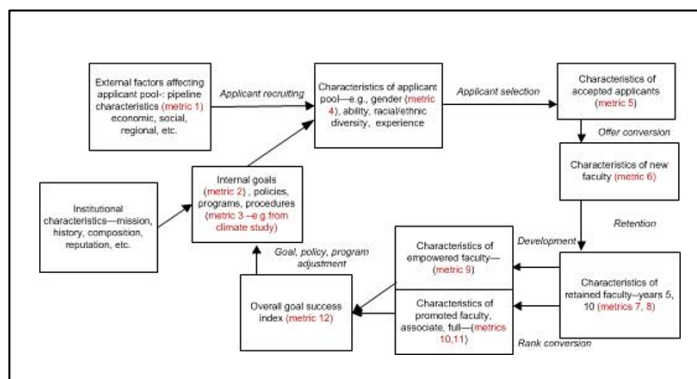


Continuous Improvement Using Lean Principles

December 2014 Update

Advance Grant Initiative

A team of faculty and staff, led by professors Sonia Goltz, Patty Sotirin, and Adrienne Minerick, are using Lean principles to determine the data and programs they need to successfully compete for an ADVANCE grant. ADVANCE is a National Science Foundation initiative to develop systemic approaches to increase the representation and advancement of women in academic STEM careers. The proposed grant goals are to measure the results of current practices in order to identify the critical keys to career success at Michigan Tech. Then, evidence-based programs will be designed as resources for academic units to address specific career issues. In this way, interventions can be tailored to defined needs and local units can be empowered to make diversity integral to their academic processes.



As the team began planning their grant strategy, they immediately saw the need for a way to accurately identify every step in the career path for faculty and collect actionable data. Advance committee member Anita Quinn, suggested they use a Lean kaizen strategy to do this. The simple flow chart above shows how the team leaders thought the career path looked before the kaizen.

On September 22, 2014, team members in the initial kaizen outlined the complete career path for



faculty, as shown on the left. Twenty possible metrics were identified. The next steps will be for future teams to dive into specific pieces of the overall career map. The early career phase was explored on October 29, 2014, and progress in the later career is scheduled to be reviewed on December 2, 2014. A series of six kaizens in total have been planned to fully develop the processes, obstacles, resources, and opportunities for intervention to retain and advance women faculty. The team intend to write Lean kaizens into their grant as a means to overcome obstacles as they are encountered.

TEAM MEMBERS

September 22, 2014 – Career Map Cartographers

Max Seel (champion), Sonia Goltz (team co-leader), Patty Sotirin (team co-leader), Theresa Coleman-Kaiser (facilitator), Bill Predebon, Louisa Kramer, Renee Ozanich, Ruth Archer

October 29, 2014 – New Faculty Career Progress, Pre-tenure Obstacles and Possible Programs

Dave Reed (champion), Sonia Goltz (team co-leader), Adrienne Minerick (team co-leader), Theresa Coleman-Kaiser (facilitator), Terry Sharik, Jason Carter, Laura Brown, Lucia Gauchia, Jill Hodges, Ruth Archer

Lean Outreach and Connections

- Thirteen Michigan Tech employees, representing the Executive Team areas of Academic Affairs (3), Administration (6), Financial Services and Operations (1), Research (1), and Student Affairs and Advancement (2), began training to become volunteer Lean facilitators for Michigan Tech. The training is seven days long spread over six months, and will include hands-on projects and feature guest speakers. The class will graduate in March 2015.
- The Copper Country Lean Group (CCLG) met in October at Pettibone Heavy Equipment Group, LLC, in Baraga, Michigan. The meeting began with a presentation by Pettibone on how they are integrating Lean into their entire organization, followed by a tour of their manufacturing facility. After the tour, the Lean topic for discussion was Root Cause Analysis using the 5 Whys method. A teach-back on 5 Whys was provided by Pettibone's Quality Manager, then the attendees shared how the 5 Whys method is used in their businesses. The next meeting of the CCLG will be in January, and will be hosted by Michigan Works.
- Lean training modules have been developed and delivered for new Michigan Tech employees and the new UAW Certification Program. The new employee training is designed to teach employees basic Lean concepts and methods they might encounter on the job. When they finish the training, they'll be ready to actively participate in a kaizen event led by others. The Lean training for the UAW Certification program is designed to provide UAW staff a basic understanding of Lean principles and skill using several Lean tools.
- The Office of Continuous Improvement is collaborating with Michigan State University's (MSU) Demmer Center for Business Transformation to create a Lean Community of Practice. The Demmer Center director (who is also the Chair of the Michigan Lean Consortium) is particularly interested in how we have developed Lean in the business operations side of the university, which is cutting edge for Lean application. He wants to begin a program like ours at MSU.
- The Michigan Tech [Continuous Improvement Blog](#) has had several guest bloggers, including Mary Fogelsinger-Huss, a Michigan Tech alumna and an ASQ Certified Six Sigma Black Belt working for the Dow Corning Corporation, and Kaylee Betzinger, a Michigan Tech student and intern at Amway in their Enterprise Excellence Department.
- The Office of Continuous Improvement participated in the Fall University Department Information Fair on Career Fair day. Several career fair recruiters took the opportunity to learn more about Lean initiatives at Tech.

Continuous Improvement Events as of October 31, 2014

Executive Team Area	Active as of 31 Oct 14	Completed 1 Jul-31 Oct 14	Completed FY15 YTD	Completed FY14 Full Year
Academic Affairs	1	2	2	7
Administration	2	0	0	29
Financial Services and Operations	0	0	0	1
Information Services	0	0	0	1
Research	0	0	0	2
Student Affairs and Advancement	0	0	0	4
Total	3	2	2	44