

Collaborative Diagnostic Methods

Michael Colburn

Doug Hartshorn

Agenda

- Introduction of presenters
- Session objectives
- Relationship of presentation to Baldrige Criteria 3 (Customers), 5 (Workforce), and 6 (Operations)
- Hints on maximizing the value of this session
- Three Important Voices for an effective and collaborative diagnosis
- Case Study

Introduction of presenters

- **Michael Colburn** is a performance improvement professional that has worked with a broad range of businesses in the private and public sectors. He recently retired as an Associate Professor of Management at Ashland University where he taught Organization Development, Operations Management and Self Management & Accountability. Michael earned a bachelor of Industrial Engineering, a master of science in Industrial and Systems Engineering and a PhD in Adult Education, all from the Ohio State University. He is a registered Professional Engineer in the state of Ohio. Michael was awarded the Meritorious Service Citation by the College of Engineering of the Ohio State University. [E-mail: dr.mjcolburn@gmail.com].
- **Doug Hartshorn** is an Operational Excellence executive who has worked with a variety of businesses transforming them from traditionally managed organizations to lean organizations with a culture of continuous improvement. Doug earned his bachelor's in production Operations from Ohio University, an MBA from Capital University, and a master's in organizational development, from the Bowling Green State University. He is lean six sigma certified and . Doug is past president of the Capital City Organization Development Network. [E-mail: deh073115@outlook.com]

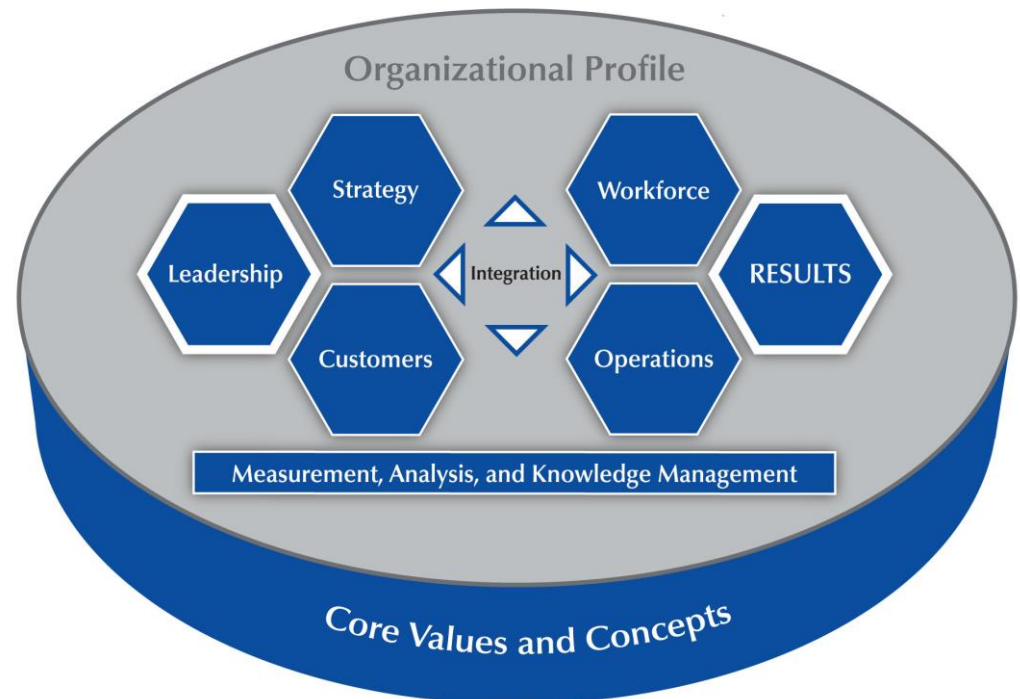
Session objectives

You will learn how to:

- Listen to three important voice of an effective diagnosis
- Use tools to identify and gather data for these three voices
- Observe the impact of these tools for system improvement and associate engagement
- Obtain resources for your continued development

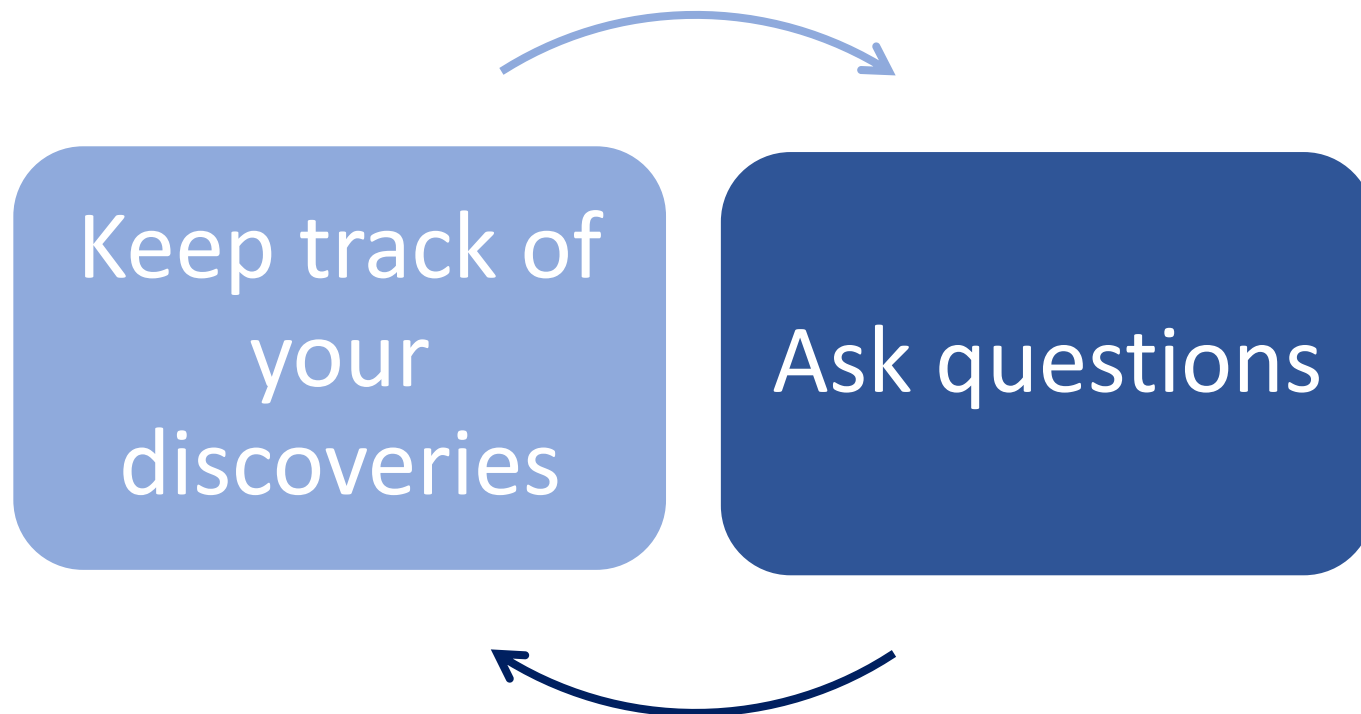
Relationship of presentation to Baldrige Criteria

- Engaged Leadership
- Links Strategy Execution
- **Customer**
- **Engage The Workforce**
- **Operations – Process Focus**
- Results Driven



From Baldrige Performance Excellence Program. 2021. *2021–2022 Baldrige Excellence Framework: Proven Leadership and Management Practices for High Performance*. Gaithersburg, MD: U.S. Department of Commerce, National Institute of Standards and Technology. <https://www.nist.gov/baldrige>.

Hints on maximizing the value of this session



Three Important Voices for an effective and collaborative diagnosis



Voice of the
customer



Voice of the
associate

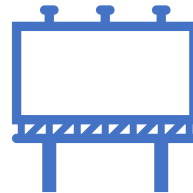


Voice of the
process

Voice of The Customer



Who are they and how do we involve them in diagnosis and performance improvement?



What is our value proposition with our customers (external and internal) ?



What are the four questions to use when interviewing customers?

Voice of The Customer

What do we do well as a provider of (product/services) to you ?

What are your needs and expectations as a provider of these (product/services)?

What are the performance indicators that tell us that we are meeting these needs and expectations?

What can we do more of, better or differently to improve our performance?

The Voice of the Associate

How do we tap into the knowledge and experiences of the associates to diagnose the needs for process improvement?

How do we utilize the skills and good will of the associates to develop and implement solutions

The Voice of the Associate - Approach

1. What keeps you from doing your best every day? Using one-question focus group to identify opportunities for improvement. to determine root causes to quality and productivity.)

(2) How building a process flow chart with a group of process members can make the process visible, identify pain points and generate improvements.

(3) How informal 'hanging out' with process owners and members can provide valuable information.

The Voice of the Process



WHAT METHODS CAN BE USED TO
ENGAGE OUR ASSOCIATES IN
REDESIGNING OUR PROCESSES FOR
SUSTAINABLE IMPROVEMENTS IN
QUALITY AND PRODUCTIVITY?



THE VOICE OF THE PROCESS AND
THE INTEGRATION OF THE THREE
VOICES – CASE STUDY

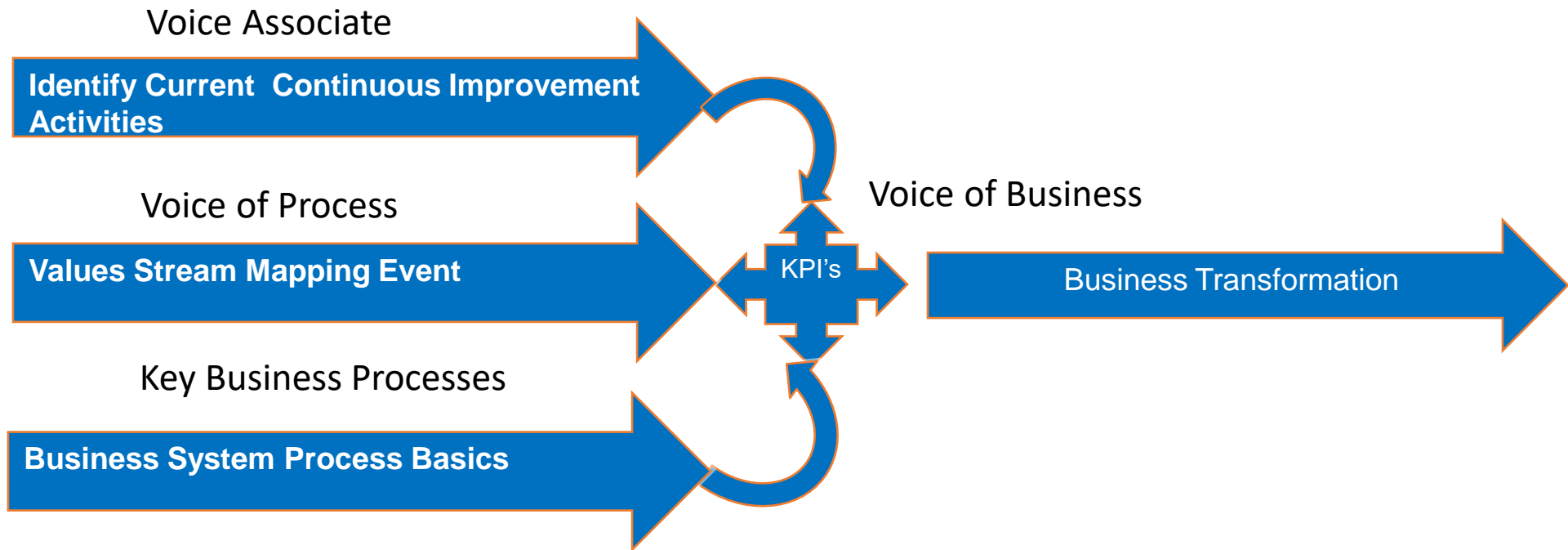


DOUG WHO WILL PRESENT HIS
CASE STUDY AND SHOW THE
TOOLS AND METHODS HE USED TO
APPLY THE CONCEPTS OF THESE
THREE VOICES TO IMPROVE
PROCESS PERFORMANCE.

Sample Kickoff Agenda

- Opening Remarks- John Engagement of Senior Leadership
- Review of The Strategy & 2017 Business Goals – Linked to Strategy
- Review Draft Deployment Plan – Doug
- Change Management Strategy
- Next Steps - Team

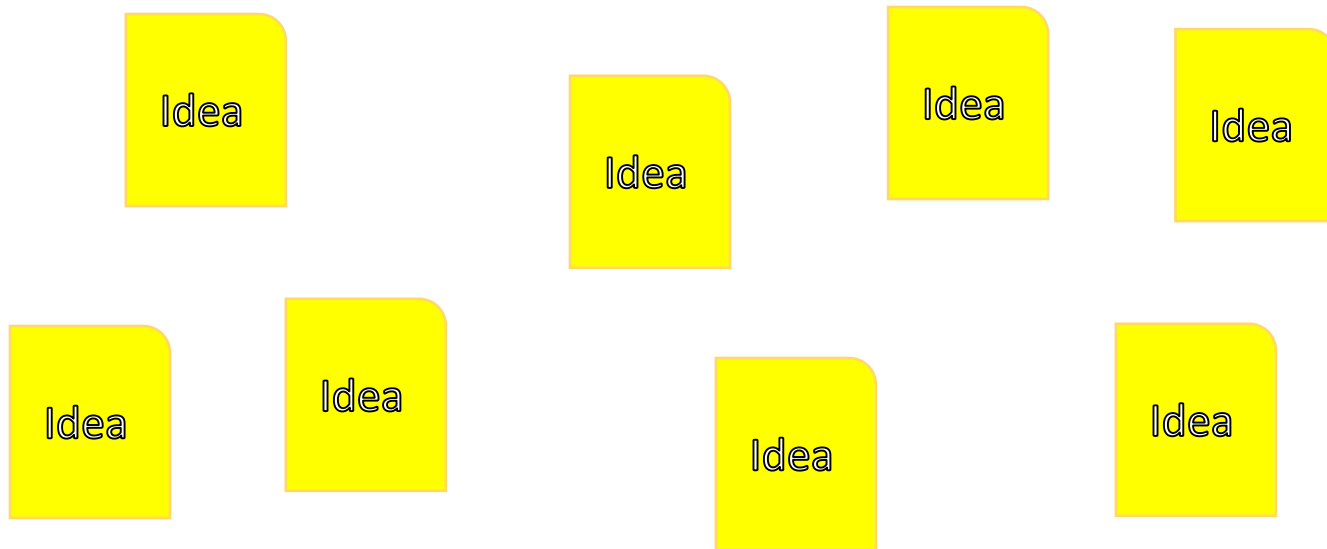
Voice of The Associate & Process



Voice of Associate – Avoid Delayed Perfection

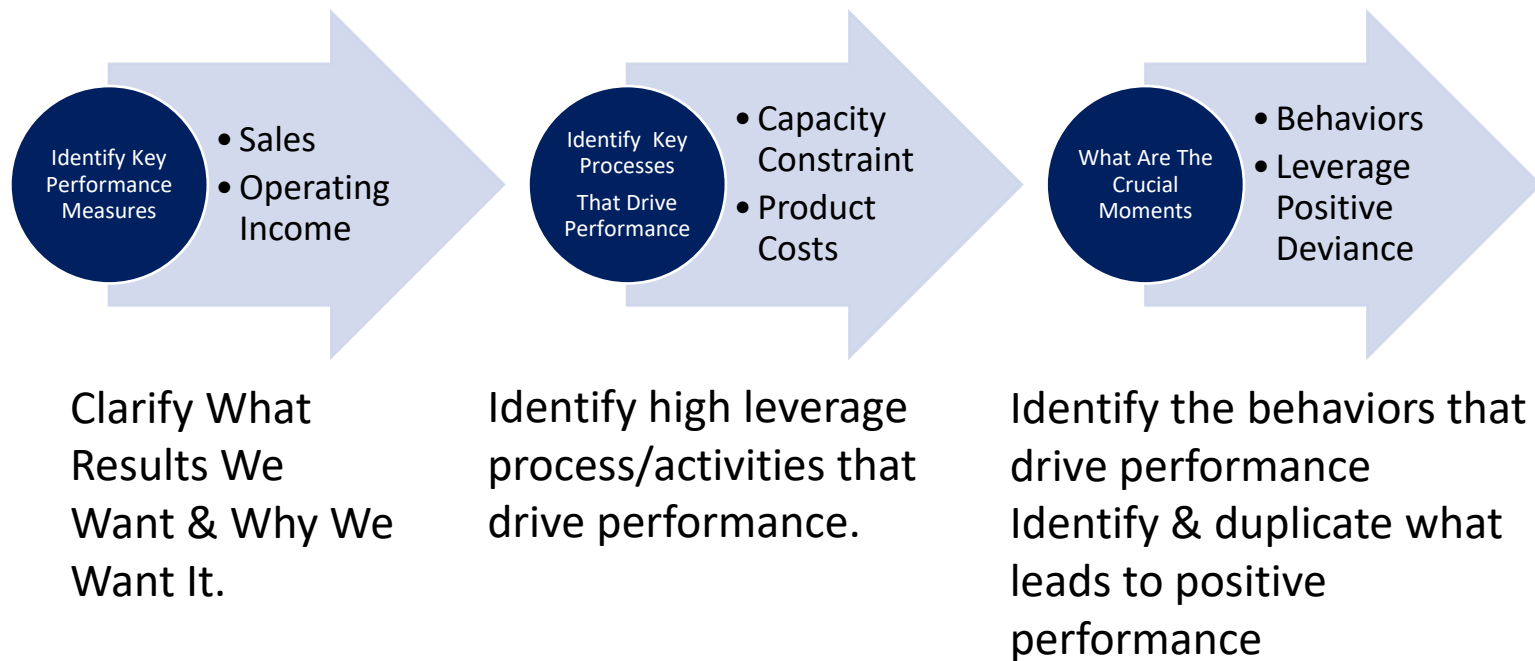
Identify Current Continuous Improvement Activities

- During Kickoff- What are the current continuous improvement activities – Everyone silently writes ideas on post -its



- During Kickoff- Ideas are documented and affinized

Establish a Change Management Strategy - Influencer



Voice of The Customer – Quality, Delivery, Cost, Service

Next Steps



Identify The
Transformation Team



Develop a
Communication Plan



Identify Area of Focus



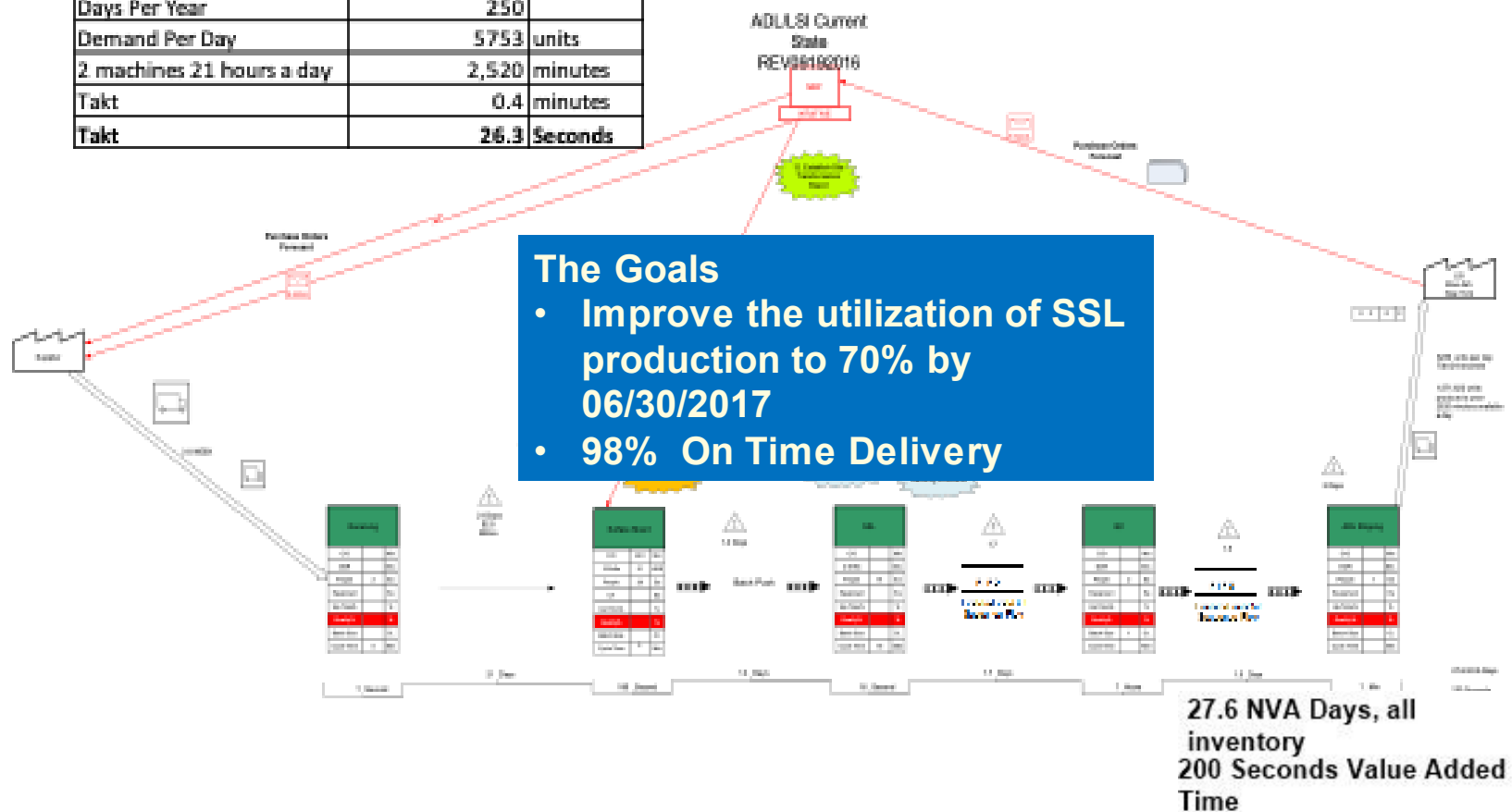
Schedule & Charter
The Value Stream
Mapping Event




Evaluate and Charter
(if required) Current
Continuous
Improvement Activities

Voice of The Process Value Stream Mapping Event Includes Customer Expectations

Demand Per year	1,438,271	
Days Per Year	250	
Demand Per Day	5753	units
2 machines 21 hours a day	2,520	minutes
Takt	0.4	minutes
Takt	24.3	Seconds



Engaging The Voice of Employee Through Continuous Improvement Events

Transformation Plan																								
ADL Transformation Plan		K=Kaizen			Internal VSM	External VSM	- New or needs info / data															Approvals:		
		JDI =Mini Kaizen / JDI																						
Process Owner:		P=Project Capital,																						
Start Date: Sept 19, 2015 (Week 15)		P6=Sigma																						
						Weekly Schedule																	Status (Plan / Post) - Green / Red	
Item	CI Activity	Type	Sponsor	Facilitator	Goal	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	25-Dec	90 Day	Target Date	Resp. / Tm Ldr			
1	Shift Change	K	DF	DEH	Reduce Downtime Between Shifts															20-Oct	Don Winks			
2	SMT Change-Over	K	DF	DEH	Reduce Downtime Between Jobs															20-Nov	Sharon	Plan		
3	QC Reduce 100% Inspect	JDI	DF	DEH	Reduce None Value Activity															26-Sep	Sharon			
4	ABCD Analysis Kaizen (PFEP)	K	DF	DEH	Reduce Downtime Between Jobs, Improve Productivity, Customer Service															16-Oct	Paula			
5	Printer Project	P	DF		Reduce Downtime															TBD	DW/DEH	Started		
6	SSL (1-Piece Flow)	K	DF	DEH	Standard Work & Flow - Increase Productivity(7,8,9,12)															11-Dec	Scott	Plan		
7	Establish SSL & SMT Visual Management	K	DF	DEH	Improve Communication															24-Oct	Doug, Doug Scott			
8	Site Board	JDI	JB, DF	DEH	Improve Communication															10-Oct	DEH, Scott			
9	External Values Stream MAP	K	JB, DF	DEH	Develop External Busines Transformation Plan															16-Oct	DEH, D. Feeney			
10	ADTI Cell Design	K	JB, DF	DEH	Increased Sales															19-Sep	Don Winks, Deh	Ongoing		
11	Quote Kaizen	K	JB, DF	DEH	Improve Customer Service, Increased sales															6-Nov	A.Greer, M.Allmon	Plan		
12	Telesis 1 Piece Flow January 8	K	JB, DF	DEH	1 Piece Flow & Stabdard Work,															1/8/2017	D.Baker	Plan		
13	January 22 SMED	K	JB, DF	DEH	Increased Utilization															1/22/2017	D. Winks	Plan		
14	Scheduling	K	JB, DF	DEH	Improved Service & Throughput															12/4/2016	D.Feeney	Plan		
15																								

Voice of Customer – New Product

Opportunity: ADTI moved production of there video display boards from their Supplier in Mexico. The first was worth \$340K. The needed to be producing 60 units a day in a week

Cell design & Standard Work : Developed a U-shape cell with based on one piece flow and standard work.

Benefits: New Sales of \$340,000

Customer
Feedback

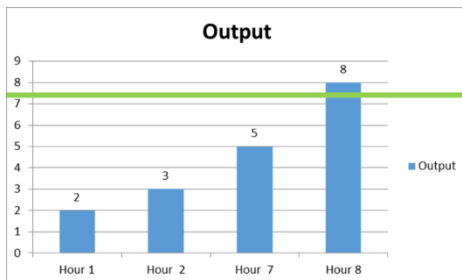
Jim Martindale
President & CEO, ADTI Media, LLC
jim.martindale@adtimedia.com
951.757.6005

On Oct 14, 2016, at 1:57 PM, Jim Martindale <jim.martindale@adtimedia.com> wrote:

Hello Dave and team:

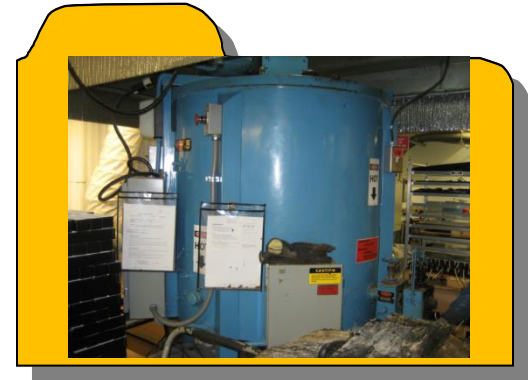
Just wanted to send a note to thank you all for your outstanding efforts in bringing up our assembly cell, learning our product, procuring significant material, hosting our engineers, and getting modules out on schedule in this short period of time! We are very impressed with your capabilities and the ease of doing business with you. Likewise, our customer is very pleased with the products we've installed thus far and we are confident we will be able to continue to provide timely deliveries of quality products to them and all of our customers with your strong support. I hear that you have been able to implement Lean process improvements on our line "real time" which is exciting and mutually beneficial.

Again, on behalf of the team at ADTI, thank you and we look forward to continuing a long and successful relationship with you



Goal 60 a
day or 7.5
per hour

Before



After

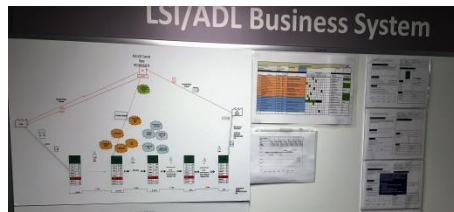
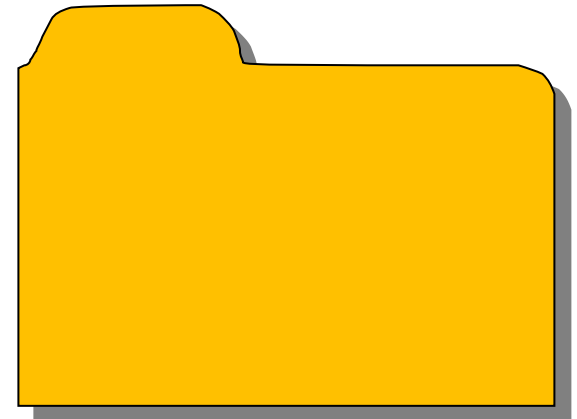


Voice of The Business – Process Basics

Problem: Lack of standard work and visibility around continuous improvement activities and business performance. Specifically, no transformation board, no standard work for the monthly Financial Review and Action Register

Solution Approach: Standard Work to drive continuous improvement and business performance

Benefits: Improved Capability



Transformation Board

Category	Item	Value	Unit	Change
NET SALES	TECHNOLOGIC SALES - PRODUCT	3	0.1%	0.1%
	TECHNOLOGIC SALES - SEA	0.0%	0.0%	0
	ALL OTHERS SALES - PRODUCT	0.0%	0.0%	0
	ALL OTHERS SALES - SHIPPING & HANDLING	0.0%	0.0%	0
COST OF SALES	Net Sales	4,116	100.0%	100.0%
		4,100	100.0%	(0.4%)

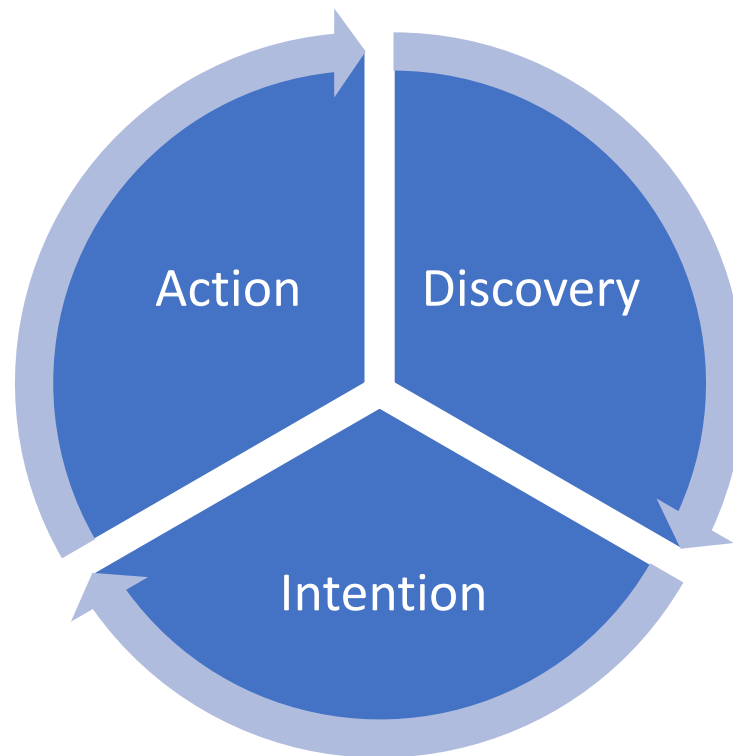
Item #	Action Item	Status	Owner	Due Date
1	Perform IT Assessment and develop plan to bring up to ISO standard	Not Started	IT/Finance	12/15/2014
2	Perform Security/Backup Assessment and plan to bring up to ISO standard	Not Started	IT/Finance	12/15/2014
3	Develop plan to automate weekly - Internal & External Value Stream Maps	Completed	Logistics/Finance	08/13/2014
4	Implement Transformation Plan	Completed	Logistics/Finance	08/13/2014
5	Cost Change System - Improve Utilization of Surface Mount Solder	Completed	Logistics/Finance	11/13/2014
6	Surface Mount Change Over Speed - Improve Utilization	Completed	Logistics/Finance	11/13/2014
7	Cost Reduction Work Item Inspection	Completed	Logistics/Finance	11/13/2014
8	ISO 9001:2015 Audit - Improve Productivity (20%)	Completed	Logistics/Finance	11/13/2014
9	Implement Transformation Visual Management Board	Completed	Logistics/Finance	11/13/2014
10	Process Mapping	Completed	Logistics/Finance	11/13/2014
11	External Business Value Stream Map	Completed	Logistics/Finance	11/13/2014
12	ASD Cost Change System - Phase 2	Completed	Logistics/Finance	11/13/2014
13	Quality Review	Completed	Logistics/Finance	11/13/2014
14	Process Change System	Completed	Logistics/Finance	11/13/2014



Voice of Associate- Activities
Driven by Employees



Your Discoveries



Closing