

Kaizen Burst Events

Essential Steps to Achieve Powerful and Speedy Results

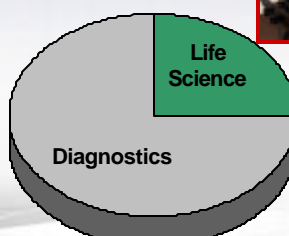
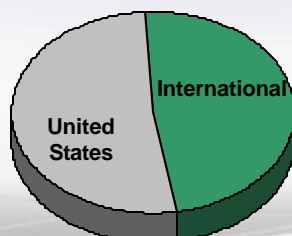
Coleen Bentley
Vice President, Global Lean Six Sigma Champion
Beckman Coulter, Inc.

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Beckman Coulter

- 11,000 employees worldwide
- Established in 1935
- Headquarters in Orange County, CA, USA
- \$2.76 Billion in 2007 revenues
- Publicly traded on NY Stock Exchange



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INSPIRATION

We are dedicated to improving patient health and reducing the cost of care.

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Lean Six Sigma Vision and Mission

Our Vision

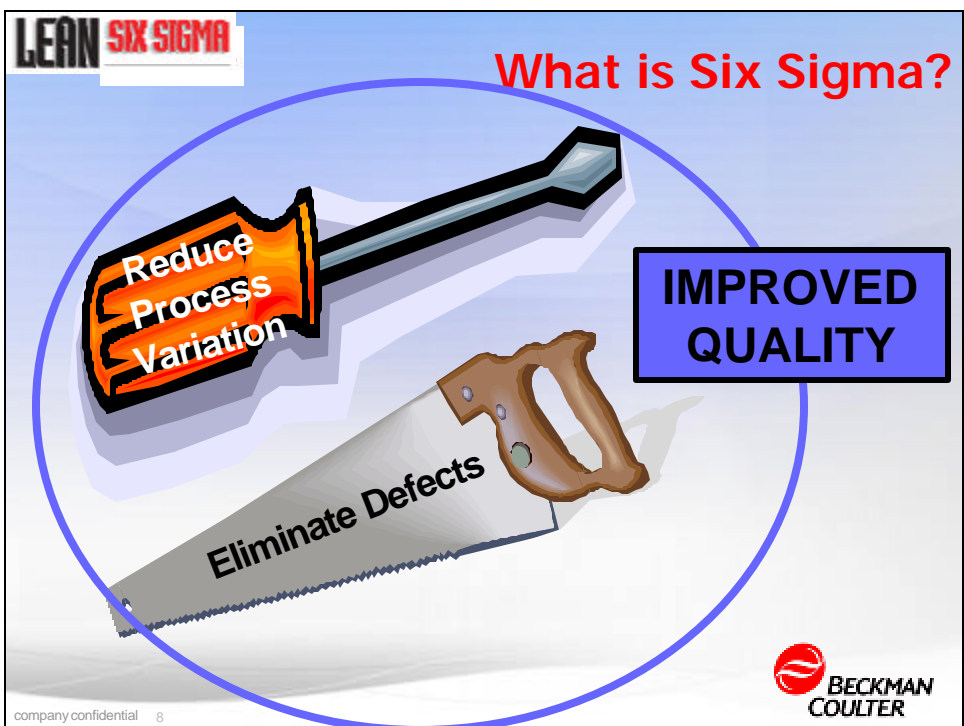
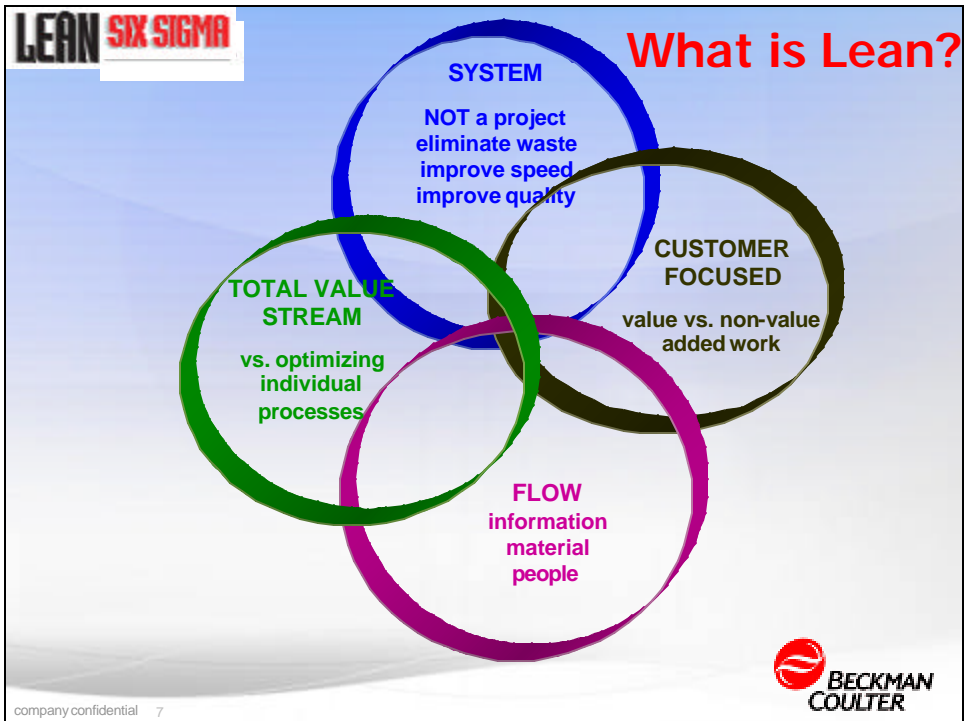
***Enable Growth and
differentiate Quality through
Operating Excellence***

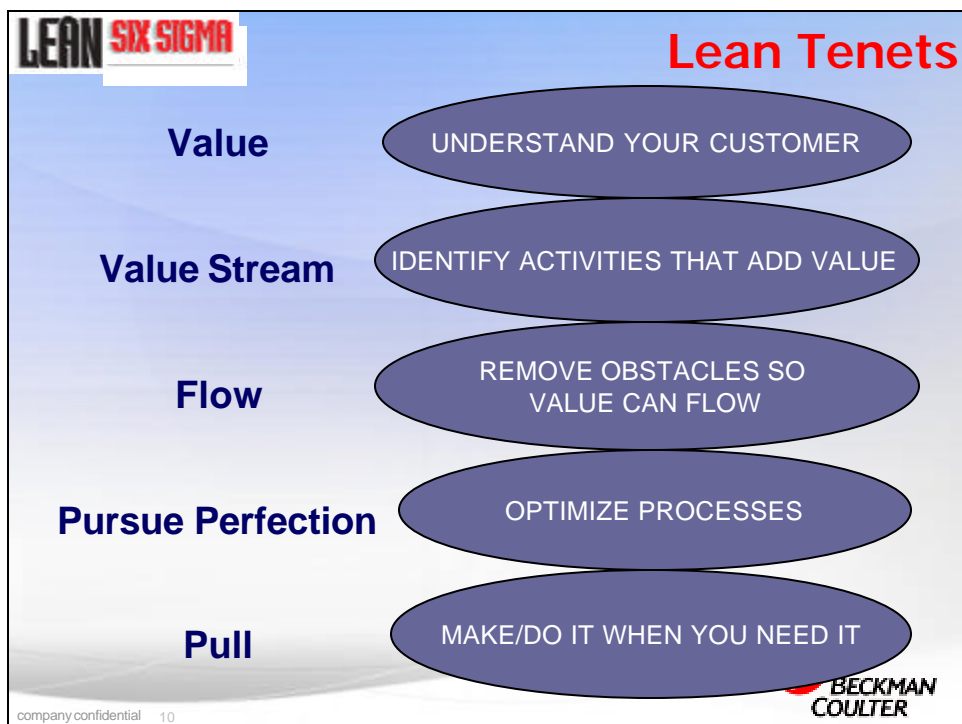
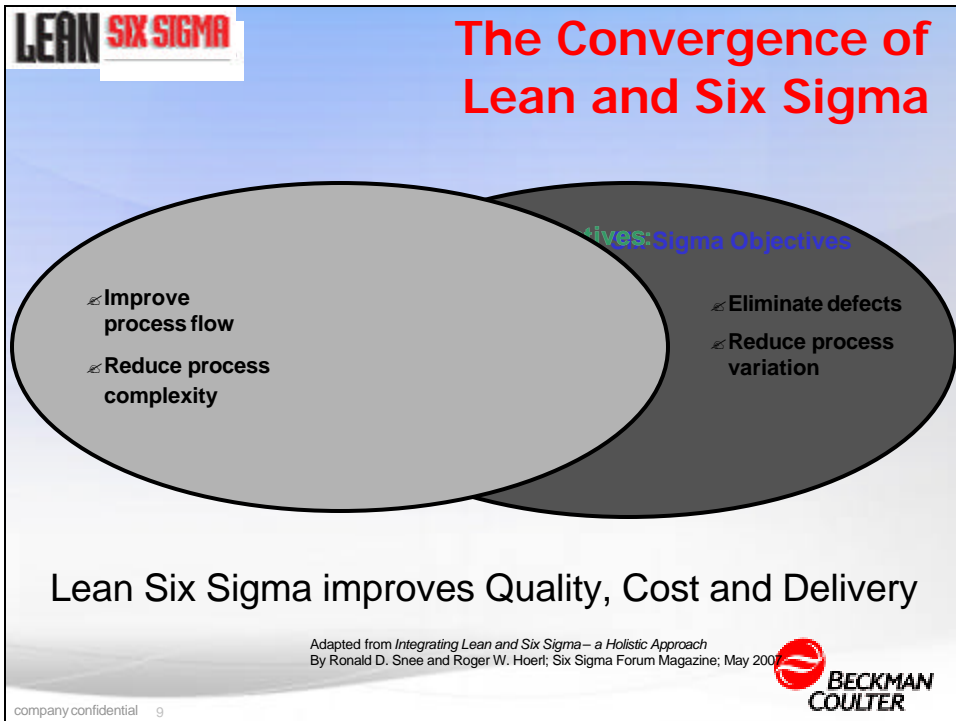
Our Mission

***Simplify, Automate and
Innovate our Internal
Processes***

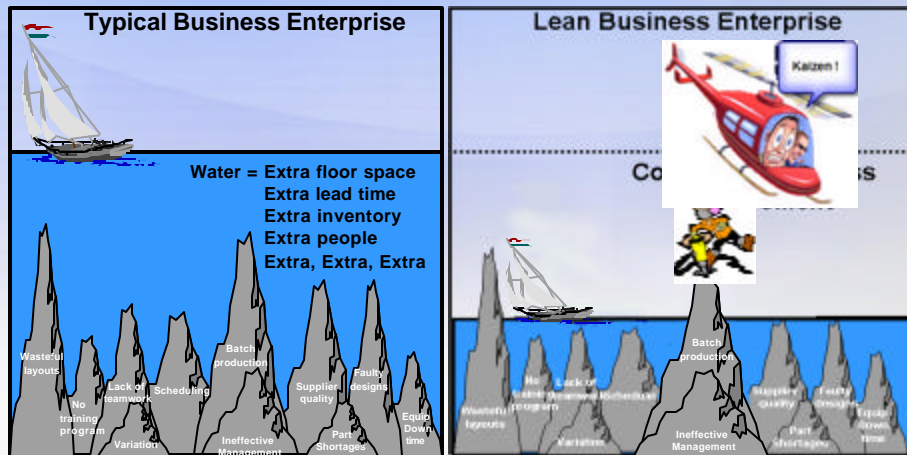
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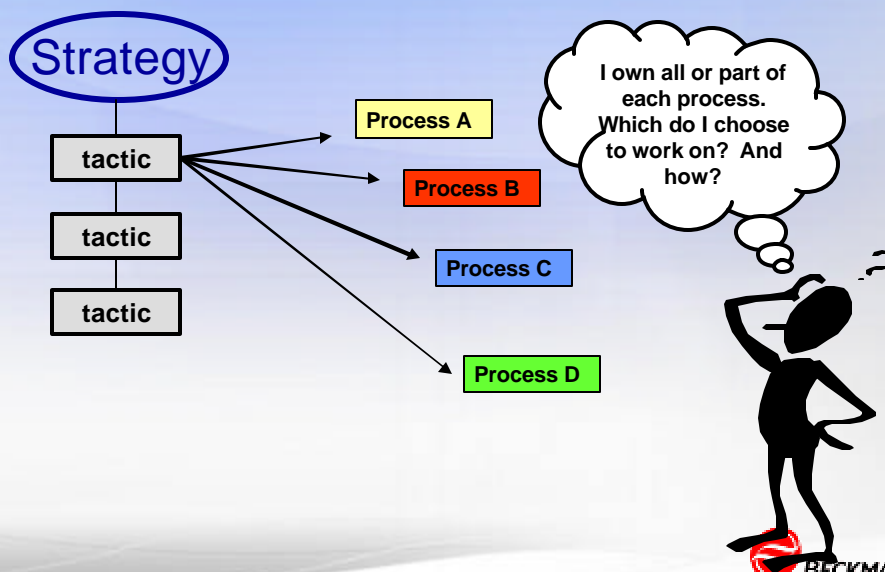
Lean Lowers the Water Level

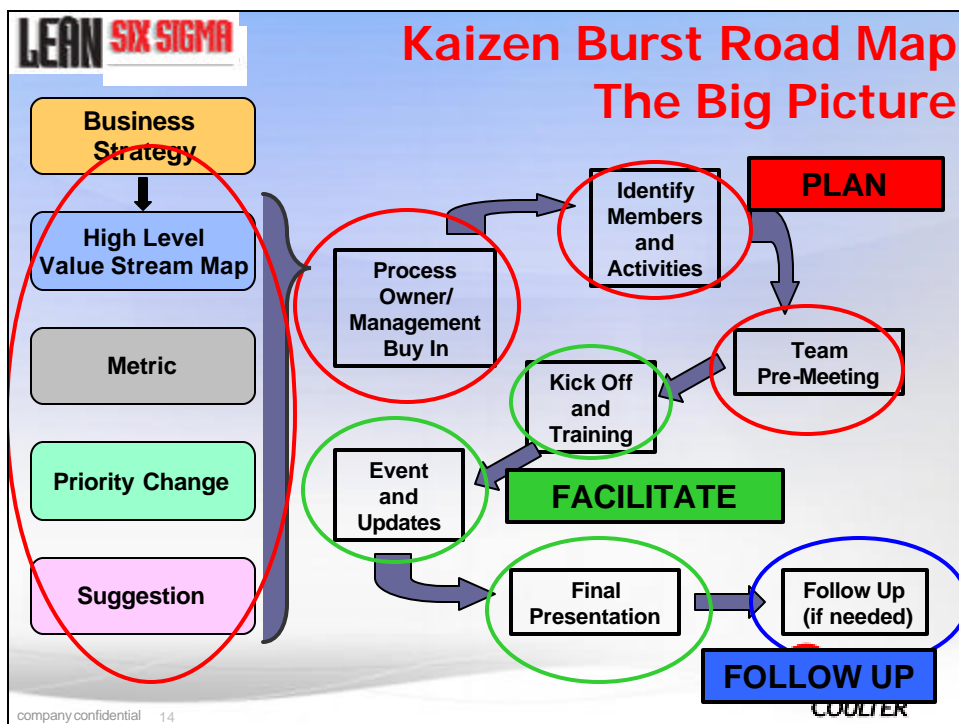
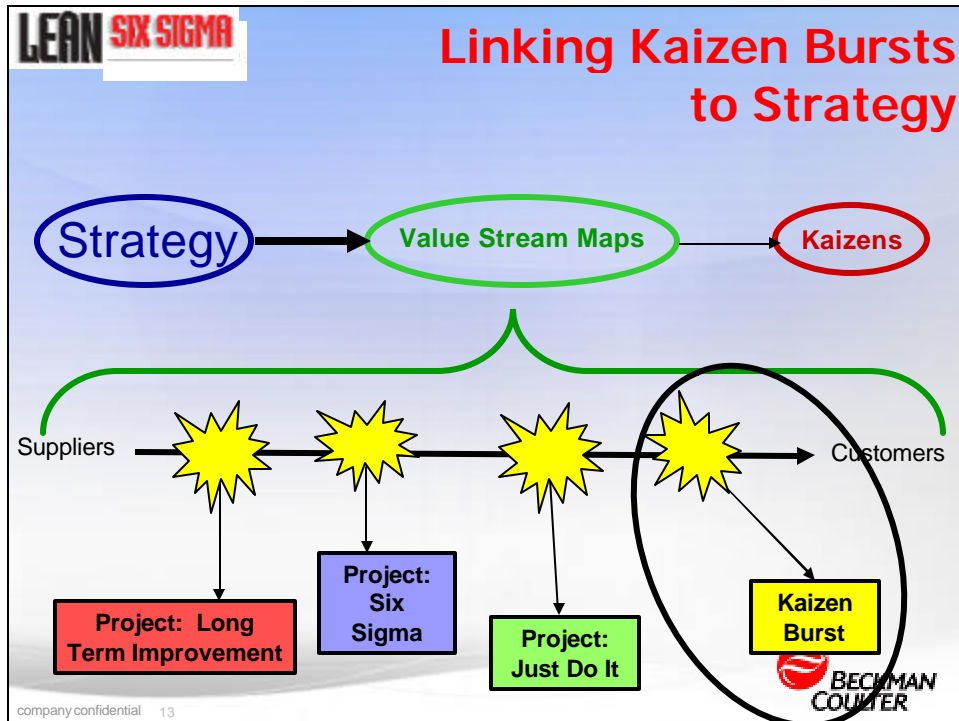


Waste is the excess water level we allow for, and tolerate, in our processes



Linking Strategies, Tactics, and Processes





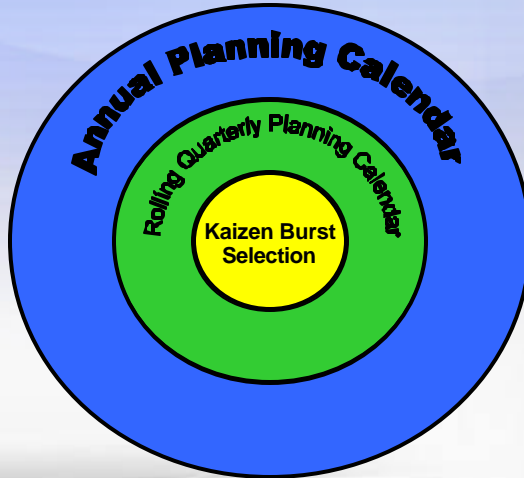
Planning for a Kaizen Burst Event



Don't Let This Be You!



Planning From General to Specific



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“Pencil Plan” → **Annual Planning Calendar**

WEEK	DATE	FACILITATOR	TEAM	TEAM	TEAM	TEAM	TOTAL TEAM	Teams Run
1	12/31-1/4		New years	New years	New years	New years		0
2	1/7-1/11							3
3	1/14-1/18	Edwards	Dxl Gantry's	Stealth	?		3	3
4	1/21-1/25							3
5	1/28-2/1		MONTH END	MONTH END	MONTH END	MONTH END		3
6	2/4-2/8							5
7	2/11-2/15	Dennis	?	?			2	5
8	2/18-2/22							5
9	2/25-2/29		MONTH END	MONTH END	MONTH END	MONTH END		5
10	3/3-3/7							5
11	3/10-3/14							5
12	3/17-3/21	Dennis	?	?			2	7
13	3/24-3/28		MONTH END	MONTH END	MONTH END	MONTH END		7
14	3/31-4/4							7
15	4/7-4/11							7
16	4/14-4/18	Dennis	?	?			2	9
17	4/21-4/25							9
18	4/28-5/2		MONTH END	MONTH END	MONTH END	MONTH END		9
19	5/5-5/9	Dennis	?	?			2	11
20	5/12-5/16							11
21	5/19-5/23		Memorial Day	Memorial Day	Memorial Day	Memorial Day		11
22	5/26-5/30	Edwards					3	14
23	6/2-6/6							14
24	6/9-6/13							14
25	6/16-6/20							14
26	6/23-6/27		MONTH END	MONTH END	MONTH END	MONTH END		14
27	7/1-7/4		Independence Day	Independence Day	Independence Day	Independence Day		14
28	7/7-7/11							14
29	7/14-7/18	Dennis	?	?			2	16
30	7/21-7/25							16
31	7/28-8/1		MONTH END	MONTH END	MONTH END	MONTH END		16
32	8/4-8/8							16
33	8/11-8/15	Dennis	?	?			2	18
34	8/18-8/22							18
35	8/25-8/29		MONTH END	MONTH END	MONTH END	MONTH END		18
36	9/1-9/5		Labor Day	Labor Day	Labor Day	Labor Day		18
37	9/8-9/12							18
38	9/15-9/19							18
39	9/22-9/26		MONTH END	MONTH END	MONTH END	MONTH END		18
40	9/29-10/3		MONTH END	MONTH END	MONTH END	MONTH END		19
41	10/6-10/10	Edwards					3	21
42	10/13-10/17							21
43	10/20-10/24							21
44	10/27-10/31		MONTH END	MONTH END	MONTH END	MONTH END		21
45	11/3-11/7	Dennis	?	?			2	23
46	11/10-11/14							23
47	11/17-11/21							23
48	11/24-11/28		Thanksgiving	Thanksgiving	Thanksgiving	Thanksgiving		23
49	12/1-12/5	Dennis	?				1	24
50	12/8-12/12							24
51	12/15-12/19							24
52	12/21-12/25		Winter Holiday	Winter Holiday	Winter Holiday	Winter Holiday		24

Rolling Quarterly Planning Calendar

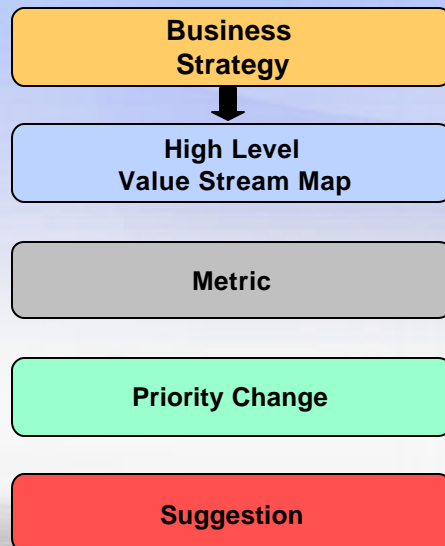
KAIZEN CALENDAR							
Week of	21-Jan	04-Feb	04-Feb				
Team	DIG Gentry	Steele	D.R. Precourt				
Leader	Kurt E	Bark K	Todd J				
Co-Lead	Jason Sootzer	Graeff Franz					
Member	Joe Eckroed	Cyndi Johnson	Pete Mitchell				
Member	Sue Sirak	Francoise Avardan	Lynn Mannone				
Member	Graeff Franz	Cindy Miller	Don Walker				
Member	Cyndi Johnson						
Member	Francoise Avardan						
Packet	X	X	X				
Room	110	110	143				
Goal	Develop flow for full service	Reduce FT time	Reduce DR time				

“Confirmed Plan”

**ECKMAN
ULTER**

LEAN SIX SIGMA

Kaizen Burst Selection



Level 1

- Proactively aligns with a business strategy; Kaizen opportunities identified as star burst on the Value Stream Map

Level 2

- Metrics including Glass Wall, Production Status Boards, Department Operating Metrics, Quality Metrics

Level 3

- Management reprioritization

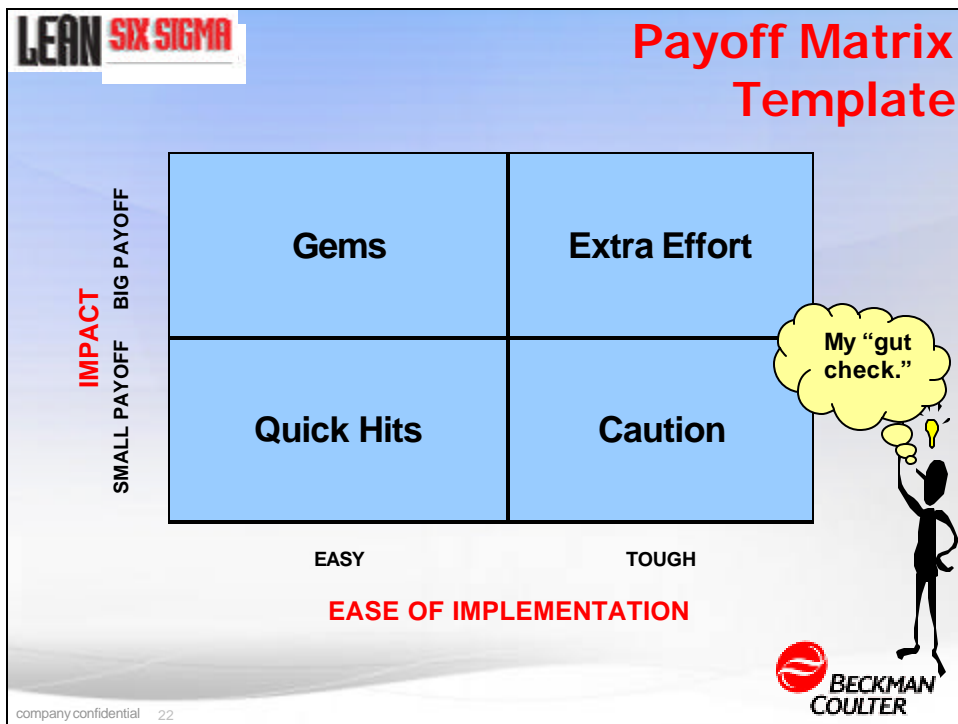
Level 4

► Suggestions from employees



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LEAN SIX SIGMA		Priority Matrix Template									
PRIORITY MATRIX			IMPACT - Increases Investment Capacity					EASE OF IMPLEMENTATION			
	Submitted by:	Aligns to Strategic Business Plans	Links to Other Value Stream Processes	Reduces Facility Space	Reduces Lead Time	Reduces Inventory	Increases Labor Productivity	Resources and Time to Implement	Complexity of Value Stream	Total	Total w/ Impact Averaged
Impact Weighting		10	10								
Suggested Process:		Scores									
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
Process Name	Owner									0	#DIV/0!
										0	#DIV/0!
										0	#DIV/0!
										0	#DIV/0!
Impact											
10 = High		Critical to Success	Critical to Achieve Enterprise-Wide Value	> 30%	> 30%	> 30%	> 30%	Resources and Time Available Some	Easy to Implement		
5 = Medium		Supports Success	Supports Enterprise-Wide Value	10 - 30%	10 - 30%	10 - 30%	10 - 30%	Resources and Time Available Limited	Somewhat Complex to Implement		
1 = Low		Not Critical to Success	Not Critical to Enterprise-Wide Value	< 10%	< 10%	< 10%	< 10%	Resources and Time Available	Complex to Implement		
0 = None											
Sort by Total											





Kaizen Burst 9 Step Checklist

**BECKMAN
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9 Step Kaizen Burst Check List

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9

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0%

Kaizen Burst Name: _____

Location: _____

Project Area: _____

Process/Process: _____

Team Leader: _____

Team Sponsor: _____

Follow-up Checklist: _____

Start Date: _____

Kaizen Burst Preparation (start 2 - 6 weeks in advance)	pt	Comments
1) This project was reviewed and approved by the Steering Committee or process owners. (2 - 6 weeks in advance)		
A. A3 -		
i. Identify Team Leader, at a minimum		
ii. Define Scope, Deliverables List, and SMART Targets		
iii. Identify Kick-Off, Leaders' Daily Alignment meetings and Final Presentation schedule		
iv. Secure management buy-in and the commitment of required resources		
2) Identify Team Co-Leader, Team Members, targets, and day one activities. Determine pre-work, confirm that the goals are reasonable, and re-confirm project scope and team participants.		
3) Complete the Define section of A3 and the Daily Activities form for Monday only (1 week in advance)		
4) The team met to review project and day one activities, schedule Final Presentation meeting, and invite appropriate management. Completed the appropriate training materials for the Kick Off training. (1 week in advance)		
Kaizen Burst Week		
1) A Kick Off meeting is held on day one or the 1st week start week. The Team Leader presents: A3, Target Sheet, and day one Daily Activities form. The appropriate site manager communicated that the team is empowered to make change.		
2) Top Management and all area management attend Monday, Tuesday and Wednesday's Leaders' Alignment meetings. Team Leader presents current A3, today's activities, supporting data, and team's own objectives using the Daily Activities form. The managers give feedback and redirect the team, if needed.		
3) Top management and all area management attend Final Presentation.		
Weeks After Event		
1) Each week following the Kaizen Burst, the newspaper challenge indirect newspaper event with the Team Leader and each is closed.		
2) The final newspaper meeting will be a 5-10 minute closing meeting to show actual goals, final outcomes and score the deliverables. Show closing information or plan for future work and update the A3.		

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Kaizen Burst Preparation The First 4 Steps

Kaizen Burst Preparation (start 2 - 6 weeks in advance)	pt	Comments
1) This project was reviewed and approved by the Steering Committee or process owners. (2 - 6 weeks in advance)		
A. A3 -		
i. Identify Team Leader, at a minimum		
ii. Define Scope, Deliverables List, and SMART Targets		
iii. Identify Kick-Off, Leaders' Daily Alignment meetings and Final Presentation schedule		
iv. Secure management buy-in and the commitment of required resources		
2) Identify Team Co-Leader, Team Members, targets, and day one activities. Determine pre-work, confirm that the goals are reasonable, and re-confirm project scope and team participants.		
3) Complete the Define section of A3 and the Daily Activities form for Monday only (1 week in advance)		
4) The team met to review project and day one activities, schedule Final Presentation meeting, and invite appropriate management. Completed the appropriate training materials for the Kick Off training. (1 week in advance)		

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Step 1 of 9 Has Multiple Sub-Steps

Kaizen Burst Preparation – (start 2 – 6 weeks in advance)	pt	Comments
1) This project was reviewed and approved by the Steering Committee or process owners. (2-6 weeks in advance) A. A3 – i. Identify Team Leader, at a minimum ii. Define Scope, Deliverables List, and SMART Targets iii. Identify Kick Off, Leaders' Daily Alignment Meetings and Final Presentation schedule B. Ensure management buy-in and the commitment of required resources C. Begin to develop the appropriate Kick-Off meeting training materials		

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Define Scope, Deliverables, Key Dates and Times

Project Scope

DELIVERABLES



Specific

Measurable

Achievable

Relevant

Timed



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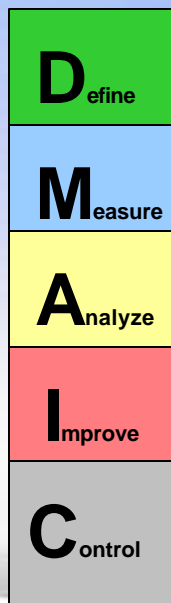
Last Part of Step 1 Management Buy In

Role of Management

- ✗ Set high level SMART targets
- ✗ Team Leader selection and availability
- ✗ Finalize Kaizen Burst date selection
- ✗ Team Member selection and availability
- ✗ Pre-meeting schedule with leader and team
- ✗ Kick Off introduction and team empowerment
- ✗ Attend Leaders' Alignment Meetings
 - ✗ Align, encourage, assess, make decisions
- ✗ Responsible for removing obstacles during Kaizen Burst week
- ✗ Celebrate at final presentation



DMAIC Definitions




... the problem or problems from the customer's point of view and identify deliverables.

- the current state of the problem compared to the
- Structured way of approaching our work
 - Helps prevent us from prematurely jumping to solutions

... the process by addressing the root cause or causes and implement the selected solutions.

... is put in place to ensure that future process performance is sustained.





A3 Template DMAIC Format

Team: Kaizen Burst Project Name

DEFINE: ...the problem or problems and customer deliverables.

THEME:

S.M.A.R.T. TARGETS:

ANALYZE: ...and determine the root cause of the problem.

ROOT CAUSE:

CONTROL: ...future process performance.

SUSTAINMENT:


NEWSPAPER ACTIVITY:


MEASURE: ...the extent of the problem and current performance to quantify the problem.

OBSERVATIONS OF WASTE:

IMPROVE: ...the process by eliminating defects that are tied to root cause. Implement the selected solution.

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A3 Template DMAIC Format

Team:
 Team Leader: John Jones
 Team Co-Leader:
 Team Members:
 Facilitator: John Atuatasi

DEFINE:

THEME:

Improve efficiency in the XYZ area by centralizing all Phoenix testing processes into the existing footprint.

S.M.A.R.T. TARGETS:

- Reduce walking distance
- Reduce area floor-space
- Implement a complete 5S system in area
- Reduce daily area labor hours

ANALYZE:

ROOT CAUSE:

CONTROL:

SUSTAINMENT:


NEWSPAPER ACTIVITY:

MEASURE:


OBSERVATIONS OF WASTE:

IMPROVE:

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We've Completed Step 1 of 4 in Our Preparation


Kaizen Burst Preparation – (start 2 – 6 weeks in advance)		pt	Comments
1) This project was reviewed and approved by the Steering Committee or process owners. (2-6 weeks in advance) A. A3 – i. Identify Team Leader, at a minimum ii. Define Scope, Deliverables List, and SMART Targets iii. Identify Kick-Off, Leaders' Daily Alignment Meetings and Final Presentation schedule B. Ensure management buy -in and the commitment of required resources C. Begin to develop the appropriate Kick Off meeting training materials			



Step 2 of 9 Identify Team Members, Targets and Day One Activities

EMPLOYEE LEAN MATRIX							Target Sheet				
Employee Name	Team Leader	Team Co-Leader	Team Member	Lean 101: 9 Wastes	Lean 101: 9 Wastes	SS	Target	Measurement	Value	Delta	100% Done
John Jones	1	2	1	07-Jun	07-Jun	07-Aug					
Shemi Adams	1	2	1	07-May	07-May	07-Aug					
Phil Seymour	1	1	1	07-Jun	07-Jun						
Don Striner		1	2	07-Dec	06-Jan						
Kathleen Harris			1	06-Jan	07-Jun						
Gary Chang		3	3	07-Jun	06-Feb						
Henry Pent				06-Feb	07-Jun	07-Aug					
Jason Grant			1	05-Mar	06-Feb						

Item	Reviewed	Item	Reviewed
Activities	Yes	Process owner activities defined	Yes
Communication	Yes	Process plan	Yes
Materials/Equipment	Yes	Team roles	Yes
Organization	Yes	Timeline/MS	Yes
Resources	Yes	Performance Chart	Yes
Skills	Yes	Project Plan	Yes
Support	Yes	Team/Process	Yes
Tools	Yes	Training	Yes
Value Stream Map	Yes	Workload	Yes

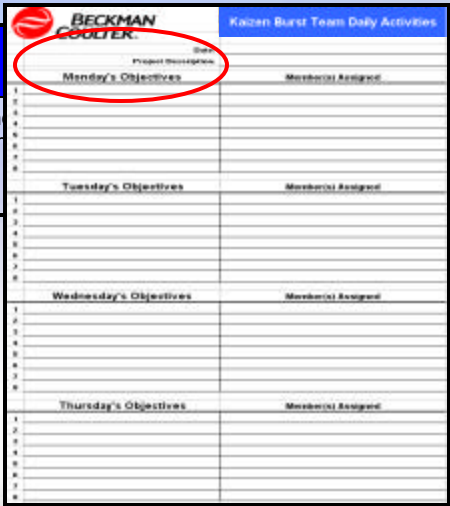



Step 3 of 9

Document A3 and Daily Activities Form

Kaizen Burst Preparation – (start 2 – 6 weeks in advance)

3) Complete the Define section of A3 and the Activities form for Monday only (1 week in advance)



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Phoenix KAIZEN BURST

1/8/08 ~ 1/12/08

Team:
 Team Leader: John Jones
 Team Co-Leader: Sherri Adams
 Team Members: Kathleen Harris,
 Gary Chang, Henry Perri, Jenna Grant
 Facilitator: John Atuatasi

DEFINE:
THEME:
 Improve efficiency in the XYZ area by centralizing all Phoenix testing processes into the existing footprint.

S.M.A.R.T. TARGETS:
 Reduce walking distance
 Reduce area floor-space
 Implement a complete 5S system in area
 Reduce daily area labor hours

MEASURE:
 OBSERVATIONS OF WASTE:

A3 - Target Sheet - Daily Activities Form
Complete and Ready for Kick-Off


ANALYZE:
 ROOT CAUSE ANALYSIS:

IMPROVE:

CONTROL
 SUSTAINMENT:

NEWSPAPER ACTIVITY:

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LEAN SIX SIGMA


Step 4 of 9 Meeting


4) The team one ad meeting Compl for the

1	Make Change Happen, You are Empowered
2	Demonstrate a “Can Do” Attitude
3	Question Every Assumption
4	Follow Beckman Coulter core Values Integrity, Leadership, Teamwork
5	Never Leave in a Silent Disagreement
6	No Position or Rank - One Person, One Vote
7	Focus on the Kaizen and Leave Process Fires Behind
8	Understand your Current Process, then TRUST THE KB PROCESS and JUST DO IT!
9	Think Outside the Box
10	Have Fun

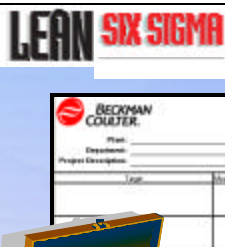
Comments

Team Rules



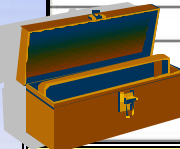


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LEAN SIX SIGMA

Tool Boxes



Target Sheet

BECKMAN COULTER

What: _____

Department: _____

Project Description: _____

Task	Assessment	Notes	Owner	Completion Date

Kaizen Burst Preparation

BECKMAN COULTER

Available time calculation:

Operator attendance: _____ Hours X (\$80,000/Year) = (\$80,000/Year) _____

Operator attendance: _____ Hours X (\$80,000/Year) = (\$80,000/Year) _____

Subtract burst time: _____ Hours X (\$80,000/Year) = (\$80,000/Year) _____

Subtract benefits: _____

Kaizen Burst Exercises

BECKMAN COULTER

What: _____

Department: _____

Project Description: _____

Task: _____

Assessment: _____

Notes: _____

Owner: _____

Completion Date: _____

Kaizen Burst Exercises

BECKMAN COULTER

What: _____

Department: _____

Project Description: _____

Task: _____

Assessment: _____

Notes: _____

Owner: _____


Completion Date: _____

Kaizen Burst Preparation Tool Box

Kaizen Burst Tool Box

Kick-Off Training Tool Box

Kaizen Burst Exercises Tool Box



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Facilitating the Week



LEAN SIX SIGMA

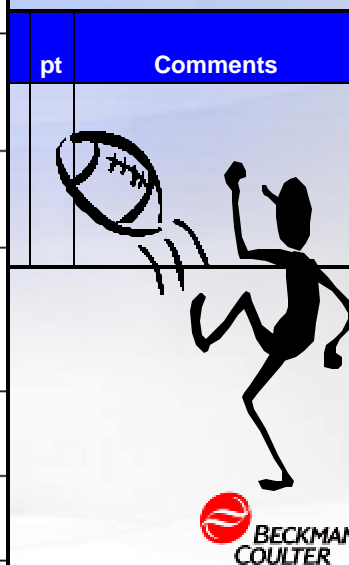
Sample Weekly Agenda Follows DMAIC Format

Times are flexible	Monday	Tuesday	Wednesday	Thursday	Friday
?? 8am	Kickoff Meeting	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Follow Up Items
9am	Training on lean principles	Begin the ABC process	IMPROVE	Collect all "after" data for metrics	Finalize A3
10am	DEFINE	Finish data collection, charts & diagrams	Develop improvement plan based on analysis	Update A3	Presentation Preparation
11am	Theme	Brainstorm visual for data collection	Trystorm	CONTROL	Final Presentation
12pm	SMART goals	ANALYZE	Trystorm, implement and measure improvements	Sustainment of changes made during Kaizen Burst	Celebration
1pm	MEASURE	Determine root cause of defects	Trystorm and implement	Develop documentation and control plans	If needed, team continues
2pm	Develop data collection plan	Identify sources of variation	Trystorm and implement	Prepare Newspaper	Maybe can go home
3pm	Observations of waste	Prioritize improvement opportunities	Brainstorm visual for process improvement	Communication Plan	
4pm to ??	Leader's Alignment Meeting	Leader's Alignment Meeting	Leader's Alignment Meeting		

Sample Agenda

Step 5 of 9 Kick Off Meeting

WHAT	WHO
<ul style="list-style-type: none"> ✓ Welcome ✓ Introductions ✓ Ice Breaker ✓ Team Rules 	Facilitator
<ul style="list-style-type: none"> ✓ Alignment Update and Final Presentation Times 	Facilitator
<ul style="list-style-type: none"> ✓ A3: Define/SMART Targets ✓ Daily Activity Form: Day One Activities 	Team Leader
<ul style="list-style-type: none"> ✓ Strategic Send-Off 	Highest Level Manager in Attendance
<ul style="list-style-type: none"> ✓ Begin Training 	Facilitator



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Lean Six Sigma Training

Times are flexible	Monday				
?? 8am	Kickoff Meeting	Tr	S		
9am	Training on lean principles	E			
10am	DEFINE	co			
11am	Theme	E			
12pm	SMART Targets				
1pm	MEASURE				
2pm	Develop data collection plan	Id			
3pm	Observations of waste	Prioritize improvement opportunities	Brainstorm visual for process improvement	Communication Plan	
4pm to ??	Leader's Alignment Meeting	Leader's Alignment Meeting	Leader's Alignment Meeting		

- Facilitator Presents:
- 1) Fundamentals of Lean slides and,
 - 2) Training slides specific to the Kaizen Burst:
 - Value Stream Map
 - Flow, Layout or Re-Layout
 - Pull and Kanban System
 - Standardized Work
 - Built In Quality
 - Six Sigma
 - Business Process
 - 5S

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Define and Measure

Times are flexible	Monday	Tuesday	Wednesday	Thursday	Friday
?? 8am	Kickoff Meeting	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Follow Up Items
9am	Training on lean principles	Begin populating the A3 template	IMPROVE	Collect all "after" data for metrics	Finalize A3
10am	DEFINE	Finish data collection, charts & diagrams	Develop improvement plan based on analysis	Update A3	Presentation Preparation
11am	Theme	Brainstorm visual for data collection	Trystorm and implement	CONTROL	Final Presentation
12pm	SMART Target	ANALYZE	Trystorm, implement and measure improvements	Sustainment of changes made during Kaizen Burst	Celebration
1pm	MEASURE	Determine root cause of defects	Trystorm and implement	Develop documentation and control plans	If needed, team continues
2pm	Develop data collection plan	Identify sources of variation	Trystorm and implement	Prepare Newspaper	Maybe we can go home
3pm	Observations of waste	Prioritize improvement opportunities	Brainstorm visual for process improvement	Communication Plan	
4pm to ??	Leaders' Alignment Meeting	Leaders' Alignment Meeting	Leaders' Alignment Meeting		

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Phoenix KAIZEN BURST 1/8/08 ~ 1/12/08

Team:
 Team Leader: John Jones
 Team Co-Leader: Sherri Adams
 Team Members: Kathleen Harris, Gary Chang, Henry Perri, Jenna Grant
 Facilitator: John Atuatasi

DEFINE:

THEME:
 Improve efficiency in the XYZ area by centralizing all Phoenix testing processes into the existing footprint.

S.M.A.R.T. TARGETS:

- Reduce walking distance by 50%
- Reduce amount of carts in area by 70%
- Reduce amount of assembly benches by 25%
- Reduce area floor-space by 30%
- Reduce parts racks by 25%
- Implement a complete 5S system in area
- Reduce daily area labor hours by 10%

MEASURE:

OBSERVATIONS OF WASTE:

- 1) Lots of excess walking: sub-assy to final assy, final to testing, testing to gather test parts, X to Y, Y to Z, etc.
- 2) Excess trash, carts and inventory in the area.
- 3) Overproduction leading to excess sub-assembly inventory and spares.
- 4) Area not run by a set takt time and labor hours not calculated and tied to production demand causing erratic production output and allocated hours.
- 5) Excess handling of inventory
- 6) Underutilized and excess work-stations
- 7) Excess floor-space full of excess inventory,

ANALYZE:

ROOT CAUSE:

IMPROVE:

CONTROL:

SUSTAINMENT:

NEWSPAPER ACTIVITY:

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Step 6 of 9 Daily Leader's Alignment Meeting

Kaizen Burst Week	pt	Comments
6) Top Management and all area management attend Monday, Tuesday and Wednesday's Leaders' Alignment meetings. Team Leader presents current A3, today's activities, supporting data, and tomorrow's objectives using the Daily Activities form. The managers give feedback and redirect the team, if needed.		

Daily Leaders' Alignment Meeting

Times are flexible	Monday	Tuesday	Wednesday	Thursday	Friday	
?? 8am	 <p>© Scott Adams, Inc./Dist. by UFS, Inc.</p>					Review A3
9am						Today's Activities (Daily Activity)
10am						
11am						
12pm						
1pm						
2pm						
3pm						
4pm to ??	Leaders' Alignment Meeting	Leaders' Alignment Meeting	Leaders' Alignment Meeting			Minutes
		opportunities	improvement			Schedule Meeting Time to Ensure Leader Participation

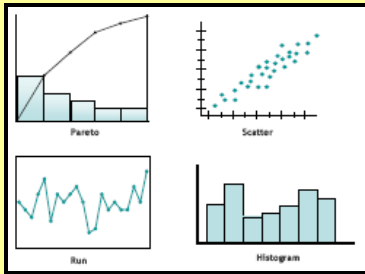
Variety of Tools

Analyze

Financial

- Cost Benefit Analysis
- Total Cost – not standard cost

Pareto, Scatter, Run, Histograms



Fishbone Diagram



5 Why's

Root Cause Analysis

Phoenix KAIZEN BURST 1/8/08 ~ 1/12/08

Team:

Team Leader: John Jones
Team Co-Leader: Sherri Adams
Team Members: Kathleen Harris,
Gary Chang, Henry Perri, Jenna Grant
Facilitator: John Atuatasi

DEFINE:

THEME:

Improve efficiency in the XYZ area by centralizing all Phoenix testing processes into the existing footprint.

S.M.A.R.T. TARGETS:

- Reduce walking distance by 50%
- Reduce amount of carts in area by 70%
- Reduce amount of assembly benches by 25%
- Reduce area floor-space by 30%
- Reduce parts racks by 25%
- Implement a complete 5S system in area
- Reduce daily area labor hours by 10%

MEASURE:

OBSERVATIONS OF WASTE:

- 1) Lots of excess walking: sub-assy to final assy, final to testing, testing to gather test parts, X to Y, Y to Z, etc.
- 2) Excess trash, carts and inventory in the area.
- 3) Overproduction leading to excess sub-assembly inventory and spares.
- 4) Area not run by a set takt time and labor hours not calculated and tied to production demand causing erratic production output and allocated hours.
- 5) Excess handling of inventory
- 6) Underutilized and excess work-stations

ANALYZE:

ROOT CAUSE ANALYSIS: (5 WHY'S)

Why is the area inefficient?
Because there's too much excessive walking
Because it's not laid-out in a good flow
Because minimal layout expertise during previous layout

IMPROVE:

CONTROL

SUSTAINMENT:

NEWSPAPER ACTIVITY:

Times are flexible	Monday	Tuesday	Wednesday	Thursday	Friday
?? 8am	Kickoff Meeting	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Follow Up Items
9am	Training on lean principles	Begin populating the A3 template	IMPROVE	Collect all "after" data for metrics	Finalize A3
10am	DEFINE	Finish data collection, charts & diagrams	Develop improvement plan based on analysis	Trystorming	Presentation
11am	Theme	Brainstorm visual for data collection	Trystorm and implement	Trystorming	Presentation
12pm	SMART Targets	ANALYZE	Trystorm, implement and measure improvements	Trystorming	Celebration
1pm	MEASURE	Determine root cause of defects	Trystorm and implement	Trystorming	If needed, team continues
2pm	Develop data collection plan	Identify sources of variation	Trystorm and implement	Trystorming	Maybe can go home
3pm	Observations of waste	Prioritize improvement opportunities	Brainstorm visual for process improvement	Trystorming	
4pm to ??	Leader's Alignment Meeting	Leader's Alignment Meeting	Leader's Alignment Meeting	Trystorming	

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BECKMAN COULTER

Phoenix KAIZEN BURST 1/8/08 ~ 1/12/08

Team:
Team Leader: John Jones
Team Co-Leader: Sherri Adams
Team Members: Kathleen Harris, Gary Chang, Henry Perri, Jenna Gant
Facilitator: John Atuatasi

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THEME:
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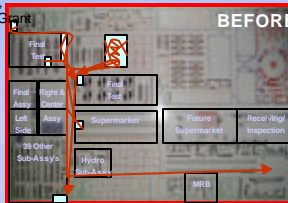
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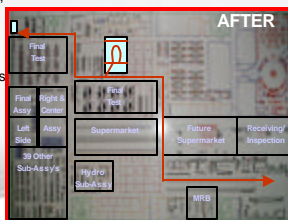


ANALYZE

ROOT CAUSE ANALYSIS: (5 WHY'S)

Why is the area inefficient?
Because there's too much excessive walking
Because it's not laid-out in a good flow
Because minimal layout expertise during previous layout

IMPROVE



What we actually did was.....

- 1) Took out excess tables, racks, carts and equipment from production area.
- 2) Move 4 testers, reagent pallet and miscellaneous testing equipment into area
- 3) Moved the whole Phoenix process into area
- 4) Re-organized and consolidated parts to reduce the amount of total parts racks and tables in the area.
- 5) Re-layout area to improve parts flow, reduce walking distance and reduce excess motions
- 6) Implement 5S with a responsibility map

ITEM	BEFORE	GOAL	AFTER	SAVINGS
Red. walk dist.	2519	50%	1270	50%
Red. Carts	28	70%	7	75%
Red. Benches	14	25%	11	21%
Red. floorspace	2135	30%	1594	25%
Red. Racks	35	25%	27	23%
5S sustain	None	Imp	1	100%
Red. Labor hrs	28 daily	10%	20 daily	28%

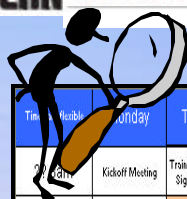
CONTROL

SUSTAINMENT:

NEWSPAPER ACTIVITY:

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BECKMAN COULTER

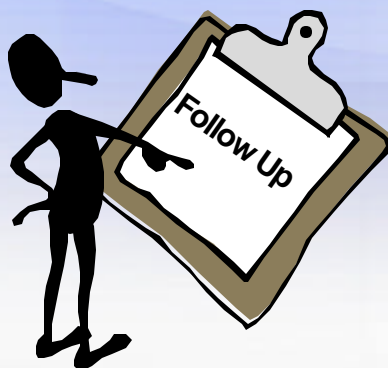


Step 7 of 9 Final Presentation

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8am	Kickoff Meeting	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Training on Lean Six Sigma principles	Follow Up Items
9am	Training on lean principles	Begin populating the A3 template	IMPROVE	Collect all "after" data for metrics	Finalize A3
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11am	Theme	Brainstorm visual for data collection	Trystorm and implement	CONTROL	Final Presentation
12pm	SMART Targets	ANALYZE	Trystorm, implement and measure improvements	Sustainment of changes made during Kaizen Burst	Celebration
1pm	MEASURE	Determine root cause of defects	Trystorm and implement	Develop documentation and control plans	If needed, team continues
2pm	Develop data collection plan	Identify sources of variation	Trystorm and implement	Prepare Newspaper	Maybe can go home
3pm	Observations of waste	Prioritize improvement opportunities	Brainstorm visual for process improvement	Communication Plan	
4pm to ??	Leader's Alignment Meeting	Leader's Alignment Meeting	Leader's Alignment Meeting		


Agenda

- Welcome and introductions
- Team Members conduct the presentation
- Review A3 by DMAIC
- Team presents "Lessons Learned"
- Team Leader and Facilitator thank the team
- Ask the Process Owners or Senior Managers to speak
- Celebrate successes



Follow Up After the Kaizen Burst Event

Step 8 of 9 Newspaper

Weeks After the Event		Comments	
 <p>Team Member: _____ Project Leader: _____</p> <p>Keizen Newspaper</p> <p>Week: _____ Day: _____ Time: _____ Location: _____ Score (Y-Sigma): _____ Percent Complete: _____</p>		<p>8) Each Burst review the newspaper close</p> <ul style="list-style-type: none"> Set Specific Times for Weekly Updates and include Process Owners in the Update Assign an Owner to the Newspaper to follow up with Team Members on Open Action Items 	

Control

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Step 9 of 9 Final Newspaper Meeting

Weeks After the Event	pt	Comments
9) The final newspaper meeting will be a closing meeting. A five - ten minute presentation - show initial goal and final outcome and note the differences. Show closing information or plan for a future event and update the A3.		

Team

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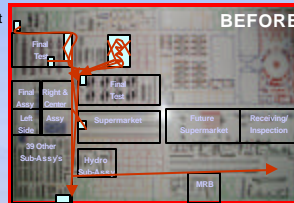
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Phoenix KAIZEN BURST 1/8/08 ~ 1/12/08

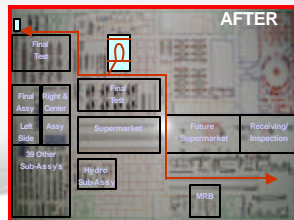


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5S sustain	None	Imp	100%	100%
Red. Labor hrs	28 daily	10%	25 daily	28%

CONTROL:

SUSTAINMENT:

- 1) Supervisor to schedule daily audit of the process.
- 2) Daily 5S audit for 5S sustainment

NEWSPAPER ACTIVITY:

- 1) PFEP kanban for all the major parts in area
- 2) Create a universal cart for the assembly and test
- 3) Eliminate excess parts for final build
- 4) Visual production status board in area
- 5) Standardize process for existing/new labor calculation

Some Examples of Results



Examples of Results

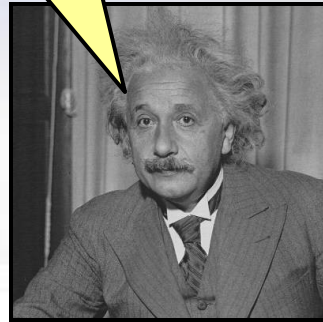
- ✍ Release Documentation process time reduced by 45%
- ✍ Translations process time reduced by 67% and number of hand-offs by 17%
- ✍ Laboratory utilization increased by 40%
- ✍ Service Agreement process reduced from 120 hours to 6.5 hours
- ✍ Mycoplasma testing of Cell Cultures in R&D reduced from 8 weeks to 2 hours

Why Lean Six Sigma?

"The definition of insanity is doing the same thing and expecting a different outcome!"



"We cannot solve problems using the same thinking that created them."



**In the words of
two immortal
thinkers...**