Project Completion Summary  - Cross-Registration

Summary Metrics

- **Budget:** 20% over/under due to savings on expected resources ($52,934)
  
  *Green = less than 10%, Yellow = between 10% and 20%, Red = more than 20%*

- **Schedule:** 18 months late — on hold for several months due to resource constraints and realignment with HUIT priorities (cloud and SIS)
  
  *Green = less than 10%, Yellow = between 10% and 20%, Red = more than 20%*

- **Total Value Achieved:** N/A — value of business was not quantified in dollars

- **Open Serious Defects:** 0
  
  *Green = 0, Yellow = between 1 and 3, Red = more than 3*

**Major Benefits Achieved**

- Provided the first platform for cross-registration that is used by all Harvard schools, MIT, Tufts, EDS and Brown.
- Increased cross-registration by 34% since the 2013/14 academic year*.
- Built a way to track all cross-registration requests from Harvard students into MIT courses.

**Key Success Factors**

- Active engagement with Registrars from all of the schools.
- Dedicated product development team, and introduced DevOps practices including continuous integration and automated unit testing.

**Areas for Improvement**

- Change management for high impact decisions like the iSites decommissioning, cloud migrations, and integration with the Student Information Systems program.

*Corrected from original version*
## Course Catalog and Cross-Registration Vision

*Provide intuitive and high performing tools for students, registrars, faculty, and advisors which support Harvard’s cross-school learning initiatives*

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Guiding Principles</th>
<th>Key Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improve and simplify user experience</td>
<td>Features and functionality serve the needs of the Harvard Community</td>
<td>• Increase cross-registration participation across the university</td>
</tr>
<tr>
<td>• Improve system performance</td>
<td>Technology decisions support by HUIT goals and values</td>
<td>• Reduce response time per petition</td>
</tr>
<tr>
<td>• Deliver excellent quality features and enhancements</td>
<td>We seek to continuously improve our processes and our product</td>
<td>• Reduce the number of problem tickets which have coding or testing root causes</td>
</tr>
<tr>
<td>• Remove dependency on systems targeted for decommission</td>
<td>Transparency and integrity are reflected in all of our communication</td>
<td>• Deliver an detailed roadmap to align with the iSites decommission plans</td>
</tr>
</tbody>
</table>


Vital Statistics

- Project Name: Cross-Registration Phase II
- Project Manager(s): Georgina Prager
- Functional Area: Student Cross-Registration
- Sponsor(s): Judith Singer

### Timeline Planned and Actual

<table>
<thead>
<tr>
<th>Phase</th>
<th>Planned Start</th>
<th>Actual Start</th>
<th>Planned Finish</th>
<th>Actual Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6/2016</td>
<td></td>
</tr>
</tbody>
</table>

### Costs – Planned and Actual

<table>
<thead>
<tr>
<th>Phase</th>
<th>YR1 (FY14)</th>
<th>YR2 (FY15)</th>
<th>YR3</th>
<th>YR4</th>
<th>Savings or Cost Overruns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement</td>
<td>66,868</td>
<td>64,892</td>
<td>193,142</td>
<td>108,942</td>
<td>0</td>
</tr>
<tr>
<td>Change Request(s)</td>
<td></td>
<td></td>
<td>27,084</td>
<td>0</td>
<td>6,158</td>
</tr>
<tr>
<td></td>
<td>$84,200</td>
<td>57,116</td>
<td>52,934</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Project ROI

• Did the project have an anticipated ROI?
  
  There was no financial ROI projection with this proposal.

• Did the achieve projected savings or income? Please explain.

  N/A
Objectives Realization

• **Problem or Opportunity Statement:**

  Description of project. What business problem or objective will be addressed:

  The project is a University-wide online cross-registration system that enables students at all Harvard Schools and select partner institutions to identify courses and submit petitions for cross-registration within the University Course Catalog environment, and enables faculty and registrars to field and approve petitions online. Building on the success of the paperless cross-registration system piloted during spring and fall 2012 terms, phase 2 implementation will incorporate a range of requirements and enhancements identified in surveying faculty, staff, registrars and FAS resident deans.

• **Problem Resolved or Opportunity Realized:**

  Did the project solve the problem or realize the opportunity that was predicted? If yes, how?

  The project was successful in implementing online cross-registration to all schools. Cross-registration petitions increased by 35%* from fall 2014-fall 2016 and many features were added based on feedback from users, such as the ability to remove petitions, and the ability to filter and export petitions.

*Corrected from original version
Benefits Realization

Anticipated Benefits:
Remove barriers to cross-registration for students and faculty and supports One Harvard vision. Increase total number of Harvard and non Harvard students cross-registering for Harvard courses.

If, the anticipated benefits changed over the course of the project please explain.
During the project we identified and implemented the following benefits:
- Remove dependency on systems targeted for decommission
- We implemented online cross-registration for Harvard students to submit online petitions for MIT courses, replacing a manual petition process which required Harvard students to travel to MIT to complete their application.

Achieved Benefits:
• Did the project actually achieve the anticipated benefits? Yes
• How did you measure the benefits?
  – The number of petitions each term were documented and reported to the stakeholders
  – Feedback from the Registrar’s via the Cross-registration Steering Committee
  – Number of major incidents was reduced to zero
• Will there be ongoing KPIs or metrics reported? Yes, reporting will continue through the life of the application.
• Who is accountable for tracking and reporting the metrics? The Project Manager is responsible for tracking metrics and reporting to the Steering Committee

Other Benefits
During the project we implemented APIs to support mobile and HKS functions. We were able to extend the APIs for SIS to use during the wave 1 and 2 rollout phase.
Features and Requirements Delivery

Did the project deliver all planned features and requirements?

- Database re-write for performance optimization
- Migration off of iSites platform
- Course Catalog API (users include mobile app and library services)
- Cross-registration API support for HKS
- Ability to sort, filter, and export petitions
- Ability to remove petitions
- Ability for Harvard students to submit online petitions for MIT courses

List any planned features/requirements that were not delivered.

- History/Audit trail and home school specific configurations were removed from scope when the iSites decommission and MIT integration scope was prioritized.

List any significant changes to scope.

- During this project, we learned that iSites would be decommissioned, and our Course Catalog and Cross-Registration sites lived on the iSites platform. We piloted with DevOps to build and release the new sites to the cloud.
- Enabled Harvard students to use the Harvard University Cross-Registration site to petition into MIT Courses.
Project Quality

No critical defects are remaining open.

<table>
<thead>
<tr>
<th>Product Defects/Bugs</th>
<th>Closed</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>High/Medium/Low</td>
<td>124</td>
<td>0</td>
</tr>
</tbody>
</table>
Transition

Ongoing Governance

• **Who is the product owner?** Georgina Prager

• **Describe ongoing governance for defect correction and enhancement requests.**

The cross-registration Steering Committee and Administrative Technology leadership approve the roadmap for cross-registration.

Ongoing Support

• **Who is the service owner?** Georgina Prager (note, the service will be migrated into the SIS system by the end of FY17)

• **Describe the support team/structure:** Administrative Technology Services Applications Support Specialists manage incoming requests. Application issues and enhancement requests are escalated to the Project Manager, Ramya Rajiv. The PM reviews all requests with the Product Owner for prioritization and roadmaps are reviewed with the steering committee at quarterly meetings.

• **Describe how the support team was trained/prepared** – The support team was trained by the project team.

Communication and Engagement

• **Described what worked:** We engaged with the Registrar community often and invited their feedback.

• **What didn’t work and why?** The transition of level 1 support to the main help desk was slow and difficult because there are many interdependent systems. We have done a lot of work this year to help get tickets more quickly assigned to the correct service group.
Lessons Learned

Surprises:

• **Describe any unexpected risks.** The impact of the iSites decommission and the SIS transition was unknown until mid-way through the project.

• **Did any project assumptions prove to be wrong?** We planned to use a UI test automation tool which proved not to be a viable option for our product. The implementation costs and the amount of required updates were not worth the investments so we used manual testing throughout the project.

• **Were there any unexpected dependencies?** The dependency on the Academic Technology Services for course feeds persisted throughout the project.

Best Practices:

• **Describe any tools used or practices and processes followed during this project that would be valuable for other project managers or project teams to adopt?** We used JIRA, Confluence, Jenkins, and Clover for our Agile and Continuous integration tools.

• **What tools, practices or processes do you wish you had that would have helped manage this project more effectively?** In addition to the Steering Committee, a primary business sponsor from the Registrar community.

Lessons Learned:

• **If you had to do this project again what would you do differently?** I would transition more support to the IT help desk earlier in the process so they could coordinate cross-team issues.

• **What do you wish you had known when the project started?** It would have been helpful to know the roadmap for the iSites decommission, cloud migration and SIS initiatives. Also, a way to gather key metrics at the start of the project so that we have them to compare to.
Appendix
# Successful petitions

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Petitions Submitted</th>
<th>Successful petitions</th>
<th>Increase in Successful petitions</th>
<th>Increase in successful petitions from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/14</td>
<td>8,049</td>
<td>5,554</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014/15</td>
<td>8,516</td>
<td>6,810</td>
<td>1,256</td>
<td>23%</td>
</tr>
<tr>
<td>2015/16</td>
<td>10,332</td>
<td>7,442</td>
<td>632</td>
<td>9%</td>
</tr>
</tbody>
</table>

Number of successful cross-registration petitions increased by 35% from year 1 to the end of the project