MACRAO CONFERENCE-2018

Student Information Systems (SIS)—Present and Future: the Good, the Bad, the Ugly

November 16, 2018
Agenda

- Problem Statements
- Case for Change
- Request for Information (RFI) – SIS
- SIS Program
- Recommendations
Problem Statements
Problem Statements

1. Student Experience is the principal differentiator for higher education institutions. Many students believe their journey is highly fragmented and lacks personalization.

2. Systems to measure, support, and enhance student success are not integrated and limit the ability to be implemented and utilized holistically.

3. Decision makers find it difficult to extract and use actionable data, inhibiting strategic planning and daily operations.

4. MSU’s SIS has become a portfolio of legacy technologies that do not adequately support current business needs.

5. Many applications are past end of life. 50% of MSU staff, who are critical resources supporting SIS, are retirement eligible posing a significant risk to maintaining our current system.
SIS Portfolio – Pain Points

1. STUDENT EXPERIENCE
User experience for front end SIS applications is not seamless across devices and support for mobility and social channels is limited

2. OPERATIONAL EFFICIENCY
Multiple data extraction services/utilities are required to access SIS mainframe data creating a non integrated and complex solution

3. DATA USABILITY
Data available for use by supporting applications is not updated in real time creating inconsistency of information between business units/users

4. DATA EFFICIENCY
SIS mainframe data is replicated multiple times reducing data integrity and increasing the risk of data leaks

5. ENTERPRISE ARCHITECTURE
Interaction with the mainframes cannot be enabled through user friendly interfaces without the use of additional middleware increasing costs and risks

6. TECHNICAL SKILLSET
Hiring and retaining staff skilled in antiquated programming language and willing to understand and work on legacy systems is a challenge
Current MSU Student Experience (Example)
Case For Change
MSU Six Imperatives

1. **ENHANCE THE STUDENT EXPERIENCE** by expanding opportunities for where, when, and how students learn and increasing the value of an MSU degree.

2. **ENRICH COMMUNITY, ECONOMIC, AND FAMILY LIFE** through research, outreach, engagement, entrepreneurship, innovation, diversity, and inclusiveness.

3. **EXPAND INTERNATIONAL REACH** through academic, research and economic development initiatives, and strategic alliances.

4. **INCREASE RESEARCH OPPORTUNITIES** by expanding funding to support high-impact scholarship and research.

5. **STRENGTHEN STEWARDSHIP** by nurturing the university’s financial assets, campus environment, infrastructure, and people.

6. **ADVANCE OUR CULTURE OF HIGH PERFORMANCE** by elevating the quality and effectiveness of every product and process.
SIS Portfolio – Business Challenges

Recruitment
- High Support Effort
- Dependency for Change

Financial Aid
- Lack of Real Time Data In Holistic Environment
- Upgrade in Progress

Admissions and Enrollment
- Timely Reporting for Data Analysis
- Data Transfer Risks
- Changing Business Needs

Financials Processing
- Compliance Risk Due to Manual Assessment of Special Fees
- Student Financial Data Unavailable Due to Silos and Dependency

Student Success
- Proactively Engage Students
- Academic Compliance Reporting Mgmt.
- Early Decision-Making
- Coordinated Care

Information Management
- Foreign Student Location Tracking Compliance Risk
- Limited Vendor Support for Key Functionality

Technology and IT Services
- Operational Risk Resources
- Lack of Knowledgeable Resources
- Batch Based Processing
- Multiple Systems for Data Access
SIS Portfolio – Functionality and Risk Assessment

Approximately 200 SIS Applications

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerate</td>
<td>Typically the largest category in most inventories. Applications create enough business value and the costs and risks are manageable.</td>
</tr>
<tr>
<td>Invest</td>
<td>Solutions that offer significant business value. Business process needs are best-met by packaged solutions, but the system must continue to operate in support.</td>
</tr>
<tr>
<td>Migrate</td>
<td>Business value and commitment to the applications will be high, but technical difficulties will abound. Hardware or software will no longer be supported. Skilled workers will be on the verge of retirement, and the pool of replacement skills will be declining.</td>
</tr>
<tr>
<td>Eliminate</td>
<td>Most of the applications that are in this category will have low business value and poor technology marks.</td>
</tr>
</tbody>
</table>
Student Information System – Request For Information (RFI)
SIS – Guiding Principles

- Student Experience
- Student Success and Analytics
- Capability Advancement
- Operational Efficiency
- Data Usability, Efficiency, and Governance
- Enterprise Architecture
SIS RFI Cross-Functional Participants

- Admissions
- Controller’s Office
- Financial Aid
- Graduate School
- Registrar’s Office
- Information Technology Services
- Planning and Budgets
- Student Affairs
- Undergraduate Education
SIS Request for Information – Key Findings

**Classic Student Information Systems**

- Proven capabilities
- Large peer support network of research institutions (Oracle: Michigan, Penn State, Wisconsin, Minnesota, UNC-Chapel Hill, etc.)
- Vendors are transitioning to their next generation platforms and many are on terminal release with published end of life dates
- MSU would be last of peers to implement

**Next Generation Student Information Systems**

- Broad capabilities exist with additional functionality in development
- Capabilities roadmap established to support peer implementation (Workday: Ohio State, LSU, Washington State, etc.)
- Long product life expectancy
- Design partnership opportunities (Workday)
Student Information System Program
SIS Program Projects

SIS Readiness
- Organizational Change Management
- Vendor Engagement(s)
- Current State Process Mapping/Requirements
- Establish Project Governance

SIS Augmentation
- Admissions CRM Implementation
- Health Unified System Implementation
- Degree Audit and Academic Planning Implementation

SIS Implementation
- NextGen OR Classic

Problem Statements | Case for Change | RFI - SIS | SIS Program | Recommendations
# SIS Program – SIS Readiness Project

## Project

### Scope
- **Organizational Change Management**
- Current State Mapping & Policy/Process Pain Point Identification
- Requirements Definition
- Solution & Services RFP, Selection and Procurement
- Peer and Vendor Engagement
- Data Access, Reporting, and Integration Planning
- Implementation Project Planning
- **Develop Project Governance Structure**

### Reasons to Select
- MSU culture requires preparation to successfully implement with minimal customizations
- MSU current state cannot be quickly provided to services consultant during implementation (e.g., minimal documentation and/or detailed subject matter expertise)
- MSU desires to select solution and services partners through RFP process
- MSU requires more detailed information to finalize solution approach
- Future data and integration strategies are not established

### Benefits
- Prepares the University and core project team for implementation by providing a dedicated focus on activities needed for success

### Risks
- Classic (e.g., Oracle Campus Solutions) solutions may no longer available to MSU at the time of RFP
SIS Augmentation – FY2019 Considerations

<table>
<thead>
<tr>
<th>Current State</th>
<th>SIS Capabilities</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current product (EMUS) recently off support</td>
<td>Capabilities overlap with both SIS and CRM</td>
<td>Implement a solution that is part of the broad University customer relationship management strategy.</td>
</tr>
<tr>
<td>Significant need for capability advancement</td>
<td>Many unique capabilities do not overlap with SIS</td>
<td>Implement new integrated system shared across the four health colleges.</td>
</tr>
<tr>
<td>Approximately 20 legacy homegrown applications</td>
<td>Some SIS capability overlap</td>
<td>Implement capabilities known to be outside the scope of a future SIS and leverage core capabilities in new SIS, ASAP.</td>
</tr>
<tr>
<td>Current vended product (Degree Navigator) off support for several years</td>
<td>Significant SIS capability overlap</td>
<td>Reduce complexity of integration and remediation efforts within SIS project by replacing majority of health college application portfolio prior to implementation of a new SIS.</td>
</tr>
<tr>
<td>Need Capability advancement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a SIS replacement implementation is scheduled, final SIS augmentation initiatives must meet one of the following criteria:

1) Provide capabilities outside the scope of a future SIS solution and reduce complexity to the SIS application portfolio
2) Address an immediate need and provide near-term return on investment
<table>
<thead>
<tr>
<th>Scope</th>
<th>Admissions CRM</th>
<th>Health Unified System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement TargetX (Salesforce), a modern recruitment and admissions solution to support University admissions goals</td>
<td>Implement MedHUB for the four health colleges</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons to Select</th>
<th>Capabilities are needed immediately to support University recruitment and admissions goals</th>
<th>Policies and processes will be optimized across 4 colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needed capabilities are out of scope of SIS</td>
<td>Required capabilities are out of scope of SIS</td>
</tr>
<tr>
<td></td>
<td>Solution will reduce integration complexity during SIS implementation</td>
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</tr>
<tr>
<td></td>
<td>Current solution has high risk profile (e.g., security, operational failure)</td>
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<table>
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<tr>
<th>Benefits</th>
<th>Provides capability advancement in the near-term</th>
<th>Optimizes policies and processes across 4 health colleges</th>
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<tr>
<td></td>
<td>Reduces integration complexity during SIS implementation</td>
<td>Provides capability advancement in the near-term to 4 colleges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduces integration complexity during SIS implementation</td>
</tr>
</tbody>
</table>

| Risks                                      | Future SIS solution may result in duplication of capabilities                    | Future SIS solution may result in duplication of capabilities         |
# SIS Program – SIS Implementation

## Classic

**Scope**
Implement the terminal release of Oracle Campus Solutions and leverage the mature and proven capabilities of the platform.

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**Reasons to Select**
See Decision Criteria slide.

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**Benefits**
- **Advancing Capabilities**: Most mature capabilities
- **Existing Peers**: Large peer base
- **Student Experience**: Recent self-service and mobile redesign
- **Operational Efficiency**: Integrated core capabilities with known bolt-on requirements

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**Risks**
- **Terminal Release**: Vendors no longer investing and end of life dates have been published
- **Capabilities**: Similar to Current Platform
- **Faculty and Staff Experience**: Non-staff user experience not fully addressed in recent release
- **Enterprise Architecture**: Potential alignment with impending Human and Capital Management reimplementation

## NextGen

**Scope**
Join design partnership with Workday and be among the first large institutions to implement a SIS.

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**Reasons to Select**
See Decision Criteria slide.

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**Benefits**
- **Advancing Capabilities**: Significant capability investments planned; capabilities continuously and immediately available
- **Student, Faculty, and Staff Experience**: Mobile first
- **Operational Efficiency**: Highly configurable design provides promise of reduction of bolt-on needs
- **System Availability**: High availability by design
- **Enterprise Architecture**: Upgrades and disaster recovery managed by the vendor; potential alignment with impending Human and Capital Management reimplementation

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**Risks**
- **Developing Product**: Essential capabilities are not delivered as promised resulting in project cost overruns
- **Small Growing Userbase for SIS"
Decision Criteria

**Classic**
- **Cost**: control short-term costs
- **Time**: known time to delivery
- **Capability**: guaranteed functionality to fulfill the needs of today
- **Culture**: If we believe stakeholders’ demands for customization cannot be controlled, classic is a costly bridge solution to NextGen

**Next Generation**
- **Cost**: minimize long-term total cost of ownership
- **Time**: lengthened time to delivery
- **Capability**: modern architecture provides foundation for functionality to fulfill the needs of tomorrow
- **Culture**: If we believe MSU will embrace industry best practices by not customizing, then NextGen is a strategic investment
Recommendation
# Recommended Actions

## Initial SIS Actions

- **Implement Final SIS Augmentation**
  - Implement solutions that reduce complexity or to address immediate needs
- **Prepare for SIS Implementation**
  - Complete business and technical preparation prior to implementation
- **Monitor SIS Vendor Transition**
  - Actively engaged in collaboration opportunities to further inform solution selection

## Recommended Next Steps

Formalize a SIS program and initiate projects to enable a successful SIS implementation, regardless of selected solution approach

<table>
<thead>
<tr>
<th>Admissions CRM</th>
<th>Health Unified System</th>
<th>SIS Readiness</th>
<th>SIS Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Implement TargetX (Salesforce)</td>
<td>1. Implement MedHUB</td>
<td>1. Organizational Change Management</td>
<td>1. Peer site visits</td>
</tr>
<tr>
<td>2. Implement capabilities known to be outside scope of SIS</td>
<td>2. Policy Changes and Process Mapping</td>
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<td>2. Broad attendance in user groups (e.g., Workday Rising, Higher Education User Group)</td>
</tr>
<tr>
<td></td>
<td>3. Data and Integration Planning</td>
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<td>3. Join design partnership (e.g., Workday)</td>
</tr>
<tr>
<td></td>
<td>4. RFPs (Solution &amp; Services)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## SIS Solution Approaches

<table>
<thead>
<tr>
<th>Classic</th>
<th>NextGen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace the legacy solution as a bridge to NextGen solution</td>
<td>Replace the legacy solution with an emerging NextGen solution</td>
</tr>
</tbody>
</table>

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**Problem Statements**

- **Case for Change**
- **RFI - SIS**
- **SIS Program**
- **Recommendations**