

Continuous Improvement Using Lean Principles

April 2015 Update

Leaders in Continuous Improvement (LCI) and 31 Backpacks

Michigan Tech's LCI student organization formed a partnership with [31 Backpacks](#), a local nonprofit organization. 31 Backpacks sends food home in backpacks every Friday and on school breaks for eligible children who might otherwise go hungry when school is not in session. The teachers, principals, and counselors at each school identify the children who need assistance and aid in the delivery of the food bags. Every week, 31 Backpacks volunteers pack over 170 bags and distribute them to eight local school districts.

Laurel and Melissa Maki, the founders of 31 Backpacks, are very enthusiastic about working with LCI, and a game plan was formed right away. It was decided that LCI would begin with a 5S of their storeroom. 5S is a workplace organization methodology used to eliminate waste, organize a workplace, and create a system to sustain improvements.

LCI students completely overhauled the existing storeroom, as shown in the pictures on the right. In order to sustain this improvement, the students created a weekly audit which enables the volunteers to quickly and easily make sure everything is in its place and there's a place for everything. Audits are the backbone of a 5S; they allow the team to detect, correct, and solve problems while they're still small.

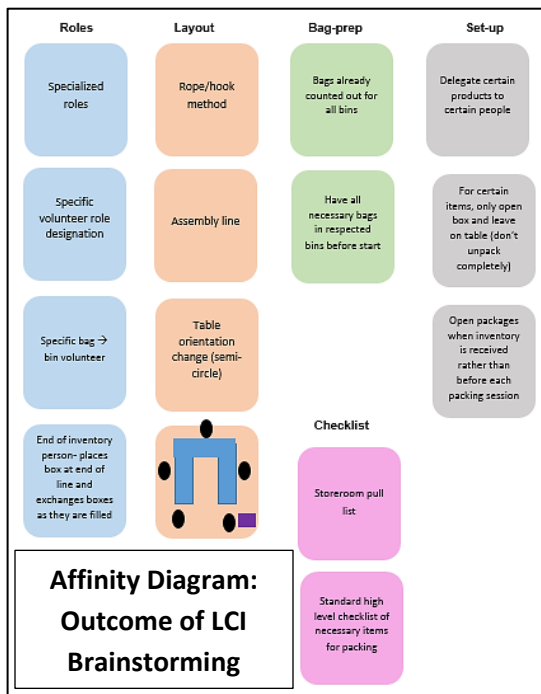


Before



After

31 Backpacks Supply Room



The next step for LCI is to improve the bag-packing process. LCI students helped pack bags several times. Then they held a brainstorming session on ways to increase efficiency and reduce back strain, a very big problem with all of the heavy cartons. Using an affinity diagram, the students organized their ideas into five areas: Roles, Layout, Bag Prep, Set Up, and Checklist, as shown in the figure on the left. The LCI students will meet with Laurel and Melissa later this month to try some rapid improvement experiments, collect feedback, and make adjustments as they improve the process.



Lean Outreach and Connections

- **LCI Growing.** The officer elections for the Leaders in Continuous Improvement student organization were successful, with a full slate of new officers elected. LCI also worked with Career Services this year in a project to create professional name tags for career fair attendees.
- **Copper Country Lean Group Active and Engaged.** The Copper Country Lean Group met in February at Michigan Works. The meeting began with a presentation by Michigan Works on how they're integrating Lean into their organization, followed by a discussion on metrics led by Northwood Enterprise and The Muffler Shop. At the meeting, we learned that Superior National Bank is joining the ranks of local businesses incorporating Lean thinking into their everyday operations.
- **Visual Management Workshop Successful.** The Office of Continuous Improvement and campus Lean facilitators provided a new Lean workshop on visual management. Visual management is a status-at-a-glance display for anything you want to keep track of, like a project, a process, department goals or daily work. Anyone who enters the work area can easily see the current situation and tell if the work is progressing as planned or if there's a problem. The goal is to display information you can act on. After an initial learning session, volunteer campus Lean facilitators Ernie Beutler, Kathy Wardnyski, and Ruth Archer provided one-on-one instruction with teams from the Library, Sponsored Programs Office, and the School of Business and Economics. This workshop is part of a recurring series of campus workshops.
- **Reaching Out to Students.** Twenty-two students attended a thought-provoking presentation on Developing Lean Leaders at a HuskyLEAD seminar. HuskyLEAD seminars, organized by Student Activities, are one-hour professional development workshops geared toward student organization leaders; however, all students are welcome and encouraged to attend. The American Society of Mechanical Engineers (ASME) student organization also welcomed a presentation on Lean basics at their weekly general meeting.
- **11 New Lean Facilitators Graduated.** Eleven employees, representing the Executive Team areas of Academic Affairs (2), Administration (6), Research (1), and Student Affairs and Advancement (2), graduated from a rigorous training program to become volunteer Lean facilitators. They'll lead continuous improvement events, consult on Lean projects, conduct value stream map and workflow analysis, and teach and use Lean thinking and problem solving skills.
- **Prestigious Post.** Theresa Coleman-Kaiser was invited to write an article for The Lean Post, a blog for the Lean Enterprise Institute, a highly respected thought leadership organization in the Lean community. Theresa's post, "[Developing Students, Improving Universities](#)," generated a lot of interest and valuable connections for the continuous improvement program at Michigan Tech.

Continuous Improvement Events as of April 3, 2015

Executive Team Area	Active as of 3 April 15	Completed since last report 25 Jan 15–3 April 15	Completed FY15 YTD	Completed FY14 Full Year
Academic Affairs	2	5	10	7
Administration	1	4	6	29
Financial Services and Operations	0	0	0	1
Information Services	0	1	1	1
Research	0	1	1	2
Student Affairs and Advancement	1	0	0	4
Total	4	11	18	44