrade the system platform supporting $1B+ annual research spending and related functions.</td>
<td>Coeus Routing and approval</td>
<td>Coeus upgrade (Convert to iReal)</td>
<td>Managing int. competitions for ext. proposal solicitations</td>
<td></td>
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<tr>
<td>Effort Tracking &amp; Management</td>
<td>To enhance the existing employee salary distribution system (NESS), salary certification system (EDACCA) and late salary distribution change system to incorporate personnel resource planning and budgeting, salary expense distribution and change tracking/documentation, late salary distribution change review and approval and personnel expense reporting and certification. This will enable faculty effort tracking and management (both direct charge and cost shared) and proper documentation of salary changes sponsored research.</td>
<td>Applicant Tracking System</td>
<td>Hiring provisioning, real-time feeds</td>
<td>Cost sharing</td>
<td>Cost sharing</td>
</tr>
<tr>
<td>Employee Experience</td>
<td>Enhance, integrate, implement systems that support an employee's life at MIT, from recruiting to hiring to onboarding to career development to retirement. Enhance enterprise learning, authoring and publishing tools, training needs identification and compliance tracking.</td>
<td>Hiring experience discovery</td>
<td>Hiring experience discovery</td>
<td>Cost sharing</td>
<td>Faculty Effort Planning</td>
</tr>
<tr>
<td>Campus Stewardship</td>
<td>Replace / enhance systems, data and processes that manage campus building repair and maintenance (the building services tab on SAPweb). Address key process. Replace parking system.</td>
<td>Repair &amp; Maint. 1.0</td>
<td>Repair &amp; Maint. 3.0</td>
<td>Parking discovery</td>
<td>Parking implementation</td>
</tr>
<tr>
<td>Financial Management &amp; Control</td>
<td>Enhance SAP Finance, SAPweb front end, RAFT, financial analytics and reporting.</td>
<td>Segregation of duties - VP and IS &amp; RAFT 1.0</td>
<td>Facilities finance (double posting, ACR, ...)</td>
<td>Managing Money</td>
<td>PCI / Cybersource Implementation</td>
</tr>
<tr>
<td>International</td>
<td>Enhance administrative systems to track international activity and handle multiple currencies.</td>
<td>SMART</td>
<td>Finance analytics</td>
<td>PCI / Cybersource Discovery</td>
<td></td>
</tr>
<tr>
<td>Reporting</td>
<td>Rollout Cognos and enhance data warehouse reporting and analytics.</td>
<td>Cognos rollout</td>
<td>Metrics</td>
<td>Cognos Rollout</td>
<td></td>
</tr>
<tr>
<td>User Experience</td>
<td>Transform the user experience for administrative systems by redesigning gateways and applications, integrating backend systems, and focusing on a person centric experience across all administrative systems projects.</td>
<td>User experience release 1</td>
<td>User experience release 2</td>
<td>User experience release 2</td>
<td>Mapping 4.0</td>
</tr>
</tbody>
</table>

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Ongoing updates

The Committee for Administrative Systems Planning will continue to oversee and update the Administrative Systems Roadmap. Requests for new work can originate from a number of stakeholders and will be considered using the criteria and approach described earlier in this document. CASP will recommend updates to the roadmap to accommodate new work, defer or cancel requests, retire systems and service, and adjust the pace and scope to reflect available capacity, resources and priorities. CASP recommendations must be approved by ASPCC and funded by ITGC. CASP and ASPCC will monitor progress against the roadmap at least quarterly.