

## Graduation Certification— Too Late to Graduate!

*By Mark S. Doman*

Oakland University (OU) in Rochester, Michigan, was experiencing growing pains. The good news was that OU had experienced 23 years of continuous enrollment growth, with student enrollment exceeding 20,000 in 2015 for the first time ever. The downside was that various administrative processes throughout the university were straining to keep up. One of the administrative processes experiencing problems was the graduation certification process. Record numbers of students were applying to graduate, and the process was really bogging down.

Students planning to walk at the following year's April commencement began applying for graduation in July. They believed all was well until deficiency notices began to go out later in the year. With help from their advisors and the registrar's office, most students were able to clear their deficiencies. But too many students were not able to do so and were notified of their graduation deficiencies too late to register for the courses they needed in order to graduate on time. The results were extreme student dissatisfaction, harried and frustrated staff, and decreased OU graduation rates.

### Lean Journey

The registrar, whose office bore the brunt of the fallout from the graduation certification process, took the first step in fixing the process. He contacted me, an OU faculty member with whom he had worked previously. For the past several years, I had taught an undergraduate "Lean" course as a part of which student teams would

conduct "Lean Workouts" of dysfunctional processes at local businesses, non-profit organizations, and sometimes even OU itself. The registrar had sponsored a student team that had conducted a Lean Workout of the OU grade change process. The team of six undergraduate students had produced a "leaned-out" online process that effectively prevented any grade change errors from reaching the registrar's office. (See Doman 2011.)

Inspired by the success of the previous Lean Workout, the registrar decided to sponsor a student team to conduct an initial Lean Workout of the OU graduation certification process. The student team mapped out the process, identified the waste in the process, and proposed several insightful countermeasures that would significantly shorten the cycle time and decrease the number of last-minute deficiencies (many of which derailed students' graduations). After reviewing the results of that student team's work, the senior associate provost and registrar decided to take the next step in their Lean journey.

Together, they sponsored a cross-functional Lean Workout team of subject-matter experts from across the campus. The team included key members of the registrar's office, including the senior associate registrar, the associate registrar, the assistant registrar for technology, the graduation auditor, the transfer coordinator, and the registrar coordinator. The team also included the associate dean for the College of Arts and Sciences (CAS), the director of advising for CAS, the director of advising for the School of Engineering and Computer

Science, the director of the Pawley Lean Institute, and two undergraduate students who had taken OU Lean courses and earned Lean Green Belt Certificates.

I facilitated the team which called itself the “Grad Path” team. We met every Wednesday from 1 to 3 p.m. during the winter semester and used the Lean A3 Report methodology to thoroughly investigate the process problems, current condition, and root causes before identifying consensus countermeasures, a target condition, and an implementation plan.

## Process Problems

Information from all across the university helped clarify that the process problems were that the undergraduate certification process took too long and had too many defects to correct at the last minute; also, too many students learned about the deficiencies too late to be able to graduate in the semester they had expected to.

- ◆ Too long: The undergraduate graduation certification process was taking almost a year to complete, including more than four months to audit and 43 days from commencement to diploma ordered.
- ◆ Too many defects: 80 percent of applicants for graduation had some sort of deficiency.
- ◆ Too late to graduate: Many of the deficiencies were not discovered until the end of the certification process. Students and staff scrambled to resolve the deficiencies, but an estimated 17 percent of applicants ultimately were not able to graduate in the semester they had expected to.

The team’s primary purpose was to minimize the “waste” in the graduation certification process so the Grad Path for students would be shorter, more efficient at correcting the defects, and more effective in producing graduates.

## Current Condition

The team found that the undergraduate certification process was an end-of-the-line, large-batch inspection process that assumed that students knew exactly what they needed to do to graduate and that they would do it in the correct sequence and according to the appropriate timeline. Yet the data revealed that only a small fraction of students did. Thus, the undergraduate certification process was characterized more by defects and

corrections than by self-sufficient students successfully navigating the OU curricula (130 majors and six catalogs) so as to graduate “problem free” and on time.

The Current Condition Timeline (Figure 1A) clearly illustrates how the OU undergraduate certification process functioned. The first audits by the registrar’s office (RO) and advisor began only after the graduation application process closed, which was after the last add/drop date for the upcoming semester. The auditing process itself consumed the resources of advising, the registrar’s office, and faculty in a frenzy of checking and correcting defects in the records of students who had applied for graduation. The back-and-forth auditing by the registrar’s office and advising lasted over four months. Many students walked at commencement in the hope that they would receive a diploma in the mail in the months to come; some received a deficiency letter instead.

## Root Causes

The team soon discovered that it needed to look beyond the undergraduate certification process and map the entire OU undergraduate value stream because all of the processes in the value stream (*e.g.*, admissions, transfer articulation, orientation, registration, etc.) were interconnected. In reality, many root causes of the waste in the graduation certification process were upstream. After evaluating the various root causes, the team focused on the following issues:

- ◆ The timing of the audit was determined by when students submitted their graduation applications.
- ◆ Graduation applications were not pre-screened for deficiencies at the front end of the process.
- ◆ Advisors were not aware when students had applied for graduation.
- ◆ Audit 1 was delayed until the graduation application process had closed.
- ◆ There was a lack of standards for completing the graduation audit of student records.
- ◆ There were no standardized formal metrics or tracking of the process.

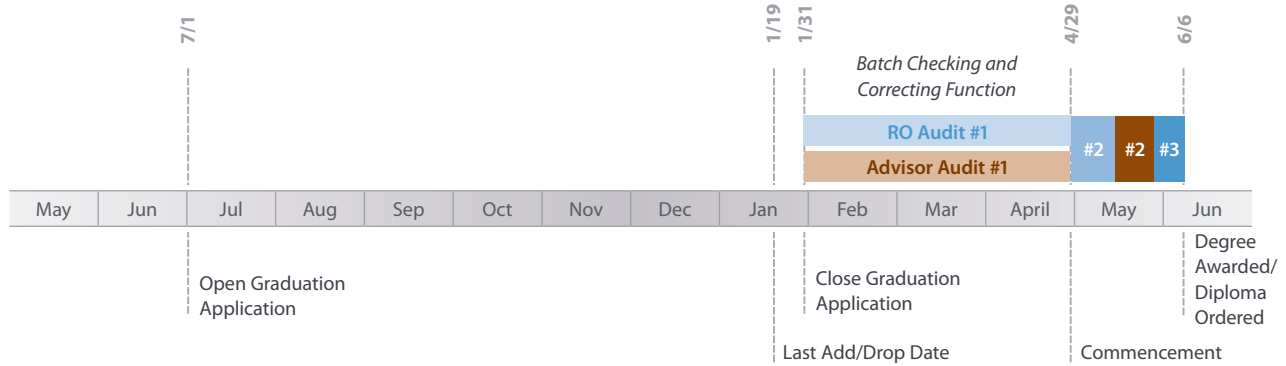
## Countermeasures

The team’s countermeasures were designed to change the undergraduate certification process from an end-of-the-line, large-batch inspection process to a more

Figure 1. OU Undergraduate Certification Process

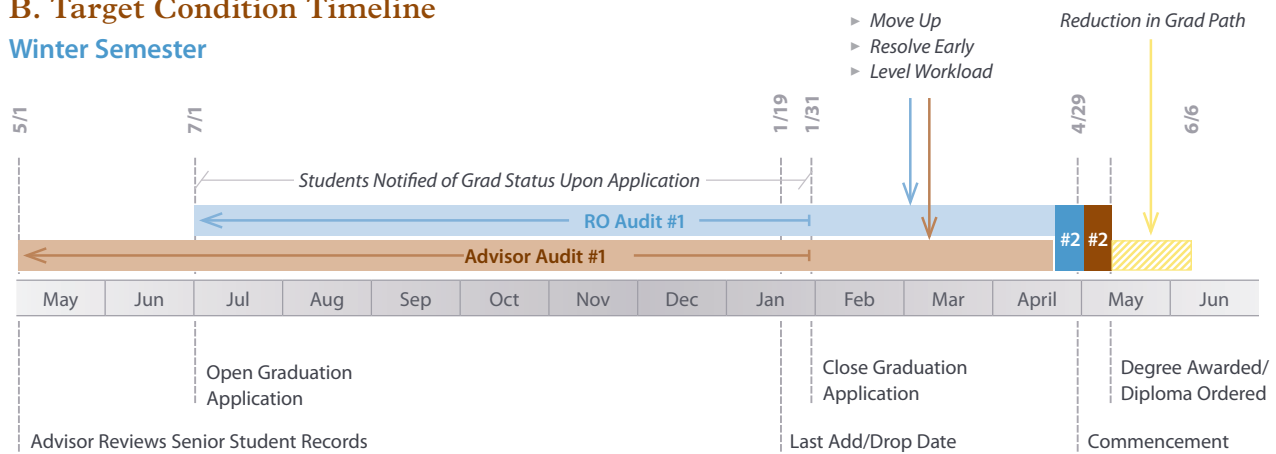
### A. Current Condition Timeline

#### Winter Semester



### B. Target Condition Timeline

#### Winter Semester



just-in-time (JIT) serial inspection process. By implementing the countermeasures below, OU has begun transforming the undergraduate certification process from a “check-and-correct” disaster recovery operation to a more value-added, front-end-loaded “counsel-and-coach” process for students.

The six initial undergraduate certification process countermeasures were as follows:

- ◆ Provide advisors with a “senior status list,” a list of students who have earned 91 or more credits.
- ◆ Have professional and faculty advisors proactively schedule consultations with senior students prior to submission of their graduation applications.

- ◆ Create automatic front-end checks (poke-yokes) in the graduation application process to immediately notify students and advisors of deficiencies.
- ◆ Produce a daily graduation applicant report for advisors, the registrar’s office, the provost, etc., listing the names of students who have completed the graduation application process.
- ◆ Move Audit I earlier in the process to precede the close of the graduation application process.
- ◆ Establish and implement standards and metrics and then document, train, and measure the new undergraduate certification process.

## Target Condition

These countermeasures help identify problems much earlier in the process, focus student and advisor attention right away, and expedite corrective action (Figure 1B). They allow advisors to level their workloads and to “counsel and coach” students along their Grad Path. Students receive a timely roadmap with clear sightlines to graduation. These feasible, cost-effective countermeasures help minimize many last-minute student frustrations and facilitate students’ graduating on time. Many can be implemented within the registrar’s office, but several require university-wide collaboration. Finally, they establish a single comprehensive source for student information (Banner/CAPP) and lay a solid foundation for the future introduction of Degree Works.

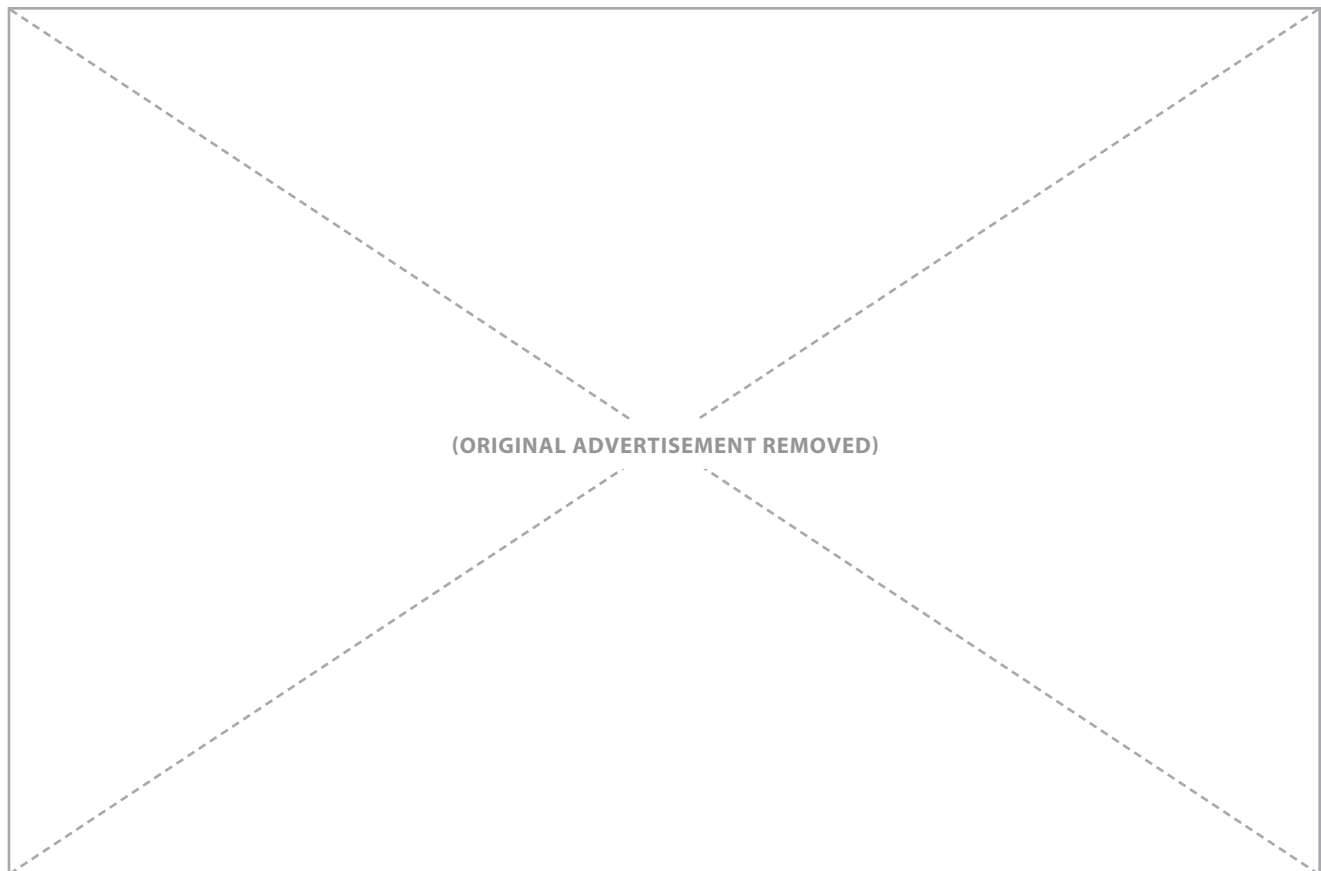
## Implementation Plan and Results

The senior associate provost and registrar took charge of the implementation plan. This was key. Having the provost’s office support the effort and lead the way re-

ally propelled the plan forward. The senior associate provost conducted monthly meetings to review progress in implementation of the team’s countermeasures and provided assistance in overcoming institutional roadblocks. The registrar appointed a member of the team to serve as “implementation manager” and to oversee implementation of the team’s countermeasures and lead the training program.

The implementation manager worked with the registrar’s office and advising personnel to:

- ◆ Create and publish the countermeasure implementation plan and track ongoing progress.
- ◆ Develop Key Process Indicators (KPIs) and automate a tracking tool to measure progress year over year.
- ◆ Create a problem log to track issues with assigned owners and prioritization.
- ◆ Write standards for the graduation certification process and walk through the document with personnel in the registrar’s office.
- ◆ Collaborate and reach consensus with the directors of advising on standard application language



for front-end “all clear” or “deficiency” messages to students, advisors, and the graduation auditor.

- ◆ Develop an Excel electronic working list (EWL) and write detailed instructions to track applicant status each semester from application to diploma ordered.
- ◆ Lead monthly meetings with the senior associate provost and key leadership team members to review the progress of the implementation plan.

Because of these efforts, significant improvements have already been made: Students receive feedback within the first 48 hours of submitting their applications, receive notifications in time to correct any deficiencies, and receive their diplomas sooner.

After just one academic year, specific results that helped shorten the undergraduate certification process and increase the number of graduates were as follows:

- ◆ Commencement (grade roll) to diploma ordered cycle time decreased more than 46 percent—from 43 to 23 days.
- ◆ Students are notified of potential deficiencies within 48 hours of applying for graduation.
- ◆ Ninety-two (92) percent of students with a potential deficiency received notification prior to the add/drop deadline for their final semester.
- ◆ The proportion of students who were denied graduation due to unmet degree requirements was reduced to 3.8 percent.

The most recent academic semester results continued to improve even with a fifteen (15) percent increase in the number of students applying to graduate as follows:

- ◆ Commencement (grade roll) to diploma ordered cycle time decreased another 17 percent—from 23 to nineteen days.
- ◆ Ninety-nine (99) percent of students with a potential deficiency received notification prior to the add/drop deadline for their final semester.

OU’s top-level leaders made a particular effort to endorse the results of the Grad Path team and recognized Grad Path team members with its 2016 Team Award. The president hosted team members at a private luncheon and participated in a spirited, wide-ranging discussion about the Grad Path Lean Workout. The board of trustees also recognized the team members at its public meeting.

More improvements to the graduation certification process need to be made, but this Lean Journey has gotten off to a very good start and is making significant progress with each new graduation cycle. The initial set of countermeasures has been implemented and quickly produced positive results. A solid infrastructure with standards, KPIs, and tracking mechanisms is now in place and producing continuous improvements. From its top leadership down, Oakland University is excited about opportunities to improve the process and, so doing, to increase student satisfaction and graduation rates.

## References

Doman, M.S. 2011. A new lean paradigm in higher education: A case study. *Quality Assurance in Education*. 19(3): 248–262.

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### *About the Author*

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