

A3 Reports:

Polishing the Elevator Speech

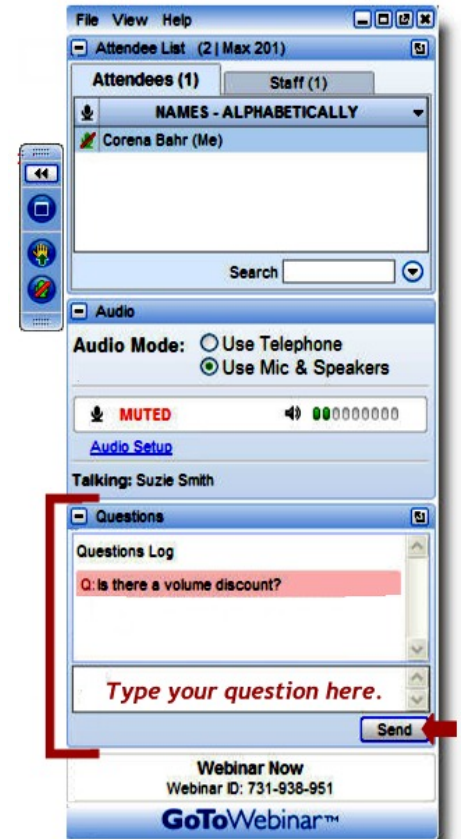
Tor Chamberlain
Clopay Plastic Products
October 31, 2012



Agenda



- Welcome
- Introduction of MBB Webcast Series
 - Larry Goldman, MoreSteam.com
- Today's Session
 - Tor Chamberlain, Clopay
- Open Discussion and Questions



- Founded in 2000
- Trained over 375,000 Lean Six Sigma professionals
- Served over 2,000 corporate customers (including 50+% of the F500)
- First firm to offer the complete Black Belt curriculum online and only firm to offer online DfLSS
- Courses reviewed and approved by ASQ and PMI
- Academic Partnership with Ohio State University

Select Customers:



Today's Presenter



Tor Chamberlain

Engineering Manager, Clopay Plastic Products

- *Provides Lean Six Sigma training across all of the Clopay businesses*
- *Mentors Black Belts in North & South American Clopay operations*
- *Bachelor of Science in Agricultural Engineering from Cornell University*

About Clipay



Scientific curiosity is the lifeblood of Clipay ...

Clipay is a global leader in specialty films, extrusion coatings, custom-printing and engineered laminations.

Serving the hygienic, healthcare, protective apparel, and industrial markets.

 **Clipay®**
PLASTIC PRODUCTS
A Griffon Company

Today's Possibilities... Tomorrow's Reality

A3: A Standardized Form of Currency



“A3 reports should become a **standardized form of currency** for problem-solving, dialogue, and decision-making ... creating an **organization of scientists** who continually improve operations and results through constant learning from the work at hand.”

- *Managing to Learn*, John Shook

A3: Tool or Process?



Both.

- Problem solving/improvement tool
- Management process

Attendee Poll



How does your organization use A3 Reports?

Does your organization use A3X Reports?

A3X: The Big Picture

A3X Matrix

Strategies (Top-Left): People and Policies to Win. Know what the global customer is demanding. Design & improve without changing. Make perfect products at target cost.

Tactics (Top-Right): Support design for six sigma through SP. Implement a lean manufacturing process.

Process (Bottom-Left): Reduce manufacturing lead time by 30%. Improve inventory turns to > 20 per year. Eliminate specific inefficiencies. Reduce changeover times to < 10 minutes. Increase asset utilization by 30%. Improve line time through quality to 95%. Reduce scrap and rework to 2%. Yield 2 hours setup per month. Eliminate lost time activities.

Results (Bottom-Right): Manufacturing manager. Manufacturing staff 1. Manufacturing staff 2. Manufacturing staff 3. Engineering staff 1. Engineering staff 2. Customer team expert.

Results Data:

Revenue contribution	\$0	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
10% at a 10% improvement rate reduction	\$11,000										
10% at a 10% improvement rate reduction	\$11,000,000										
10% at a 10% improvement rate reduction	\$11,000,000										
10% at a 10% improvement rate reduction	\$11,000,000										
Value stream profit contribution	\$11,000,000										

Summary: Revenue contribution: \$11,000,000. Value stream profit contribution: \$11,000,000.

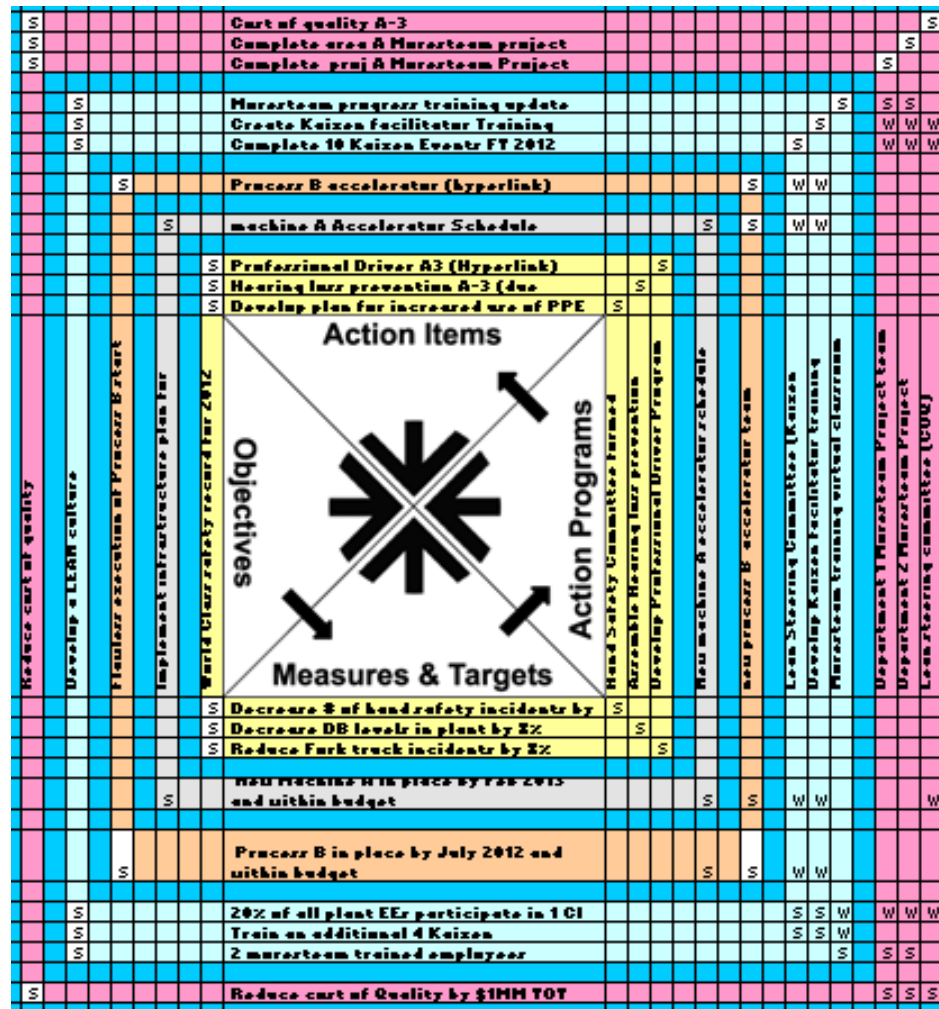
Also known as an X-matrix

- Bundles multiple A3s together
- Displays interdependencies
- Connects to bottom line results

From *Hoshin Kanri for the Lean Enterprise: Developing Competitive Capabilities and Managing Profit*, Thomas L. Jackson

Company		X Matrix for Development Team		Plant:	
Project: Hargate Plant Machine Strategy		Status: Draft - Not Reviewed			
Date: Original Revised: 04/01/2017 Author:					
		Implement standardised program			
		Create and maintain participation			
		Identify 2 trainers by 12/23/14			
		Conduct Bi-monthly meeting with			
		Complete all PV P&W and EO's			
		Complete all Alternative			
		Complete alternate sites 5 P&W			
		Complete all site P&W and EO's			
		Complete all SS P&W and EO's			
		Complete all good family 5 P&W			
		Site work - OTC Katers travel by 7/1			
		100% on process 4 line spread 4-5			
		Complete all tasks on 32 4-5 (Happell)			
		Complete all Dept 8 Katers travel			
		Complete all tasks on C6 8-31 (Happell)			
		Complete all tasks on 27 8-31 (Happell)			
		Cost of quality 0-3			
		Complete acc 8 Herculon			
		Complete proj 8 Herculon			
		Herculon program training			
		Create Katers facilitator			
		Complete 18 Katers Katers PV			
		Program 8 controller			
		working 8 Controller Schedule			
		Professional Driver 83			
		Working line generation 0-3 (Jan)			
		Working plan for increased use of			
		Measures & Targets			
		Decrease 8 of hand safety			
		Decrease 8D incidents in plant by 2X			
		Reduce Park bench incidents by			
		2015 and within budget			
		Program 8 in place by July 2012			
		and within budget			
		20X of all plant E&W participants			
		Train an additional 4 Katers			
		2 new hires to train employees			
		Reduce cost of Quality by \$50M			
		Increase line up Speed by 10X			
		Increase line up Speed by 25X			
		Decrease OTC line in, out by 10X			
		Quality 32 by 12/1/12			
		Quality process 8 at higher up			
		by 2/2/12 (Jan)			
		Decrease OTC line up by 10X			
		Complete installation initiative by			
		Complete program on by 12/2/12			
		alternate site 100% by 12/2/12			
		second line qualified by 12/2/12			
		Buy program by 12/2/12			
		WV contract Complete by 12/2/12			

A3X: How It Flows



A3X: The Important Components



A3X Components: Objectives

Develop succession planning
Develop health and wellness program
Develop training program for basic operations
Decrease cost per square meter
Implement new projects
Increase Capacity in plant
Reduce cost of quality
Develop a LEAN culture
Flawless execution of Process B start up
Implement infrastructure plan for machine A
World Class safety record for 2012
Objectives

A3X Components: Measures & Targets

Measures & Targets
Decrease # of hand safety incidents by 50%
Decrease DB levels in plant by X%
Reduce Fork truck incidents by X%
New machine A in place by Feb 2013 and within budget
Process B in place by July 2012 and within budget
20% of all plant EEs participate in 1 CI event
Train an additional 4 Kaizen facilitators
2 moresteam trained employees
Reduce cost of Quality by \$1MM YOY

A3X Components: Action Programs

Action Programs	
Hand Safety Committee formed	
Assemble Hearing loss prevention committee	
Develop Professional Driver Program	
New machine A accelerator schedule team	
new process B accelerator team	
Lean Steering Committee (Kaizen planning)	
Develop Kaizen facilitator training program	
Moresteam training virtual classroom	
Department 1 Moresteam Project team	
Department 2 Moresteam Project	
Lean steering committee (COQ)	

A3X Components: Action Items

Cost of quality A-3
Complete area A Moresteam project (hyperlink)
Complete proj A Moresteam Project (hyperlink)
Moresteam progress training update (hyperlink)
Create Kaizen facilitator Training standards
Complete 10 Kaizen Events FY 2012 (hyperlink)
Process B accelerator (hyperlink)
machine A Accelerator Schedule (hyperlink)
Professional Driver A3 (Hyperlink)
Hearing loss prevention A-3 (due date?)
Develop plan for increased use of PPE
Action Items

The A3 Process



The Clopay A3 Report Format

Title: This section is important to accurately describe the THEME of our work. This sets the stage for defining the rest of the sections accurately.

Owner: _____
Sponsor/Manager: _____
 Once signed and dated by owner and Sponsor/Mgr, this becomes an active project!



Background	
<p>This section should include current business situation, describe the process being improved or strategic need for project</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips:</p> <ul style="list-style-type: none"> ➤ Brief ➤ One or Two Bullet Points <p><i>(Please delete before filling out)</i></p>

Current Conditions	
<p>This section should include data and descriptions of the current state of the process you wish to improve.</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips/Questions:</p> <ul style="list-style-type: none"> ➤ Summarize ➤ Visual ➤ Value Stream Map ➤ Pareto <p>Question:</p> <ul style="list-style-type: none"> ➤ What is the Standard Expected? ➤ Performing to \$6σ/Expected? ➤ How is it impacting the "Customer"? ➤ How is it impacting Strategic Goals? <p><i>(Please delete before filling out)</i></p>

Problem Statement	
<p>What is the specific issue to be improved, product being developed or problem to \$6σ?</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips/Questions:</p> <ul style="list-style-type: none"> ➤ What's the pain/symptom (just the facts) <p><i>(Please delete before filling out)</i></p>

Goals/Target	
<p>What are the improvements to be achieved, resulting product to be developed or the final process \$6σ?</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips/Questions:</p> <ul style="list-style-type: none"> ➤ Brief (One or Two Bullet Points) ➤ How much will you improve? <p><i>(Please delete before filling out)</i></p>

Analysis	
<p>How do we determine the root-cause of the problem? Data should be used and clear statement of the root-cause stated.</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips/Tools:</p> <ul style="list-style-type: none"> ➤ I-Why/Cause Map ➤ Fishbone, QC Tools, Charts ➤ Use Visual Aids liberally ➤ Repeat/Repeat when Necessary ➤ Always use the simplest tool available to define the problem <p><i>(Please delete before filling out)</i></p>

Countermeasure Options and Evaluation	
<p>At least 2 options (3-7 if possible) for eliminating the root-cause or solving the problem should be listed. This could also be the various options for product development or process solutions.</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips:</p> <ul style="list-style-type: none"> ➤ Try to "Grade" Options ➤ Define Clearly the Selected Countermeasure <p><i>(Please delete before filling out)</i></p>

Countermeasure Selection and Follow-up	
<p>After analysis of the countermeasure options, the countermeasure selected should be listed with owner, timing for completion, etc.</p> <p><i>(Please delete before filling out)</i></p>	<p>Tips:</p> <ul style="list-style-type: none"> ➤ Gantt Chart ➤ Schedule Follow-up Meetings ➤ Detail the ACTIONS <p><i>(Please delete before filling out)</i></p>

Owner Completion Sign-off: _____

Sponsor Completion Sign-off: _____

Internal Clopay Only: Yes _____ No _____

The Clipay A3: Grounded on the Toyota Concept

- Size of the Paper – A3 (or 11 x 17)
- Standardized Story-Telling
- Visual documentation of the problem-solving thought process and the dialogue between the owner of an issue and others with a vested interest
- Management Process for Approval of Projects
- “Method of creating an organization of scientists who continually improve operations and results through constant learning from the work at hand”

- Managing to Learn, John Shook

An A3 Process Example

Title: Lean Six Sigma Development

Owner: Tor Chamberlain
Sponsor/Manager: Vance Greene



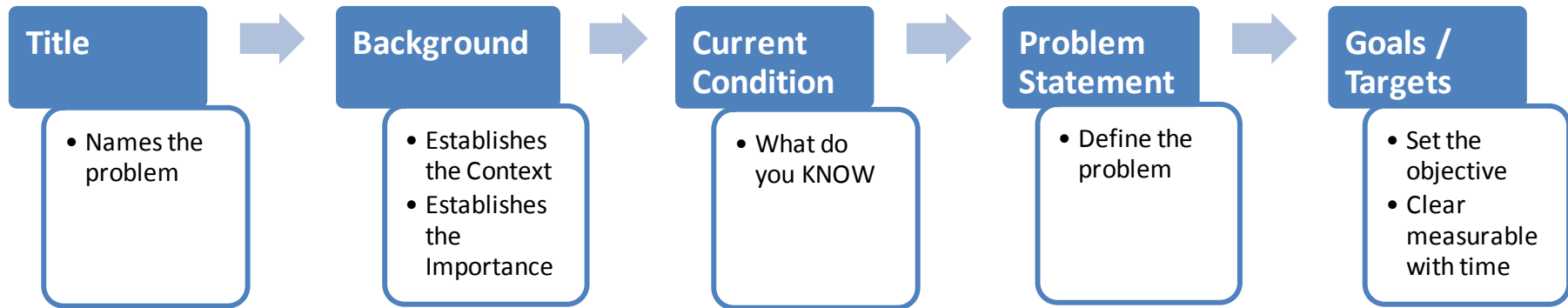
Background	
<p>Clipay Operational Excellence (COE)</p> <p>SIX SIGMA and LEAN are used to make a House of Excellence. Clipay is a house under construction.</p>	
<p>Current Conditions</p> <p>Clipay:</p> <ul style="list-style-type: none"> Is Typically Not Data / Statistics Driven Has Limited Number of Six Sigma Practitioners Does not have a way to Educate and Equip tools required for a LeanSixSigma Environment 	
<p>Problem Statement</p> <p>Clipay does not have the training or training programs to implement the Lean Six Sigma process required to meet the needs of the Clipay Operational Excellence Clipay.</p>	
<p>Goals/Targets</p> <ol style="list-style-type: none"> Develop a training plan Develop six new LeanSixSigma Black Belts Provide a repeatable process to allow further LeanSixSigma BB training Identify and implement six Plant Significant Projects 	
<p>Future State</p> <ol style="list-style-type: none"> Six LeanSixSigma Black Belts Six Plant Significant Projects Complete Repeatable Training Program to develop more LeanSixSigma Black Belts 	
<p>Countermeasures / Evaluation:</p> <p>Leading Program:</p> <ol style="list-style-type: none"> Syllabus Established Monterisium Online LeanSixSigma training selected and contracted Value Stream Mapping and A3 training provided to all candidates Project Selection Criteria Established Mentor support mechanism and timing developed Project Selection Schedule Identified Final Report developed and presented <p>Pro:</p> <ul style="list-style-type: none"> Trained important fundamentals Significant / Successful Selected key fundamentals Repeatable Successful Project Scope too Large More time required in certain areas More Clipay specific training necessary <p>Training Program Timeline and Learning Testing:</p> <p>Testing Knowledge - Final Exam:</p> <p>Pro:</p> <ul style="list-style-type: none"> Good question performance distribution Detailed thorough question selection Too long - 10 to 15 hours Questioning was unclear Many errors <p>Projectwork:</p> <p>Pro:</p> <ul style="list-style-type: none"> Significant / Successful Selected key fundamentals Successful Identified important fundamentals Project Scope too large 	

Owner Completion Sign-off: _____

Sponsor Completion Sign-off: _____

Internal Clipay Only: ☒ Yes ☐ No

A3 Process: Define & Measure – What?



- What it delivers:
 - Clear Measureable Projects developed from the data
 - Project tracking mechanism
 - Single communication method
- What it Costs:
 - Discipline at the front end
 - Willingness to let the data decide
 - Patience

*You must **go slow** in the beginning
to **go fast** at the end.*

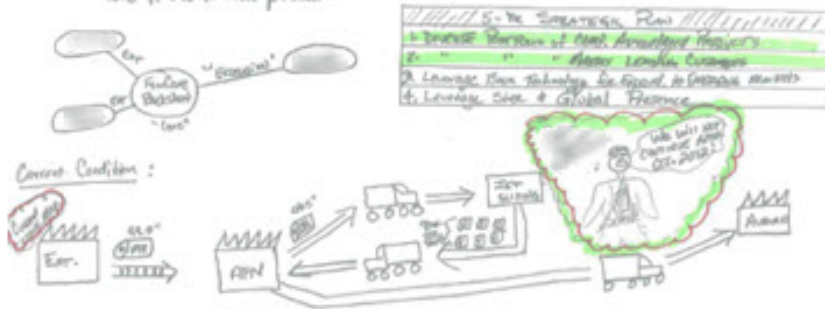
Focus on the Problem, Not the Format



A3 Report: First by Hand

Title: Short Term Recommendation for [Redacted] Waver

Background: [Redacted] (Asian, ME) has introduced [Redacted] as a new product offering. Estimated Gross [Redacted] are high (Polym) and an additional extension of current volumes are linked to this product



CUSTOMER REQ'S	✓	CLARITY CAPABILITY
3" Core ID	<	6" ID
14" OD	=	14" OD (Reel 900)
82mm Width	<	90mm Width
Print Out	✓	Print In



Problem Statement: ① Unable to meet customer obligations for Customer ② Customer is frustrated w/ costs, Jet Quality ③ Customer wants clarity to internalize business ④ Customer is demanding Recommendation for internal business NOW

Goal / Target: ① Deliver Recommendation to management by 8/10/12. ② Implement Solution w/ Acceptance of Customer by 10/5/12.

OWNER: [Redacted] & [Redacted]
SPONSOR: [Redacted]

Analysis

OPTIONS	Rolls (1000)	Rolls (2000)	Rolls (3000)	Rolls (4000)	Rolls (5000)	Rolls (6000)	Rolls (7000)	Rolls (8000)	Rolls (9000)	Rolls (10000)	Rolls (11000)	Rolls (12000)	Rolls (13000)	Rolls (14000)	Rolls (15000)	Rolls (16000)	Rolls (17000)	Rolls (18000)	Rolls (19000)	Rolls (20000)
Current Plan	12	7	N/A	TBD	+															
SLITTING ON 4:1	6	4	N/A	TBD	+															
SLITTING ON 2:1	12	4	N/A	TBD	+															
SLITTING ON 1:1	6	6	N/A	TBD	+															
SLITTING ON 0.5:1	6	1	24	12	+															
SLITTING ON 0.25:1	24	1	N/A	24	+															
SLITTING ON 0.125:1	6	1	N/A	24	+															

Recommendation: ① DELEGATE BAE PLAN OF SLITTING ON PRES AND DOCKING TO ACHIEVE 3" ID & PRINT OUT ② EXPERIMENT ON 4:1 SLIT FOR ROLLING THE EFFICIENCY GAIN

Across: ① Understand Starting Noise - 9/1/12 ② Understand Testing Reg's off Re Line - 9/1/12 ③ Track CCR Progress to Complete - 8/5/12 ④ Validate Minimum Slit Width ON Pres of Core Slitters - 8/4/12

A3 Report: Make It Pretty Later

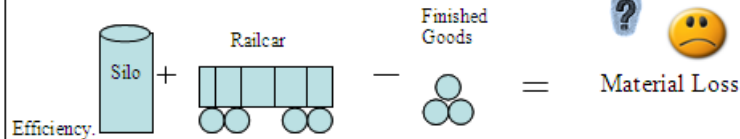
Title: Monthly Compound Adjustment

Owner: Kim Lang & Jennifer Corbett
Sponsor/Manager: Todd Eaton



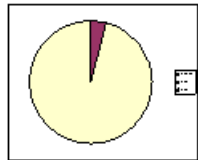
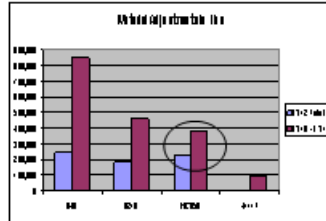
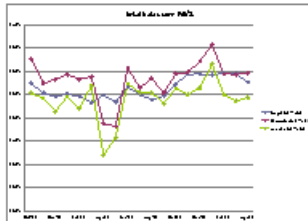
Background

Monthly accounting of compound raw material requires adjustment to Extrusion Material



Current Conditions

Each month, 22 lbs of compound, is unaccounted. This requires an adjustment to Material Efficiency.



Mach 1 - processes x million lbs/month of compound.
Mach 2 - processes xx thousand lbs/month of compound

Problem Statement

Unaccounted compound results in adjustments to extrusion material efficiencies.

Goals/Targets

Eliminate monthly compound adjustments.

Analysis



Countermeasure Options and Evaluation

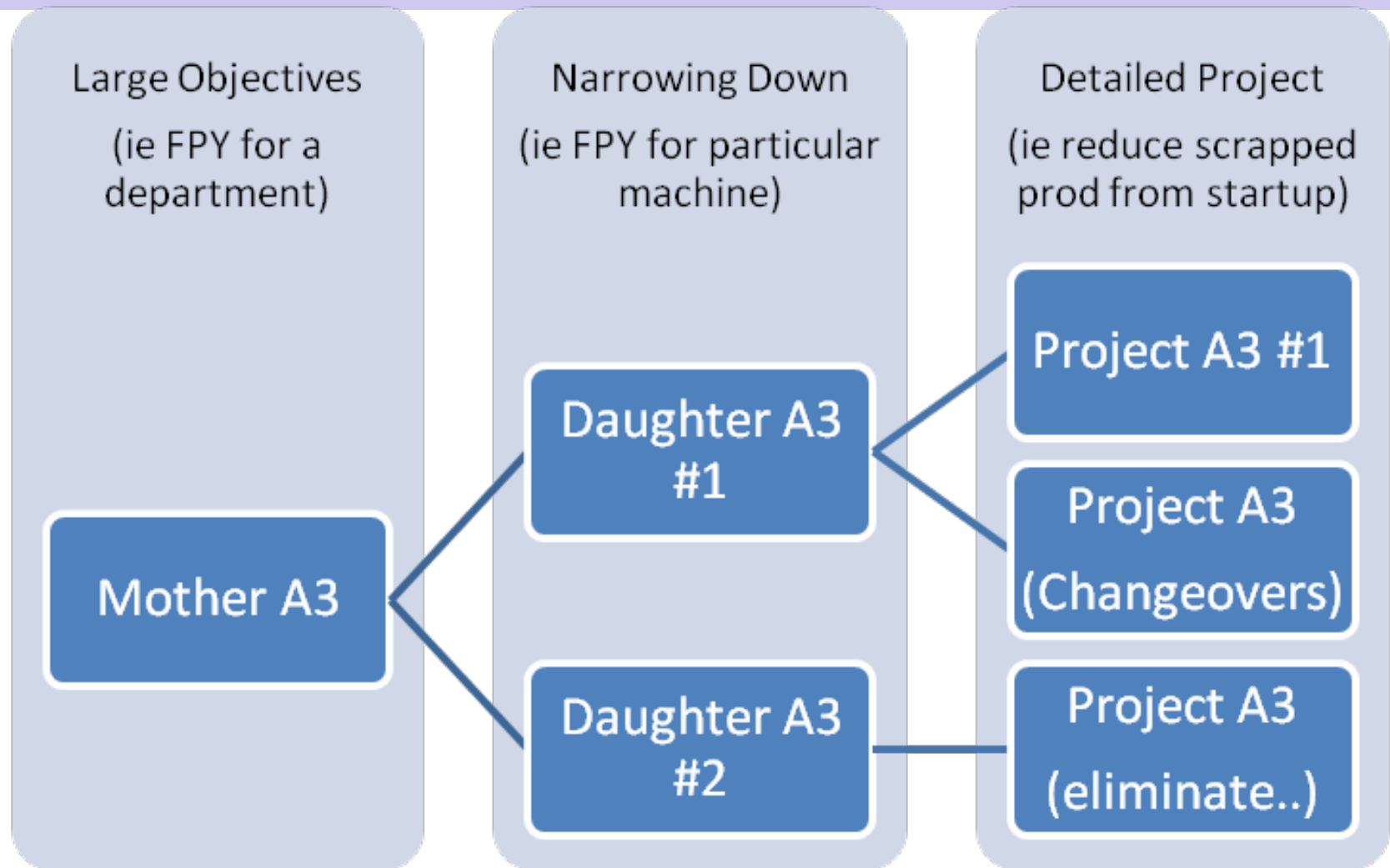
Countermeasures	Who	Date Due	Status
Moisture Samples for one railcar = one lot	Kim/Carl	10/15/2012	
old style vs ebob comparison	Carl/Maint/Kim	10/31/2012	
Is it calibrated? If so when and how	Les	10/15/2012	
Physical location in silo of SmartBob	Maint/Kim	9/10/2012	complete
How inventory adjustments are handled with COA vs ebob	Les/Tara/Kim	10/31/2012	
Audit Results from supplier facilities	John Greene/Kim	10/31/2012	
Nashville operation of Silos	Julie	9/10/2012	complete
A40 feed Hopper calibration	David Hargett	10/31/2012	
Silo clean-ups & adjustments to inventory	Todd/Scott	10/31/2012	

Owner Completion Sign-off: _____

Sponsor Completion Sign-off: _____

Internal Clipay Only: Yes No

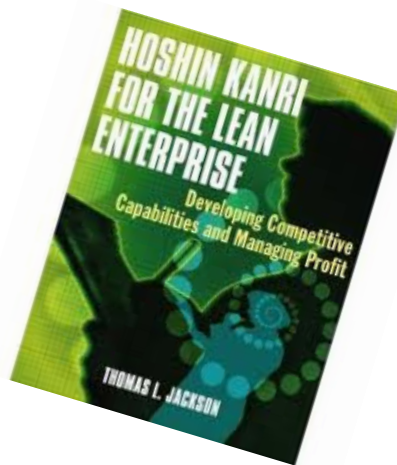
A3 Report Family



From Strategic Goals to Tactical Projects



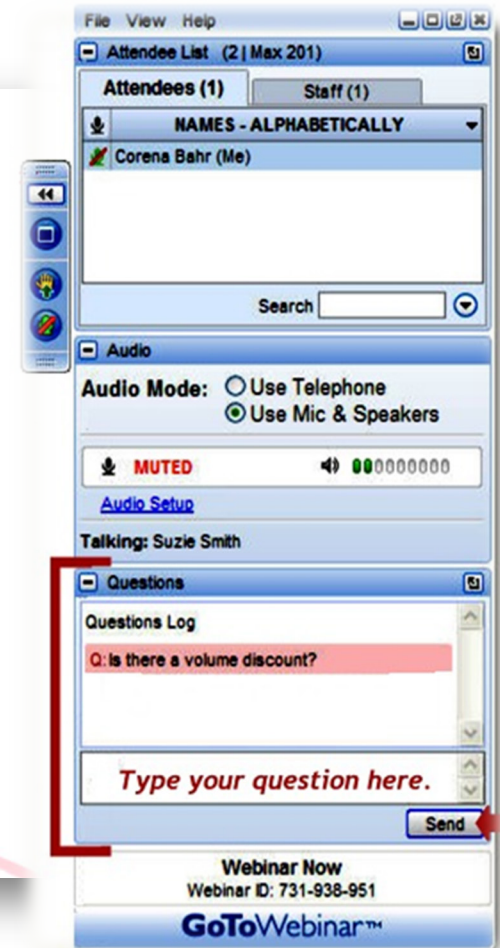
Resources for Further Information



Clopay Partners:

- MoreSteam.com
- The Ohio State University
- Systems2win

Thank You for Joining Us



Master Black Belt Program

- Offered in partnership with Fisher College of Business at [The Ohio State University](#)
- Employs a [Blended Learning model](#) with world-class instruction delivered in both the classroom and online
- Covers the [MBB Body of Knowledge](#), topics ranging from advanced *DOE* to *Leading Change* to *Finance for MBBs*



Resource Links and Contacts

Questions? Comments? We'd love to hear from you.

Tor Chamberlain, Engineering Manager – Clopay Plastic Products
TTChamberlain@clopay.com

Larry Goldman, Vice President Marketing – MoreSteam.com
lgoldman@moresteam.com

Join us for our next Webcast on November 28th:

“Things Your Teacher Never Told You about Test Optimization” –
Neal Mackertich, Raytheon

Archived presentations and other materials:

<http://www.moresteam.com/presentations/>

A3 Report Background and Current Conditions

Title:

This section is important to accurately describe the THEME of our work. This sets the stage for defining the rest of the sections accurately.

Background

This section should include current business situation, describe the process being improved or strategic need for project

(Please delete before filling out)

Tips:

- Brief
- One or Two Bullet Points

(Please delete before filling out)

Current Conditions

This section should include data and descriptions of the current state of the process you wish to improve.

(Please delete before filling out)

Tips/Questions:

- Summarize
- Visual
- Value Stream Map
- Pareto

Question:

- What is the Standard/Expected
- Performing to Std/Expected?
- How is it impacting the "customer"?
- How is it impacting Strategic Goals?

(Please delete before filling out)

A3 Report Problem Statement and Goals

Problem Statement	
What is the specific issue to be improved, product being developed or problem to solve <i>(Please delete before filling out)</i>	Tips/Questions: ➤ What's the pain/symptom (just the facts) <i>(Please delete before filling out)</i>
Goals/Targets	
What are the improvements to be achieved, resulting product to be developed or the final process specs <i>(Please delete before filling out)</i>	Tips/Questions: ➤ Brief (One or Two Bullet Points) ➤ How much will you improve? <i>(Please delete before filling out)</i>

A3 Report Analysis and Counters

Analysis

How do we determine the root-cause of the problem? Data should be used and clear statement of the root-cause stated.

(Please delete before filling out)

Tips/Tools:

- 5-Why/Cause Map
- Fishbone, QC Tools, Charts
- Use Visual Aids liberally
- ~~Kapner-Tregoe~~ when Necessary
- **Always use the simplest tool available to define the problem**

(Please delete before filling out)

Countermeasure Options and Evaluation

At least 2 options (5-7 if possible) for eliminating the root-cause or solving the problem should be listed. This could also be the various options for product development or process solutions.

(Please delete before filling out)

Tips

- Try to "Grade" Options
- Define Clearly the Selected Countermeasure

(Please delete before filling out)

A3 Report Counters and Follow up

Countermeasure Selection and Follow-up

After analysis of the countermeasure options, the countermeasures selected should be listed with owner, timing for completion, etc.

(Please delete before filling out)

Tips:

- Gantt Chart
- Schedule Follow-up Meetings
- **Detail the ACTIONS**

(Please delete before filling out)