

ARTICLE

Amway and Kids' Food Basket: Giving Back Using Lean Principles

TBM teamed up with the Amway Kids' Food Basket to help them make a 10 fold improvement in the number of meals packed every hour. This would allow the Kids' Food Basket to potentially serve more children without having to move into a larger space or requiring additional volunteers.

Executive Summary

The Kids' Food Basket serves Kent County, Michigan where at least 14 percent of households with children under the age of 18 live in poverty. Unfortunately, many children do not have access to an evening meal leaving them at a nutritional disadvantage.

The food basket had grown to the point where they were considering a move to a larger space. They believed they could do even more if they could find a way to expand without breaking the budget.

Now retired, former Amway executive, Chris Wilson, was a volunteer at the Food Basket. He had worked with TBM at Amway and asked us to pitch in and help the Food Basket improve their processes to gain more from existing resources with the ultimate goal of being able to help even more children.

This is the story of how we helped them to reduce the time spent to pack a meal and enabled a ten-fold improvement over the old meal assembly process.

Most people have heard of Amway and are familiar with its network of global independent business owners. Amway was founded 50 years ago in West Michigan by two friends, Jay Van Andel and Rich DeVos. The company's global success is well-known, and that success has continued even in the recent economic downturn: Earlier this year, Amway announced record sales for 2008 of \$8.2 billion, a 15 percent increase over 2007 sales. But this story isn't about Amway's corporate success, which is fairly obvious to anyone who follows the company; it's about giving back to the community.

Throughout Amway's existence, it has held close to its core values of freedom, family, hope, and reward. As an extension of those values—caring for people and communities—the company has made a habit of making a difference through charitable contributions and local hands-on activities. This is just one such story.

Kids' Food Basket

According to the Kids' Food Basket (KFB) Website, 14 percent of households with children under 18 live in poverty in Kent County, Michigan. The federal school program, which provides breakfast and lunch to children in need, supplies approximately 1,000 calories a day for these children. Unfortunately, many of these children do not have access to an evening meal, leaving them at a nutritional disadvantage of 800 to 1000 calories (roughly half of their daily required caloric intake). The end result of the lack of proper nutrition is children who have difficulty attending school and learning.

KFB was founded by Mary K. Hoodhood in 2001 in Grand Rapids, Michigan, to address the need for evening meals for children in poverty. KFB started providing bag dinners for 125 children from three schools. Those "sack suppers" were prepared in a church basement by volunteers. Currently,



KFB is providing 1,750 meals to 18 elementary schools in Kent County, where 80 percent or more students live at the poverty level. Clearly a need was there, and KFB was filling it.

KFB meets this mission with an average of 75 volunteers from the community each day, and has an annual budget of \$820,000, with administrative costs making up less than 12 percent of the total budget. In fact, KFB had grown to the point where it was considering moving to a larger space. They believed they could do even more if they could find a way to expand without breaking the budget.

Enter Amway

I first got the idea of using lean to help nonprofit organizations (NPOs) when I saw a newspaper article about Hope Network (a Grand Rapids-based organization founded to empower people with disabilities and disadvantages) moving to larger premises. It simply occurred to me that with lean they could increase their productivity, allowing them to be more cost effective and do more with the resources (volunteers) and funding they have. Following the lean principle of taking action, I, along with Amway's Corporate Citizenship group, set up a lean overview for representatives from eight area NPOs in late 2008. Following this, and in response to their interest, we conducted a one-day "Understanding Lean" class, which was a high-level look at lean—what it is and what it does.

This outreach effort, which was inspired by a simple newspaper article, led to Amway's involvement with KFB. With Marcia Carbines and Steve Sweers of Amway facilitating and with lean volunteers from Amway's Home Tech and Cosmetics plants, KFB undertook a kaizen event to try to improve their processes to gain more from existing resources, with the ultimate goal of being able to help even more children.

The Training

Before diving right in to an actual kaizen event, the KFB team underwent training in lean principles and kaizen. To simulate KFB's bag meal production process, the training event used the assembly of Mr. Potato Head® toys.

The scope and objectives of the Mr. Potato Head kaizen training event were to create a continuous-flow process, establish assembler standard work, establish line-side supply, and improve output by 25 to 50 percent.

The team looked at established procedures—a batch and push process—and calculated lead time, travel distances, quality defects, and work in process (WIP) inventory. They discovered a high level of defects and a WIP inventory of 315 pieces. A number of issues were identified, including lack of standard work, wasted time, clutter, and parts not clearly marked. The team then came up with five best ideas for improving the process. The next step was to implement those ideas following lean principles. Making the changes outlined above led to a decrease in lead time from 54 seconds per unit to 10 seconds per unit. Travel distance was decreased from 5,200 feet to 20 feet. Quality was improved to 100 percent and WIP was reduced to 0. This was a clear object lesson in what kaizen could do.

The Main Event

The team then put its new-found lean knowledge and skills to work addressing the meal-assembly process. Following the steps they had learned during kaizen training, they chose the assembly process for one school, Congress Elementary, and identified process issues and the changes needed to address them. Among the issues were clutter; lack of space and organization; excessive inventories; wasted time and motion, as well as interrupted flow and lots of reaching and bending; assembly table height too low; meal items difficult to find; and no obvious work instructions.

To address these problems, the team suggested a one-piece flow with a "plan for every 'part'" of the meal that would go in the lunch bag, a total of nine items per bag. During this phase of the event, the team also established an 11-step standard work protocol. They determined that meal assemblers would work from one side of the assembly table, with line-side supply coming in from the opposite side and a pack-out bin capable of holding 20 meals at the end of the table. With this set up, the assemblers averaged 4.5 seconds to prepare each meal; packing the 105 meals intended for Congress Elementary required just 8 minutes.

The time savings obtained with the new process was astounding. The original process required 41 seconds per meal, which means assemblers were able to package 88 meals per hour. Reducing the time to 4.5 seconds per meal meant that 800 meals could be packed every hour—a ten-fold improvement over the old assembly process! Not only did this mean a time savings for volunteers, but it also meant that KFB could potentially serve many more children without having to move into a larger space or requiring additional volunteers.

Thanks to the efficiencies that this project team from Amway created for KFB, we will have the ability to grow our critical services by 30 percent this fiscal year. Because of Amway's efforts, hundreds more children in Kent County won't eat lunch as their last meal of the day.

—Bridget Clark Whitney,
Executive Director, Kids' Food Basket

Going Forward

For the near-term, the meal assembly cell that was created during this kaizen event will be dedicated to producing meals for Congress Elementary. The team expects that when the cell operates with 11 work stations, assembling meals for Congress Elementary will take less than 10 minutes.

Amway's team members agreed to continue their support of KFB by offering their knowledge, skills, and experience to help further refine the Congress School Assembly Cell by using Quixx- Smart structures and other enabling materials to enhance KFB's ability to assemble just-in-time.

Since the event, several of the Amway team members made an assembly table based on what was learned during the kaizen event. The table was delivered to KFB, where volunteers had some improvement suggestions, and the Amway team is now making modifications based

on those suggestions. Amway's cell production team modified the original assembly table, incorporating KFB's improvements and made 3 additional tables, thereby completing the meal production cell.

I think the most spectacular outcome of the lean work we did is not just the incredible increase in throughput, but that by doing this along with other lean improvements KFB is able to stay where they are. Now not only can they operate in the space they have, they can also seriously consider increasing the number of sack suppers they produce, depending on food donations of course.

Bridget Clark Whitney, KFB's executive director, says, "We are truly grateful to the Amway community for contributing their expertise and consequently becoming a very instrumental part of our growth. As KFB is responding to a previously unmet need in the community, and given the economic climate in Michigan, it is imperative that KFB continues to expand our services for the Kent County community. KFB is currently serving food-insecure children in 18 schools; however, we have 15 schools remaining on our waiting list for meal services. Thanks to the efficiencies that this project team from Amway created for KFB, we will have the ability to grow our critical services by 30 percent this fiscal year. Because of Amway's efforts, hundreds more children in Kent County won't eat lunch as their last meal of the day."

The Kids' Food Basket Project is just one example of how corporations can give hope and assistance to people and communities in need simply by supplying their lean expertise to help outreach organizations do what they do better and with less.

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