The Green Manufacturing Industrial Consortium’s July 2014 Newsletter

It’s Dumpster Diving Season!
By Joe Imesch

As summer approaches, so does dumpster diving season. This summer, the GMIC team will perform Five Landfill Audits, four have been completed already! These audits range in scope from getting a snapshot of a company’s waste, to finding and implementing new recycling/composting/etc. streams for customer specific materials. Our brave students enthusiastically dive into and sort through waste after a dumpster has been emptied. In some cases (to the delight of the students), the dumpsters are tipped right over. This makes removing the waste much easier...

Landfill audits are an iterative process. The first round involves diving and sorting the waste to find the ‘big-hitters.’ Big-hitters are materials of large volume or weight, or items that have a high reclaim value (can be sold to recycling companies for a profit). Once the big-hitters are identified new streams are found (i.e. recycling, composting) to eliminate these materials from landfills. Each subsequent round follows the same general process with an end goal of diverting all waste from landfills to more environmentally friendly paths, also called ‘Zero Waste to Landfill’ (ZWTL).
Training, specific to the company, can be developed for the employees. This training helps the employees learn what materials can go into which stream, what materials have a reclaim value, and other ways they can help to achieve ZWTL.

Landscape Forms is the closest company to ZWTL that the GMIC has worked with. They currently send around 3% of their waste to the landfill! Poly-Wood and Fabri-Kal are in the second round. The GMIC has set up various recycling and composting streams and additional materials are now being diverted from the landfill. During these second rounds, we will look for new streams to further eliminate materials from the landfill and also ensure that materials are going to their proper stream (i.e. recyclable or compostable materials not in landfill stream). If materials are not being deposited into the proper location, training or signage with more information may be necessary.

Bold recently had the first round performed and the GMIC team is in the process of evaluating various recycling and composting companies. Dart Container hired the GMIC to get a snapshot of their waste. For Dart, we did not set up any streams – they will handle that. Additionally, Dart has the rare capability to recycle Poly-styrene foam in house.

The GMIC has developed an expertise in landfill audits and has contacts at numerous recycling and composting companies throughout West Michigan -
and beyond. We have begun to notice and document trends that can be found at any company, regardless of the setting. At Fabri-Kal, audits were done at both their headquarters (office setting) and manufacturing facility. Dart was another office setting. The rest of the companies have been manufacturing settings, with small offices. The GMIC not only has the know-how, but we are also the low cost option for land fill audits. Landfill audits are a great way for companies to get involved with the GMIC and can also be a trial run for membership or other future projects.  

With each new company, come new materials and challenges that the GMIC team loves to overcome.

A Farewell from Lorena!

By: Lorena Peña-Jimenez

The GMIC served as a growing platform for me for two years. I leave the GMIC with the training and the personal skills needed to start my career as an Industrial Engineer because of the continuous collaboration with the industry, and the projects I had the chance to be part of. My most treasured memories will be the extensive dumpster dives where company members participated, creating a mixed and collaborative environment. Every challenging project presented by companies leaves students with a sense of accomplishment at its completion. For me, being capable of completing every project with the GMIC team was priceless.

Welcome to the Team: An Introduction!

By: Michael Saldaña

My name is Michael Saldana and I am from the Dominican Republic. My undergraduate major was Engineering Management and Technology and I am currently doing a Master’s in Engineering Management as well. My main interests are lean manufacturing, quality control, other continuous improvement methods, and how to apply those in different environments, including health care. I am looking forward to using these tools as part of the GMIC team, learning how they help different areas of the organizations, and finding how they open doors for a more efficient process. During my free time I like to watch all kind of sports, however, I follow Baseball and Basketball more than any other.

Throughout my undergraduate studies I worked in two internships with Flowserve here in Kalamazoo where I worked as a production and manufacturing planner. I also worked for Pridgeon and Clay in Grand Rapids as a product launch engineering intern. During my time in industry, I was able to lead projects for process improvements. The main project was at P&C where I led a GP12 inspection improvement project that projected savings of over $3,000,000 for the company. In addition, I also work for the University’s Physical Plant as an energy management assistant. There, we monitor and record the energy and water use across the university and also seek ways to improve energy efficiency and reduce cost.

Interning at Haworth for the Summer!

By: Suresh Baskaran

I started my internship at Haworth on May 19th 2014. Haworth International, Inc. is a privately held global corporation, headquartered in Holland, Michigan, USA, serving the contract market with furniture and workspace interiors. The HR team at Haworth had put together an internship package which included orientation, Haworth brand, sustainability, business etiquette, completing values, strength finder, Neocon, how to build a chair, innovation, and lean in workplace.
They provided us opportunities to network with the managers and allowed us to mingle with them and discuss project goals for this year. Also, to enable more interaction between the interns of the West Michigan, Intern Connect Baseball match was arranged. It was a very interesting experience to meet and share our experiences amongst the new interns.

I was hired as the Lean expert to implement Lean in the Marketing and Sales departments. Like Toyota has a Toyota Management System, Haworth too has a “Haworth Management System” (HMS). I am the HMS intern. This is where my experience of being associated with GMIC came in handy. I was able to approach my responsibilities with greater focus and I was also able to provide viable and feasible solutions. The experience at GMIC helped with the following leaning goals and projects during my tenure as an intern at Haworth.

**Learning goals:**

The first step was to clear the required Haworth online courses. These online courses comprised of –

- Haworth Management System (lean)
- Haworth Brand Identity
- Haworth Sustainability
- Diversity
- Workplace Violence
- Haworth Strategy Modules (1,2,3,&4)

The goal at Haworth is: “Flow where you can, pull where you must, and never push.”

The **first project** I was assigned at Haworth was **Marketing Asset Management**. The asset/resource management at Haworth’s marketing and sales department are not systematic. This is one of the main goals of the department for this year. I was assigned this project as it is directly related to HMS. As a HMS intern I take care of collecting the asset data, analyzing and documenting the current process flow and create the future state map to form the database system.

The **second project** / goal is to develop a standard process for **selecting a Design partner** for their showroom space that will define requirements to have explicit criteria for selection and outline expectations on deliverables/schedule/communication.

The **third project** is **Marketing Literature**. This project is about reducing the printed Brochure inventory, the reprint quantity and number of pages.

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**Interning at ASMO for the Summer!**

*By: Saurabh Kulkarni*

I am working at a company called ASMO, a part of Denso. They make wiper systems and small motor assemblies for Toyota and many other major auto companies. I am an intern in the TIE (Total Industrial Engineering) department and my responsibilities include carrying out kaizen activities, time studies, motion studies, 5S, Kanban systems, Takt times and Kohsu (labor hours/part) calculations and similar activities related to lean manufacturing and The Toyota Production System.

Currently, I am involved in a project for implementing a Kanban system for a section of the plant to setup a pull flow system. It will help avoid confusion by ensuring the correct flow of information and material. I was also involved in the Takt time calculations of each machine to help prioritizing improvement projects and production scheduling activities. Another project that I am working on is the implementation of a productivity control chart that will allow visual control and tracking of productivity for each machine.
Poly-Wood Buildings Layouts Project

By: Benedicto Hernández

The objective of this project is to create drawings, escape routes and emergency guidelines for the six buildings at Poly-Wood Inc. Our member in Indiana is interested in having complete drawings of its facilities as well as improving the safety condition of the company by adding emergency guidelines.

The GMIC team approached Poly-Wood’s proposal with a methodology that included conducting a literature review, in-house data collection, and drafting on AutoCAD and Microsoft Visio. OSHA safety literature was reviewed and the standards referring to safety guidelines for manufacturing environments were summarized to serve as a reference for recommendations. As part of the data collection phase, the buildings were measured in detail to include the exact location of non-movable machines and workstations along with all exit doors, fire extinguishers, and first-aid equipment.

The infrastructure and workstations of the six buildings were drawn on AutoCAD and exported to Microsoft Visio for the addition of signs and emergency information. Evacuation routes and emergency guidelines were developed for the cases of a tornado or a fire; then the paths were mapped accordingly to make them visible to all visitors and employees. The optimal location of safety equipment, evacuation routes, emergency guidelines, and further recommendations from the GMIC team are going to be summarized in a final report.

With the completion of this project, Poly-Wood with have improved, visible emergency plans that will help assure the safety of employees and visitors alike. The building drawings will aid in familiarizing visitors and new employees with the facilities and will help for future planning.

Beyond Green Activities

By: Marylin Glass-Hedges

This summer, the GMIC assisted one of our members, Poly-Wood, with on-campus job postings and interview screenings for two internships calling for Process & Continuous Improvement Engineers. The two WMU students hired by Poly-Wood were also offered housing for the summer close to the manufacturing facility. We now they will learn a lot and have a great job experience!

Coming soon, Landscape Forms will host a career event at WMU's college of engineering at the beginning of Fall 2014. This event's main objective is to provide future engineers with a company overview, open engineering positions and application process, as well as help with resume and cover letter building: great event to get ready for the upcoming Engineering Expo 2014, which Landscape Forms will be attending as well.

If your company is interested in learning how the GMIC can help you plan and develop similar career events and activities, contact our project manager Marylin Glass-Hedges at marylin.n.glassangeles@wmich.edu.