The purpose of the High Performance Manufacturing Strategic Focus Group is to:

1. Establish an active HPM network amongst Manager and Shop Floor Personnel
2. Share Continuous Improvement Best Practices
3. Establish interactive and productive plant tours
4. Develop a HPM Tool Kit
The HPM Group met for a Lean - Informal Networking event at the Cat & Fiddle in Cobourg on November 18th, 2015.

Action Items Included:

1. Guest Speaker, Tara McDonough, who provided an overview of Lead to inform both new and experienced lean practitioners.

2. Established an active HPM LinkedIn networking group.

3. Development of a framework for HPM Group Plant tour/site visits to collectively resolve an identified on-site issue and share best practices.
CpK Interior Products hosted the 1st HPM Workshop on May 18, 2016. The workshop was used to focus on:
• The company’s continuous improvement journey
• The sharing of best practices
• Resolution of a problem/loss in the Plant

The half day workshop consisted of employees from

- Chem-Ecol
- Sabic
- ESCO
- Custom Plastics
- Untrack
- Canadian Resin Recovery
Objectives

1. Understand the foundation of CpK Interior Products’ lean system (World Class Manufacturing)


3. Identify improvements on the line to reduce the time it takes to process a part and to reduce the labour requirements
## Workshop Agenda

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<tr>
<th>Start</th>
<th>End</th>
<th>Duration</th>
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<td>8:00</td>
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<td>Safety and Cpk Interior Products Plant Overview</td>
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<td>World Class Manufacturing (WCM) Overview</td>
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<td>7 Steps of Focused Improvement</td>
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<td>9:05</td>
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<td>Injection 11 - Floor Exercise</td>
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<td>5W1H Exercise</td>
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<td>10:15</td>
<td>1:00</td>
<td>3M Analysis Training and House Building Exercise</td>
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<td>Step 2 of a Kaizen</td>
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<td>Step 5 - 7 of a Kaizen</td>
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<td>Wrap Up</td>
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<td>12:00</td>
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<td>Lunch and Open Discussion</td>
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May 18th, 2016
7 Steps of Focused Improvement

Step 1: Setting of an important subject Bottleneck Process Large wastes and losses

Step 2: Stratification of Losses based on S-Matrix, CD, QA Matrix

Step 3: Deciding the theme Promotion, Planning and Preparation

Step 4: Select Project Team

Step 5: Project Activities with Proper Method

Step 6: Benefit/Cost Analysis

Step 7: Follow-up and Horizontal Expansion

- Define the problem
- Describe the System
- Set the Target
- Root Cause Analysis
- Implement Solutions
- Check and Monitor Results
- Follow-up and Horizontal Expansion
Why Are We Here?
Building a Project Team

As a Project Lead why would you need to build a Team to attack your project?

1. Bring knowledge to the project
2. Bring experience to the project
3. Facilitate Data collection (Generally a good Team Leader function)
4. Roles and responsibilities in the facility
5. Spreading of knowledge
6. Development
Building a Project Team

1. Make a list of Tools/Skills/Knowledge you need to attack the problem

2. Working with People Development pillar assess your abilities/knowledge of the required tools. We do this using radar charts.

3. Working with People Development pillar understand if the gaps present are in skill (gained through application) or in knowledge (gained through self study or formal training)

4. Develop training plan (if required) and begin to select Team Members.
Training the Team to Increase Knowledge

3M Analysis

MURI MURA MUDA

11 Point Method for MURI Analysis

3M – MURA – Variation/Unevenness
Mura can only be identified by studying the operation and looking for differences. The best way to identify differences is through video analysis.

3M – MUDA – Waste

Knowledge Check
Muda is all about?
A. Differences between operators in how they do the job.
B. Wastes (i.e., walking) in doing the job.
C. Awkward, unnatural body positioning to do the job.

Exercise Review

Team 1 – “Instruction”
1. Join four (4) legs even to form a square base.
2. Attach two (2) leg caps vertically to each corner of the base.
3. Fasten two (2) how to separate sides.
4. Insert four (4) screws to the vertical posts.
5. Attach the four (4) screws, keep the assembly as a four corner angle these towards the opposite side.
6. Apply two (2) nuts.
7. Attach the (2) screws to the two (2) end caps to complete the roof.

Team 2 – “Instruction”
1. Join four (4) legs even to form a square base.
2. Attach two (2) leg caps vertically to each corner of the base.
3. Fasten two (2) how to separate sides.
4. Insert four (4) screws to the vertical posts.
5. Attach the four (4) screws, keep the assembly as a four corner angle these towards the opposite side.
6. Apply two (2) nuts.
7. Attach the (2) screws to the two (2) end caps to complete the roof.
Problem vs. Phenomenon

**Problem:** A deviation or gap between what is observed and what is desired.

**Phenomenon:** An abnormal condition producing the problem.

When you go home tonight you find your window broken. You walk into the house and find a baseball in the middle of the floor.

What is the problem? What is the phenomenon? What is the root cause?
Importance of Defining the Problem

**Initial Description of the Problem:**

Within the injection molding process at XYZ Corporation, an issue was identified with the efficiency of the mold opening/closing mechanism. The problem is attributed to the high frequency of mold failure, leading to significant downtime and reduced production capacity.

**Detailed Analysis:**

- **What is the problem being addressed?**
  - Mold failure leading to extended production downtime.

- **When did the problem occur?**
  - The issue is frequently observed during the peak production periods, coinciding with increased demand.

- **Where does the problem occur?**
  - The problem is localized to the injection molding machines located in the North Plant.

- **Who is affected by the problem?**
  - The production line workers and machine operators.

- **Why does the problem occur?**
  - Possible reasons include mechanical wear, material quality issues, and maintenance practices.

**Revised Description of the Problem:**

After further investigation, it was determined that the mold opening/closing mechanism is vulnerable to wear due to the high mechanical stress imposed during the molding process. This wear leads to malfunctions and subsequent failures.

**Solutions Considered:**

- **Preventive Maintenance Program:** Implementing regular maintenance checks to mitigate wear and tear.
- **Material Improvement:** Testing new materials with higher resistance to wear.
- **Design Modifications:** Updating the mold design to reduce stress points.

**Conclusion:**

Addressing the root cause of the mold failure will require a combination of preventive measures and design enhancements. Immediate action is necessary to prevent further production disruptions and maintain operational efficiency.
Root Cause Analysis and Identification of Countermeasures

13 Root Causes Identified

11 Potential Countermeasures Being Considered
EHS – Environmental/Health & Safety
HR – Human Resources