The Value of Lean: Superior’s Journey

Michael Kachur
John Povhe
About Michael

• Born and raised in Saskatoon
• Worked in a few different industries
  – Journeyman Press Operator with Mercury Graphics
  – Metal fabrication and CI Facilitator with Case New Holland
  – Scheduling, Custom Drafting, Quality and Service, Continuous Improvement Manager
About John

• Born and raised in Saskatoon
• Worked in a few different industries

So now we are going to tell you a story....
A Story
So you think you got problems?

– The market dried up in Western Canada in 2008
  • 60% of business was done in Alberta and that market dropped 50%
– Had to endure two layoffs dropping staff from over 400 to 240 – 40% reduction
– Attitude that we would be ok when market recovered
– New ideas not accepted
  • We tried that back in 1986 and it did not work....
– No framework to tactically solve problems
  • Ever heard the phrase “spinning your wheels”? 
– We are way too busy to do that now.....
So you think you got problems?

- Waste, inefficiencies
- Lots of debt – money was easy in mid 2000’s – Brand new store in Edmonton financed 100%
- Lots of fixed costs – large staff
  - Needed to go through painful layoffs
- Long lead times to get cabinets to customer
- Quality problem with 7% of our revenue going to service costs to complete jobs
We met Tim Woods
Our interview with Tim Woods
Our interview with Tim Woods
What is in a name?

• The name Tim Woods is synonymous with waste
• Some think it is waste in a manufacturing environment such as you would see at Toyota or Superior
• But Tim does not just stick to manufacturing but is in offices and homes too
• He is everywhere
• Lets take a closer look at his name
Tim Wood and the “S” on the See Saw
Focus on Culture

STRATEGY, INNOVATION, PASSION
Our Cultural Shift

RESOURCE TOOLKIT
“THE TOYOTA STYLE IS NOT TO CREATE RESULTS BY WORKING HARD. IT IS A SYSTEM THAT SAYS THERE IS NO LIMIT TO PEOPLE’S CREATIVITY. PEOPLE DON’T GO TO TOYOTA TO ‘WORK’ THEY GO THERE TO ‘THINK’”

TAICHI OHNO, FATHER OF THE TOYOTA PRODUCTION SYSTEM
Our Plan and Action

• We will take down Tim Woods, even if it kills us.
• Let's go back a few years to 2012
• We decided to start small... and "lean" on our staff in the plant to show us the way
WHERE OUR LEAN JOURNEY BEGAN
Spring 2012
Spring 2012
Our Lean Journey Begins

*Our team in manufacturing:*

- Had varied backgrounds
- Lacked manufacturing experts
- Some experience with CI tools in other businesses

*The perfect incubator for CI....*

- Engaged
- Motivated
- Strong positive culture
Little more on 2012

On the corporate side we created a CI team

However without vision or a proper structure, it disbanded after one year

Some of us already knew what the answer was. We needed LEAN!
Enter the Quick Kaizen

A Quick Kaizen form would give us a way to look at the improvements we made everyday. It needed to be easy to...

- Understand
- Implement
- Celebrate
- Share
The Quick Kaizen

<table>
<thead>
<tr>
<th>Area:</th>
<th>Theme:</th>
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<tbody>
<tr>
<td>Safety</td>
<td>Quality</td>
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**Description of the phenomenon**
Parts are getting damaged when handled and transported in the plant. One of our most common areas of damage are the corners on our panels and sides. The parts are often large therefore not easily to handle, they protrude past the containers / carts they are transported on making them susceptible to being bumped into by other carts or the carts are bumping into other objects in transport. As well the parts get handled several times before any real protection is applied to them.

**Description of the solution**
1. Put the foam corners on panels and sides at the inspection stage versus the wrapping stage.

**Standardization**

Complete - the Inspectors have been trained to follow the new process.

**Verify results**

Upon investigation using parts tracking and employee interviews we determined that a minimum of two of these types of parts were being re-ordered every week. We can confidently say we will avoid these particular re-orders.

**Losses attached**

- NVAA
- Human Error
- Setup
- Parts Presentation
- Breakdowns
- Quality Defects
- Warranty
- Inventory Mgmt.
- Excess Material Handling

<table>
<thead>
<tr>
<th>Originator of the improvement</th>
<th>Date</th>
<th>Date of Implementation</th>
<th>Cost</th>
<th>Benefit</th>
<th>Cost/Benefit Ratio</th>
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<td>Jason W., Kevin B., Brent B.</td>
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Little more on 2012

Did we stop there??

• No!! The plant continued to drive change and lead the way with **20 QK’s** completed
• We knew that to succeed you need to have relentless determination and focus
2013 – Momentum is building

*Plant continues to drive change*

- Formal SOP Template
- Expanded Supervisor QK Training
- Improved QK Template
- Completed 50 QK’s
- Began talking seriously about 5S
2014 – the fun is just beginning

**Plant begins to accelerate**

- Superior joins CME
- Two staff trained to facilitate 5S and Cycle time reduction
- **Completed 260** QK’s
- **Completed Two** 5S Projects
What is a 5S?

- **Sort**
- **Set in order**
- **Shine**
- **Standardize**
- **Sustain**
The Crucial Step
### 5S Audit

**Area:** _________________________  **Area Owner:** _________________________

<table>
<thead>
<tr>
<th>Scoring Guide:</th>
<th>1 = Poor</th>
<th>2 = Needs Improvement</th>
<th>3 = Acceptable</th>
<th>4 = Good</th>
<th>5 = Excellent</th>
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<tbody>
<tr>
<td><strong>Sort</strong> (No unnecessary items)</td>
<td>No clutter. No tripping hazards. No un-needed materials. Good identification and separation of parts, tools, etc.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td><strong>Set in order</strong> (Home positions used)</td>
<td>A place for everything (labels and shadows). Everything in its place (WIP). Shadow boards are present and maintained. First Aid is easily found.</td>
<td>1</td>
<td>2</td>
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<tr>
<td><strong>Shine</strong> (Clean and uncontaminated)</td>
<td>Floors and work areas are tidy. The area is clean and contaminant free. Cleaning responsibilities are assigned.</td>
<td>1</td>
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<td>3</td>
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<tr>
<td><strong>Standardize</strong> (Regularly maintained)</td>
<td>The area ownership is clear. SOP’s are visible. The Cleaning list is visible. Proper PPE is being worn.</td>
<td>1</td>
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<tr>
<td><strong>Sustain</strong> (upgrades and audits)</td>
<td>5S is maintained everyday. The cleaning list and other self-check activities are visibly sustained. Any changes to the area are updated to the new standards.</td>
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<td>2</td>
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**Comments:**

**Date:**____________________  **Audit By:**____________________  **Average Score:**____________________
5S Sustainment Board
## 5S Sustainment 2017

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<th>Departments and Work Centers</th>
<th>Q1 2017</th>
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**Quarterly Winner**
- Finishing
- Assembly
- Finishing
- #DIV/0!
# 5S Office Sustainment 2017

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**Graph**

![Graph showing 5S Office Sustainment](image-url)
Break Down the Walls
CYCLOMIX
BUSINESS CASE
Current State

Future State
Current State

Future State
Cyclomix Approval Process

• Completed an in depth look at economic benefit to Superior
• Committed to building a tracking mechanism to measure financial savings and monitor success of the project
• Obtained references of Cyclomix installations
• Received Board approval for an unbudgeted capital expenditure based on payback
Scorecard June 2014 to December 2015

<table>
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<th>Scorecard Metrics</th>
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<td>Finishing Line Products</td>
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<td>Average Prior to Cyclomix</td>
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<td>Average Post Cyclomix</td>
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<tr>
<td>Savings per cabinet</td>
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<td>Boxes produced Post Cyclomix</td>
<td>40,200</td>
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<td>Savings</td>
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Plant Focused on CI Alone 😞
QK Challenge with the Plant
Everyone Focused on CI Together 😊
2015 – Sustained Growth

• **Over 700** QK’s completed
• Corporate Resource Team and Plant begin QK challenge
• **Completed 20 5S Projects**
• Two LEAN Green Belts trained
  • Decision to have full time CI Manager
• Finance team embraces Lean and goes to paperless filing and payments
• Internal training program initiated
Passport Levels

Lean Passport

White Belt

Yellow Belt

Green Belt

Black Belt

Jon Nurse

Your Lean Journey starts here!!
2016 – Continue Sustained Growth

- **Over 950** QK’s completed
- **Four** 5S projects
- **One** CTR projects
- Two more Green Belts
- CME SK Manufacturer of the Year
- Our Quick Kaizen idea being implemented at other companies
- Passport board taken by numerous companies that visited us
2017 & 2018 – Continue Sustained Growth

- QK improvements – points and multiplier system
- 6 more Greenbelts – including one more in accounting
- 2 Blackbelts – take us to the next level
What does this all mean to Superior?

*Since 2012 we have completed:*

- **Over 3000** QK’s
- **50+** 5S projects
- **20+ Cycle Time Reduction** projects
- **2018 CME Lean Assessment Score** 3/5
- **3 major Kaizen opportunities** - high level VSM of our business
Ok, what does all this really mean?
Our CEO.....
Ok, what does all this really mean?

- QK’s have generated over $500,000 in savings
- 5S projects in our plant have reclaimed ~500 ft² of floor space
  - Allows for additional space to operate
- 5S projects in our Edmonton and Calgary warehouses have reclaimed ~400 ft²
  - Allows for additional space to store product
- 5S in head office to capture space and savings
Other projects

• Solvent recycling system – $120K annually
• Cardboard crushing – $25K annually
• Sanding automation – expected to save $200K annually
• These opportunities were identified by employees on our shop floor
Final Thoughts

• Superior Cabinets is not special – our people are – we found a way to empower them to make us better
• Implementing a lean culture and driving CI takes effort
• Get buy in at the top
• The framework exists – you don’t need to reinvent the wheel
• You don’t need to do this alone – there are lots of resources out there to help
• The only thing better than being Lean is being Lean and helping others become Lean
• The results can be so gratifying
• Remember to be patient