## Improvement Event Story: Geology Graduate Application Process

Challenge: Graduate applications have been steadily increasing in recent years for Michigan Technological University, causing a strain on application review processes that did not change with the trend. The geological and mining engineering and sciences department became aware that their internal review process had shortcomings for the influx of applications needing review. After capturing spring 2012 data, it was found that an average of 50 days went by before a student was notified of a decision on their application. Much of this time was spent with applications waiting in the queue for review as well as over processing and re-working of application information.

The lengthy review time was causing a loss of students (to other schools with a faster response time), an increased amount of contacts from anxious students, and potential problems for accepted international students who have less time to obtain a visa to arrive for their first semester. Here is a picture of the current state process map for the application review process:
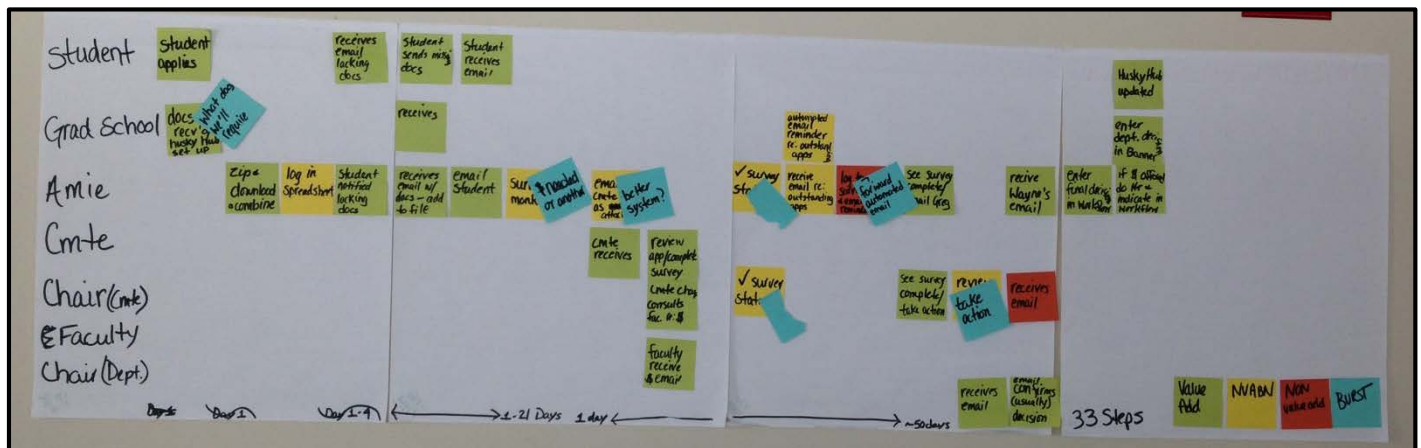
Solution: Using Lean principles and problem solving tools, a cross-functional team was formed to identify the critical areas for improving the process. A visual map of the review process allowed the team to focus on a few critical areas in which the process was strained. It was determined much of the wait time for review boiled down to the configuration of the review committee – at that time made up of four faculty members plus the department chair. The team reviewed application decisions from spring 2012 data and found the department chair (the 5th committee member) rarely changed the decision of an application.

A new structure for the review team was configured. Three faculty members would be assigned to each application, with at least one of the reviewers being a possible advisor, and the department chair would only be called to review as needed. This structure maintained the current need for a thorough application review and reduced the time commitment for each faculty member and the department chair.

Other process improvements included utilizing a color coded spreadsheet that indicates the review status of each faculty member, elimination of over processing the application materials, creating a shared network drive for applications, and bi-weekly reminders to graduate committee which includes the status of each applicant.

Supporting Data: The new process has 24 steps. With the elimination of over processing and re-work, this is down from the 33 steps in the original process, a 27% improvement. The team was anxious to see the impact of the new process design. After collecting data on the new process during the application rush this

spring (2013), the improvements were impressive. The average time to respond to a graduate applicant has been reduced from 50 days to 20, a 60% improvement.

Improvement Event Story: Duplicates in Banner

Challenge: Data downloads and manual entry into Banner can create duplicate people/IDs within the system. Over time, as more data becomes associated with an ID, it becomes obvious that one person has multiple IDs. When this happens, staff must manually respond to each instance by researching the duplicates to determine which ID to keep and then combine down to one record. Depending on the amount of information attached to each ID, this process can be complex. For example, a student might have course records on one ID and payroll records on another. The longer a duplicate exists, the more time that is required to fix it. In addition, loading data files can be time consuming as records are suspended for manual review for possible duplicates.

Solution: Information Technology held a daylong event utilizing Lean improvement practices with key stakeholders from Admissions, Enrollment Services Information Systems, as well as members with an outside perspective. During this event the team reviewed the current situation and desired outcomes which helped determine that they needed to focus on the data load process which created many of the duplicates. As a result of this group's work, new multi-stage matching rules were created for the data load process as well as a standard for which files would be loaded. The new multi-stage matching rules allowed the load process to identify and automatically combine records, reducing duplicate creation as well as causing fewer suspended records requiring manual review. Old rules included data we no longer received, such as Social Security Number. The new rules took into consideration address data as well as demographic data such as email and date of birth. In addition, new standards were developed for the fields before they would be loaded. For example, files without name and address are no longer loaded.

The new matching rules and data load standards have saved the department staff many hours of manual work. A reduction of 34 hours for combining duplicates has been achieved in 2013 thus far; this time which was previously spent correcting errors is now freed up for value adding projects for the University. The department now meets quarterly to track and validate the improvements as well as review the matching rules.

Supporting Data: Suspended records requiring manual review during the data load process and the number of duplicates being fixed were tracked before and after the changes. The team experimented with the new matching rules by using the same data for each rule set. TOEFL files went from 22% suspended to 6%, GRE files went from 13% suspended to 6%. An annual large data load of 15,304 records went from 11% suspended to 1.6% suspended.

Total duplicate records combined each month for 2011, 2012, and 2013 were also tracked. Total duplicates for the end of March for 2011 were 268, for 2012 were 259, and for 2013 were 191. In March alone duplicates were down to 54 for the month compared to 123 in 2012 and 111 in 2011. There have been 68 fewer duplicates this year, freeing up nearly 34 hours for other projects.

Special Note: The two improvement events summarized above, were submitted for national recognition to the University Business Magazine "Models of Efficiency" Program. More information is available at: http://www.universitybusiness.com/moe

Improvement Events

Nine (9) Lean improvement events have occurred since the April 2013 report. A comprehensive list of all improvement events (event descriptions, results and any associated cost savings) will be shared annually each fall. This annual report was first initiated for Fiscal Year 2012. The Fiscal Year 2013 report will be shared at the September meeting.