Academic Unit Information Solutions

Business Case

Proposal for new approaches and services to meet the administrative business needs of academic units on the Ann Arbor campus.

April 17, 2009

Version 1
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Executive Summary

A discovery phase has been completed to determine if centrally-provisioned solutions to meet operational, managerial and information needs of academic units should be pursued by MAIS. The assessment examines campus interest and business need priorities. This document presents the findings and establishes a business case for new products and services to support Ann Arbor campus academic units.

The Business Issue

Interviews with over 100 campus administrators, conducted by Laura Patterson as part of the MAIS Strategic Planning effort or by the Academic Unit Information Solutions (AUIS) discovery team, provides strong consensus that solutions are needed for a number of critical business processes that are the responsibility of academic unit administrators. Top areas of concern are faculty information management and student study abroad and student professional placements and activities solutions.

Current Situation and Challenges

The AUIS discovery team heard staff describe tasks common to academic units across campus, yet found that most units create and maintain their unique solutions. There is great uniformity in what administrative staff are responsible for yet how these tasks are accomplished have little consistency or scalability as one looks across the organization.

Supplemental systems, developed by academic units for operational, reporting, or analysis tasks, are widespread. Information collected and maintained in supplemental systems is often redundant or in conflict with enterprise data or data collected for other purposes within the academic unit. Administrators note concern about the validity of information on which they are making business decisions.

Collaborative problem-solving is not the norm for administrative responsibilities at the University of Michigan. The University is fortunate to have skilled administrators with extensive knowledge; however, staffs tend not to work outside their organizational boundaries to foster collaborative solutions and economies of scale. The decentralized structure of the university inherently has created expertise silos.
AUIS Discovery Effort
Working with stakeholders from across campus, as well as the leadership notes from the interviews with Deans conducted by Laura Patterson, the team collected and organized input to establish the priority list for academic unit information solutions. The discovery team received guidance from the AUIS Steering Committee. The team also reviewed vendor applications to establish application solutions.

Recommendations
The AUIS discovery team’s recommendations are two-fold:

1. Provide services that foster collaboration, collective expertise, best practices, and enterprise solution adoption. A new service model for the new MAIS/ITCS/ITSS organization which encompasses and recognizes academic unit business needs is needed. Without this, the risk for new enterprise solutions to have poor adoption rates is significant.

2. Leverage existing enterprise systems to address academic unit business needs, as appropriate. This may require new or improved user interfaces, navigational improvements, and other development efforts to uniquely create application solutions targeted to academic unit business needs. Leveraging existing systems will speed solution delivery and increase the University’s return on investment. Facilitate implementation of new enterprise application solutions when existing systems cannot be leveraged. The first two development efforts to consider are:
   - Faculty information management.
   - Student study abroad, professional placements, and activities, if recommended by the Study Abroad Council’s assessment of campus needs and potential solutions.

Costs
A new service model will require dedicated staff to foster collaborative services and solutions; provide active advocacy, influence, and participation in application solutions; mitigate organizational boundaries within MAIS to deliver comprehensive, end-to-end solutions to business needs; and advance adoption and transition as centrally-provisioned solutions are developed for academic units.

The following start-up staffing is recommended:

<table>
<thead>
<tr>
<th>Position</th>
<th>Annual Salary</th>
<th>Benefits</th>
<th>Effort</th>
<th>Total Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project/Service Manager</td>
<td>$90,000</td>
<td>29%</td>
<td>100%</td>
<td>$116,100</td>
</tr>
<tr>
<td>Business System Analyst – Senior</td>
<td>$81,000</td>
<td>29%</td>
<td>100%</td>
<td>$104,490</td>
</tr>
<tr>
<td>Performance Support Analyst - Senior</td>
<td>$65,000</td>
<td>29%</td>
<td>100%</td>
<td>$ 83,850</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$304,440</strong></td>
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</table>

If new funding is not available, the AUIS team recommends that MAIS consider reorganization and reallocation of staff positions to ensure enhanced academic unit products and services.
The AUIS discovery team recommends that application solutions for academic units, in general, be absorbed via product strategy prioritization of the new MAIS/ITCS/ITSS organization. This assumes that an AUIS engagement framework is in place to ensure the priorities of this important constituency are included.

**Risks**

A number of risks are inherent when centralized solutions are considered for decentralized business needs:

1. Champion to lead charge for collective solutions.
2. User acceptance of change.
3. MAIS/ITCS/ITSS restructuring.
4. “Right-staffing” AUIS engagement model.
5. Defining business process commonality for enterprise solutions.
Academic Unit Information Solutions (AUIS)
Business Case

In June, 2008, a proposal authored by several University units was presented to Provost Terry Sullivan and CFO Tim Slottow to recommend development of an enterprise academic unit information system. At a high level, the proposal recommended that a centrally-provisioned solution be developed to meet the operational, managerial and information needs of academic units. Development of a course planning system that includes support for faculty-related administrative tasks was recommended as the first priority project.

Because centrally-administered academic unit information solutions would represent a new business area for Michigan Administrative Information Services (MAIS), the Provost and CFO requested a discovery effort to define, at a high level, unit needs and to assess if this proposal has strong cross-campus consensus as a needed, cost-effective, and viable approach for the University to embark upon. They also asked for recommendations for technical solutions, including vendor options, and opportunities to leverage existing enterprise systems.

Over the past six months, the MAIS AUIS discovery team has met with key administrators from across campus. This document presents their findings and establishes a business case for new products and services to support Ann Arbor campus academic units.

The Business Issue

The University of Michigan provides a very rich and diverse academic environment. Spanning 19 schools and colleges, 320 study fields engage students and faculty at the Bachelor, Master, Doctorate, and Professional levels. Approximately 150 academic departments address the administrative and business needs of faculty, students, and staff; over 600 staff members provide administrative services and support within these academic departments. Responsibilities are far-reaching and complex, and are dependent on comprehensive information and coordination.

In fall 2008, Laura Patterson, Associate Vice President, conducted campus interviews with Deans and other key staff as part of the on-going MAIS Strategic Planning effort. Preliminary review of leadership comments highlight many of the challenges that administrative tasks place on academic units.
The AUIS discovery team also met with over 50 school and college administrators. Comments from these sessions were combined and organized with the leadership interview notes. Pervasive business need themes emerged. The following high-level categories represent areas where units felt centrally-provisioned solutions should be pursued (see Appendix A for a description of each):

- **Comprehensive Student and Faculty Profiles**
- **Student Study Abroad, Professional Placements, and Activities Support**
- **Enhanced Student Recruitment and Retention**
- **Internationalization**
- **Interdisciplinary Study**
- **Research Support and Administration**
- **Accreditation Management**
- **Donor Relations, Fundraising**

The following chart demonstrates the relative importance of administrative business needs based on a weighted review of interviewee comments. Research Management was not included because of the recent eResearch Proposal Management System implementation; Donor Relations/Fundraising was excluded because of its recent approval as a separately-approved and resourced effort.

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**Current Situation and Challenges**

The decentralized environment of the University is reflected in the administration of business approaches by academic units. While there is great uniformity in **what** administrative staff are responsible for, **how** these tasks are accomplished have little consistency or scalability as one looks
across the organization. Over and over, the AUIS discovery team heard staff describe tasks common to academic units across campus, yet found that most units create and maintain their unique solutions.

**Supplemental Systems**

The most common solution is the use of supplemental systems within the academic unit. Most often, the supplemental system is a software application tool running on a desktop (e.g., spreadsheet, Access database) that is created and maintained by an individual or group within the academic unit. Data contained in the supplemental system may be wholly created and maintained by the unit, or originate from an M-Pathways system with unit-specific data added to meet administrative business and reporting needs. Supplemental systems are often used as silo transactional and data collection tools.

While a few academic units (Social Work, Psychology) have built sophisticated solutions that integrate many administrative business needs into a single unit system, most departments develop and maintain disparate solutions to tackle specific business needs. For example, a unit may use spreadsheets to record and track faculty human resource information, but separate and unconnected spreadsheets for course management. Bringing complex data together to create integrated business processes has been beyond the reach of most academic units. Further, information collected is often redundant or, in some cases, in conflict with enterprise data or data collected for other processes within the academic unit. Many administrators noted concern about having valid, “source of truth” information.

**Benefits and Liabilities of Unit Supplemental Systems**

Supplemental systems have proliferated within academic units for very valid reasons.

- **Need for Integrated View of Complex Information.** M-Pathways systems have provided robust and comprehensive application solutions for University central offices. While M-Pathways systems, as currently implemented, can address some academic unit administrative needs, application design and delivery has not been conducive to the integrated view that is of most value to academic units. For example, while enterprise data and tools can be used to establish a comprehensive faculty profile (e.g., human resource information, instructional assignments, teaching evaluations, payroll data, research activity) the skills and time needed to bring this information together from multiple sources is beyond the reach of most academic units. The effort becomes increasingly complex and error-prone with the need to combine locally collected and maintained data with enterprise information.

- **Familiar and Accessible Tools.** Application tools such as Microsoft Excel (and for some units, Microsoft Access) provide a comfortable solution within the skill range of most campus administrators. Coupled with business expertise, desktop tools can be a powerful solution.

- **Local Control.** Adding, combining, and changing data locally provides unit administrators with solutions that organize information precisely as they need or want to represent it.
Leadership requests for data presentation in specific formats, time frames, or other metrics can be more readily met if staff have control.

- **Perceived “Low Cost.”** The suite of Microsoft desktop tools (or similar applications) provides an academic unit with a low-cost alternative to IT professionals building and maintaining databases, applications and structured business rules.

With locally-developed and maintained administrative solutions come liabilities for campus:

- **Unsustainable Solutions.** The AUIS discovery team heard numerous examples of complex local business solutions abandoned when staff changes occurred or technology became so dated that support was no longer available. The team also discovered examples of dissimilar tools (e.g., FileMaker Pro and Microsoft Excel), generating incompatibility issues, within a single unit. Even with the comprehensive Psychology Department Information System (PDIS), key functionality was suspended for a year when staffing changes left the department without an expert who understood its intended use.

- **Productivity Impact.** Local data management can lead to excessive time spent on gathering, updating, massaging, and integrating data. TDWI Research estimates that administrative staff can spend up to two days per week creating and maintaining spreadsheets.

- **Solutions Silos.** Administrative tasks in the academic units often represent complex problems or business needs that need solid business solutions. Working in isolation, similar business needs are engineered and solved without the benefit of collective expertise. Further, many solutions need to span organizational boundaries; disparate solutions further complicate meeting business needs across the University’s decentralized environment.

- **Vulnerability.** Desktop tools’ ease of use can deceptively mask issues of data integrity, data consistency, and data security. While tools within products such as Microsoft Excel and Access exist to track and manage change control, few spreadsheets or local systems provide the meta-data to confidently know how and when data changes have been made, what and where are the authoritative sources of data, who has changed data, and why it has been manipulated. The AUIS team heard from many administrators a serious concern that they are making decisions based on information they are not always confident is valid or accurate. They also express privacy and security concerns for data stored locally.

**Community Expertise**

The AUIS team met with many administrators who have extensive knowledge and skill and are working hard to meet the demands of their units. Often, they outlined business needs that were also issues for their colleagues across campus. However, collaborative problem solving utilizing colleagues’ expertise from across the organization was rarely mentioned. Units tend to address their specific needs with their specific solutions. The decentralized structure of the university inherently has created expertise silos.

Three common threads emerged:
1. Unit administrators were aware of efforts by other units but did not have a contact network to foster collaboration.
2. Unit administrators were unaware of initiatives or solutions that would work well for their units.
3. Unit administrators were aware of initiatives or solutions but focused on their perceived differences, rather than commonality, and therefore did not pursue collaboration.

The AUIS team concluded that collaborative problem-solving for administrative business processes is not the norm at the University of Michigan.

**AUIS Discovery Effort**

The AUIS discovery phase started in November, 2008 and concluded in March, 2009. The AUIS Steering Committee provided periodic review and insight to help direct the discovery phase of the project. The AUIS Steering Committee members are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Candy Ellis</td>
<td>Department Administrator, Industrial and Operations Engineering, College of Engineering</td>
</tr>
<tr>
<td>Tom Finholt</td>
<td>Associate Dean, Research and Innovation, School of Information</td>
</tr>
<tr>
<td>Rich Gonzalez</td>
<td>Professor of Psychology, Department of Psychology</td>
</tr>
<tr>
<td>John Gohsman</td>
<td>Director of Business Intelligence, Student Administration, and Human Resource Management Systems, MAIS</td>
</tr>
<tr>
<td>Lynn Johnson</td>
<td>Director, Dental Informatics, School of Dentistry</td>
</tr>
<tr>
<td>John King</td>
<td>Vice Provost for Academic Information, Office of the Provost and Executive Vice President for Academic Affairs and Professor of Information, School of Information</td>
</tr>
<tr>
<td>Debra Komorowski</td>
<td>Director of Faculty Affairs, School of Medicine</td>
</tr>
<tr>
<td>Laura Patterson</td>
<td>Associate Vice President for Administration Information Systems, Leader and Administrative-Lead, Michigan Administrative Information Services</td>
</tr>
</tbody>
</table>

**Identify Campus Information Needs and Potential Scope for AUIS**

The AUIS discovery team was staffed by MAIS personnel. Working with stakeholders from across campus, as well as the leadership notes from the interviews conducted by Laura Patterson, the team collected and organized input to establish the priority list for academic unit information solutions contained on Page 7. The chart below outlines the outreach activities of the AUIS discovery team:
<table>
<thead>
<tr>
<th>Division/School/College</th>
<th>Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Art and Design</td>
<td>Chief Administrative Officer</td>
</tr>
<tr>
<td>College of LSA</td>
<td>Administrative Director, Senior Manager of Divisional Affairs, Senior Manager for Information and Finance, Data Base Lead</td>
</tr>
<tr>
<td>School of Dentistry</td>
<td>Sr. Associate Dean; Director of Budget and Finance</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>Administrative Specialist, Senior Programmer/Analyst, Senior Student Administration Assistant, Credit Evaluator, Graduate Program Administrator, Department Administrator, Academic Counselor, International Programs Coordinator</td>
</tr>
<tr>
<td>School of Kinesiology</td>
<td>Business Administrator Lead, Human Resources Manager, Assistant to the Dean</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>Programmer/Analyst Supervisor</td>
</tr>
<tr>
<td>School of Music, Theatre and Dance</td>
<td>Associate Dean of Academic Affairs, Associate Dean for Research, Director of University Productions, Chief Administrative Officer, Assistant Dean for Enrollment Management, Business Administrator, Director of Development, Manager of Computer and Instructional Technology, Assistant to the Dean</td>
</tr>
<tr>
<td>Ford School of Public Policy</td>
<td>Chief Administrative Officer</td>
</tr>
<tr>
<td>School of Natural Resources and Environment</td>
<td>Director of Business and Administration</td>
</tr>
<tr>
<td>Ross Business School</td>
<td>Manager of Business Intelligence</td>
</tr>
<tr>
<td>School of Social Work</td>
<td>Director of Administration, Finance and Operations</td>
</tr>
<tr>
<td>College of Architecture and Urban Planning</td>
<td>Director of Budget and Administrative Services, Assistant Dean, Administrative Assistant, Graduate Coordinator, Program Assistant, Assistant Registrar, Computer Support Manager</td>
</tr>
<tr>
<td>School of Information</td>
<td>Associate Dean for Research and Innovation, Financial Lead Manager</td>
</tr>
<tr>
<td>College of Pharmacy</td>
<td>Business Manager</td>
</tr>
<tr>
<td>Academic Human Resources</td>
<td>Assistant Provost and Director of Academic HR, Associate Director of Academic HR</td>
</tr>
</tbody>
</table>
Prioritizing Academic Unit Business Needs

Collecting comments from leadership notes and AUIS interviews, the team organized the articulated business needs by frequency and perceived level of importance. Applying a weighted review scale, the business need themes surfaced, as outlined in Page 7 and detailed in Appendix A.

Expanded Interest for Faculty Expertise Information

Also impacting the group's assessment are two concurrent efforts to explore expansion of faculty expertise exposure within and outside the university. The MAIS Research Division, under the leadership of Cindy Wells, was approached by the AVP for Research and the Business Engagement Center to assess options for web presentation of faculty information. Examples of impressive systems include Cornell’s VIVO (http://vivo.cornell.edu/), Harvard’s Catalyst (http://catalyst.harvard.edu/home.html), and the UM Medical School’s M-Resources (https://www.umms.med.umich.edu/test.mresources/). The UM Library System is also investigating a faculty expertise tool, Scholar Universe, to replace the Community of Science (http://www.research.umich.edu/funding/cos.html) portal.

While AVP Research/BEC and the Library System were not included in the initial target audience to ascertain academic unit information business needs, the acute interest to develop effective approaches to leverage faculty expertise points to obvious synergistic opportunities with AUIS. For many of the same reasons academic unit administrators are seeking faculty information management solutions – strengthening collaboration, tracking accomplishments, eliminating redundant or conflicting information across organizational boundaries – developing a structured environment to collect, store and maintain faculty profile information would not only meet academic unit business needs but provide a powerful foundation on which to utilize faculty data for other campus business needs. Data collected in a faculty information management system, such as publications, honors and awards, and service internal and external to the University, can provide authoritative and validated information to a number of campus initiatives.

Vendor/Application Solutions

A number of application software products were reviewed and assessed by the AUIS discovery team. The chart below provides a brief summary of each.

<table>
<thead>
<tr>
<th>Product</th>
<th>Functionality</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Measures</td>
<td>Faculty activity tracking software.</td>
<td>Hosted solution; data not available for integrated use with enterprise systems.</td>
</tr>
<tr>
<td>Indiana Faculty Annual Report</td>
<td>Faculty activity software used to collect and produce annual faculty report.</td>
<td>Indiana-developed application; built in Java and supplements data collected and stored in PeopleSoft.</td>
</tr>
<tr>
<td>Sedona</td>
<td>Open source academic management application, including teaching</td>
<td>Scaled for the small, homogenous academic environment.</td>
</tr>
<tr>
<td>Faculty Academic Information (FAIR)</td>
<td>Faculty activity and reporting software developed by the University of Southern Florida and sold to Aptitude Ventures.</td>
<td>Relies on master extracts from enterprise systems to combine data for tracking and reporting.</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>eCV</td>
<td>Module within Academic Management Systems that creates curriculum vitae for faculty and generates annual faculty activity reports.</td>
<td>Hosted solution that allows export to other systems.</td>
</tr>
<tr>
<td>PeopleSoft Campus Solutions</td>
<td>Enterprise Human Resources and Student Administration system licensed by UM.</td>
<td>Significant functionality in base product to support faculty information management</td>
</tr>
</tbody>
</table>

**Recommendations**

The AUIS discovery team started its effort with the goal to identify the top projects or development efforts MAIS should consider to meet academic unit business information needs. However, through many conversations, it became clear that extending software applications without addressing the need for academic unit collaboration and engagement will seriously handicap the success of projects targeted to this audience. Without a framework to engage administrators to define in detail unit-specific business needs, assist in development, and facilitate transition to centrally-provisioned solutions, success will be elusive.

The AUIS recommendation, therefore, is two-fold:

1. Provide services that foster collaboration, collective expertise, best practices, and enterprise solution adoption.
2. Leverage existing enterprise systems to address academic unit business needs, as appropriate. Facilitate implementation of new enterprise application solutions when existing systems cannot be leveraged.

**Engagement Framework**

Current enterprise solutions, such as M-Pathways on-line access to existing student and faculty information or Business Objects and M-Reports reporting tools, are simply not used by many academic unit staff. There is a powerful and pervasive belief that current M-Pathways systems provide little or no value to academic unit business processes. Habits die hard, especially for staff who have found workarounds to meet their daily responsibilities.

Conversely, MAIS is not structured to address complex academic unit business needs that span M-Pathways systems and/or product areas. MAIS has many business analysts with deep expertise in their assigned application or functional areas; however, MAIS’s product area organization, while serving central offices well, imposes barriers for academic units. Limited understanding of the complexities of
academic unit business needs hinders staff from making logical connections to extend business process solutions across MAIS boundaries. This can leave academic units with incomplete solutions and continued reliance on local supplemental systems.

A new service model which works to mitigate internal and external boundaries is needed to foster collaboration, share expertise, and build a collective intelligence across and for academic units. Without this, the risk for new enterprise solutions to have poor adoption rates is significant.

Just as the University’s Business Intelligence Community of Experts (BICE) is improving strategic and tactical decision-making, the AUIS discovery team believes that a collaborative model for business process improvement can provide campus with synergistic solutions. Combining central office, academic unit and MAIS expertise will enable comprehensive solutions.

**AUIS Engagement Model**

A new service framework that formalizes structure, education, and approach for cross-engagement between MAIS, central offices and academic units. With collective intelligence, superior products and services to meet complex business process needs of academic units can result.

**Leverage Existing Enterprise Systems**

Significant investment has been made in the University’s information administrative services infrastructure and tools sets to create and deliver robust enterprise systems. In addition to the operational/transactional systems (Financials, Student Administration, Human Resource Management, Research), systems to support reporting and business intelligence (data warehouses, Business Objects, M-Reports) provide an extensive enterprise infrastructure for information administration services. Application development tools such as PeopleTools or Microsoft .NET enable the extension of vendor applications or the opportunity to create new application solutions.

The AUIS discovery team believes many of business needs identified by academic units can be addressed by leveraging existing MAIS applications, development tools, and infrastructure. This may require new
or improved user interfaces, navigational improvements, and other approaches to uniquely create application solutions targeted to academic unit business needs.

Leveraging existing systems will speed solution delivery and increase the University’s return on investment.

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**Leveraging Enterprise Systems for Academic Unit Business Needs**

<table>
<thead>
<tr>
<th>Order of Priority</th>
<th>Faculty Management</th>
<th>Student Management</th>
<th>Internationalization</th>
<th>Interdisciplinary Collaboration</th>
<th>Accreditation Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td>Faculty profiles</td>
<td>Study abroad</td>
<td>Track globalization</td>
<td>Enhance connections</td>
<td>Develop accreditation</td>
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<td>teaching, research</td>
<td>Student placements</td>
<td>and research</td>
<td>across organization</td>
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<td>and service</td>
<td>and activities</td>
<td>opportunities</td>
<td>Increase collaboration</td>
<td>Integrate accreditation</td>
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<td>Comprehensive</td>
<td>Track faculty and</td>
<td>partnerships, communities</td>
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<td>student profiles</td>
<td>students abroad</td>
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<td>planning</td>
<td>impediments to global</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recruitment</td>
<td>activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>support</td>
<td>Deliver services and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mitigate risk for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>international</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Enterprise Data and Systems** (Student, HRMS, Financials, Research, Data Warehouses, M-Reports, etc.)
Roadmap for Academic Unit Products and Services

To move toward successful enterprise solutions to meet the business needs of academic units, the following action is recommended for MAIS:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Attributes</th>
</tr>
</thead>
</table>
| **Formalize academic unit services and product needs as the new shared MAIS, ITCS, and ITSS organizational structure is defined** | • A new organizational structure for MAIS, ITCS, and ITSS is to be formalized by July, 2009. Academic unit business needs should be formally addressed in the new structure.  
• Directorial responsibility should be specifically assigned for academic unit engagement, services, and products |
| **Assign dedicated staff for academic unit engagement** | • Specific staff should be assigned to engage academic unit staff and provide coordinated services and products that span the MAIS/ITCS/ITSS organization  
• A framework to foster academic unit collaboration, leading to shared intelligence, for business process solutions is needed. Use MAIS staff to facilitate, coordinate and execute. |
| **Strategically prioritize and resource top AUIS findings for application development** | • Begin development of a faculty information management system. Utilize current PeopleSoft SA/HRMS development tools and infrastructure for solution.  
• Participate and help solve student professional placements, activities, and study abroad business needs.  
• Make top projects targeted to the academic unit community organization-wide priorities for MAIS/ITCS/ITSS. |

Initial Project Recommendations

**Faculty Information Management**

The AUIS team recommends development of faculty information management functionality as the first project to complete under the academic unit engagement framework. Campus feedback identified this as the highest priority for unit administrative staff. Reasons for priority include:

- Faculty information is time-intensive to gather and maintain in a structured way.
- The need to share faculty information across organizational boundaries is rapidly accelerating due to the campus’s expansion of interdisciplinary activities.
- Faculty information is foundational data for many unit business processes. It is also critical for strategic projects such as the Business Engagement Center’s interest in a Faculty Expertise project or the Library’s Community of Science portal replacement proposal.
- It is very difficult for units to combine local, self-reported, and central data into comprehensive information about each faculty member.

The proposed project would provide a comprehensive solution for:
• **Data Collection**: Collection and storage of unit and faculty information to provide a complete profile of each faculty member.

• **Data Integration**: Logical and useful combinations of data presentation to address and support specific business needs.

• **Data Intelligence** – Insightful data presentation to enhance and expand business decisions.

Examples of features for a faculty information management solution include:

<table>
<thead>
<tr>
<th>General/HR*</th>
<th>Teaching*</th>
<th>Research/Creativity*</th>
<th>Service*</th>
</tr>
</thead>
</table>
| • Bio/demo information  
• Appointment information  
• Tenure  
• Sabbatical/leave  
• Memberships  
• Honors/Awards  
• Contract information | • Courses taught  
• Combined/interdisciplinary teaching  
• Independent study  
• Advising  
• Informal teaching  
• Teaching goals and preferences  
• Space needs and preferences | • Sponsored activity  
• Grants under consideration  
• Publications  
• Performances, presentations  
• Accomplishments  
• Licenses/certification  
• Clinical Work | • Service to department(s)  
• Service to University  
• Service to field  
• Public service |

* Information in red represents tables that currently exist in M-Pathways systems.

Data mapping to existing PeopleSoft tables indicates that about 80% of the needed structure already exists in the M-Pathways SA/HRMS system. Therefore, the team recommends development in this environment. This recommendation is supported by the AUIS Steering Committee.

**Student Study Abroad, Professional Placements, and Activities**

Another very high priority for academic unit administrators are enterprise tools to support student study abroad, professional placements, and activities. An assessment of campus needs to support students studying abroad was recently launched by the Provost’s Office via the Study Abroad Council. A possible outcome of this initiative may point to the need for enterprise solutions. If so, the AUIS team recommends that this effort be considered the second project for academic unit information solutions.
Costs

Academic Unit Engagement (AUE)

An on-going support model to develop and promote a collaborative academic unit business community is needed. This model would resource staff to provide tight integration with MAIS application and business expertise. As priorities for engagement are defined, dedicated AUE staff would facilitate cross-MAIS effort to utilize and maximize expertise. The service team would provide needed integration to define and address complex business processes that span MAIS product areas.

- **Focus on collaborative services and solutions target to academic units.**
- **Provide active advocacy, influence, and participation in application solutions.**
- **Mitigate organizational boundaries within MAIS to deliver comprehensive, end-to-end solutions to business needs.**
- **Advance adoption and transition as centrally-provisioned solutions are developed for academic units.**

The initial staffing proposal is:

<table>
<thead>
<tr>
<th>Position</th>
<th>Annual Salary</th>
<th>Benefits</th>
<th>Effort</th>
<th>Total Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project/Service Manager</td>
<td>$90,000</td>
<td>29%</td>
<td>100%</td>
<td>$116,100</td>
</tr>
<tr>
<td>Business System Analyst – Senior</td>
<td>$81,000</td>
<td>29%</td>
<td>100%</td>
<td>$104,490</td>
</tr>
<tr>
<td>Performance Support Analyst – Senior</td>
<td>$65,000</td>
<td>29%</td>
<td>100%</td>
<td>$ 83,850</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>$304,440</strong></td>
</tr>
</tbody>
</table>

If new funding is not available, the AUIS team recommends that MAIS consider reorganization and reallocation of staff positions to ensure enhanced academic unit products and services.

Application Development and Implementation

Except during major system upgrade windows, appropriately 50% of product division budgets are dedicated to projects focused on product and service enhancements. Potential projects are prioritized based on a number of factors, including operational efficiencies, business intelligence, strategic positioning, and reducing cost/increasing return on investment for enterprise systems.

The AUIS discovery team recommends that application solutions for academic units, in general, be absorbed via product strategy prioritization. This assumes that an AUIS engagement framework is in place to ensure the priorities of this important constituency are included.
Risks

The AUIS discovery team has identified several significant risks that could prevent the expected efficiencies and improvements academic unit solutions can bring.

1. **Champion for Collective Solutions.** In the University’s decentralized environment, the absence of a unified will to streamline and standardize academic unit business processes exists. Will key administrators provide the leadership to direct transition to centrally-provisioned solutions?

2. **Commonality for Enterprise Solutions.** Throughout the discovery phase, business needs were discussed at high level and universal business needs were apparent. Will significant differences emerge when detailed business requirements are defined? Can flexible solutions be delivered to meet the core and local needs?

3. **User Acceptance of Change.** Performing tasks in a comfortable and predictable way provide staff with security and control; change can be very threatening and disruptive. Will unit staff make the transition from local approaches to centrally-provisioned solutions?

4. **MAIS/ITCS/ITSS Restructuring.** Will the revised organizational structure provide the support, staff resources, and priority to support the unique business needs of academic units?

5. **Staff Expertise.** Finding the right staff, within MAIS and across academic units, with knowledge, background and interest to define and develop solutions for complex academic unit business needs is critical.
APPENDIX A

Business Need Themes

The following academic unit business need themes have emerged during interviews with key administrators across campus.

Business Need Themes

- **Comprehensive Student and Faculty Profiles.** Academic units must have comprehensive information about faculty and students to accomplish unit responsibilities, such as course planning and assignment, leaves and sabbaticals, faculty annual reports, and student service support. Units need to track faculty and student expertise and interests, without redundant or conflicting information when individuals are engaged in activities that span organizational boundaries.

- **Student Study Abroad, Professional Placements, and Activities Support.** Academic units need to know more about the interests and activities of their students, including study abroad, participating in professional placements, pursuing community-based activities, and current and future interests and pursuits. Placement and study abroad information needs to logically connect to centrally-maintained academic data.

- **Enhance Student Recruitment and Retention.** Units want to attract, engage, admit, and retain the highest caliber of students. Many units need to increase the pool of applicants to ensure stability, quality, and diversity. Some units want to engage in more targeted admission, such as increasing international students or expanding select programs; some see a need to increase tuition revenue. To enhance recruitment, Michigan needs to leverage its abundant resources and offerings to differentiate it from other colleges and universities.

- **Internationalization.** Administrative obstacles hinder expansion of faculty and student opportunities for global learning and research. Units want to improve the experiences of our international faculty and students.

- **Interdisciplinary Study.** Addressing faculty and student needs across organizational boundaries is often labor-intensive, redundant, and prone to error. Units need to identify and foster interdisciplinary interests, research, and collaboration.

- **Research Support and Administration.** Units need streamlined grant proposal and compliance management procedures and ways to identify diverse funding sources. Michigan should leverage its research expertise and contribute more to solving state and national issues.

- **Accreditation Management.** Units expressed concern about the amount of time and effort needed to meet accreditation requirements.
Donor Relations, Fundraising. Increased emphasis on fundraising necessitates administrative services that meet the needs of sophisticated donors. Students need to be engaged earlier to become the donors of tomorrow.

Overarching Themes

Reduce Administrative Burden, Improve Business Processes. A universal theme articulated by every unit is the need to improve business processes and reduce administrative burden. The need to contain costs is frequently cited; many administrators noted they are seeking opportunities to share administrative resources and expertise.

Accessible and Accurate Information. Academic units need to easily access reliable and accurate information – enterprise and local – to make educated and timely decisions. Costly past practices to collect and maintain information locally is being questioned by administrators across the organization.

Integrate Local and Enterprise Information. While the M-Pathways enterprise systems provide comprehensive information across many business areas, it is often difficult to locate, interpret, and combine enterprise information with local information by the academic unit. There are also critical gaps in the information collected and stored in M-Pathways, data which is essential for administrative responsibilities shouldered by the academic units.

Easy to Use and Sustainable Solutions. Academic departments face diverse and complex responsibilities with competing priorities. Staff gravitate to tools and solutions that are accessible, agile and familiar (such as Excel spreadsheets) to enable quick responses to administrative demands. Enterprise solutions are desired but not at the expense of satisfactorily meeting unit responsibilities.