

Transformational Lean™ in Accounts Receivables

Case Study - Transactional Lean
2009 ASQ Lean Six Sigma Conference
March 2-3, 2009 - Phoenix, Arizona



Consumer Tools & Storage
Stanley Works, Inc.

Jaime Villafuerte, Lean Manager
CSSBB, CQE, Shingo SME Lean Certified, PMP

Learning Objectives

At the conclusion of this session, attendees should learn:

- How the initiative was selected
- How the initiative was implemented
- How Lean Six Sigma tools were used

Agenda

- I. Stanley SFS Initiative
- II. Accounts Receivables Initiative
- III. Lean Six Sigma Tools
- IV. Nor Lean neither Six Sigma Tools
- V. Q&A

I. Stanley SFS Initiative

- Working Capital Turns
- Return on Capital Employed



*How Efficient is the **Working Capital** Used?*

I. Stanley SFS Initiative

- Working Capital Turns
- Return on Capital Employed



*How do **Accounts Receivables** Affect These Metrics?*

I. Stanley SFS Initiative

Working Capital Turns:

Number of times in a year that a company is able to convert its' working capital into sales

Working Capital Turns:

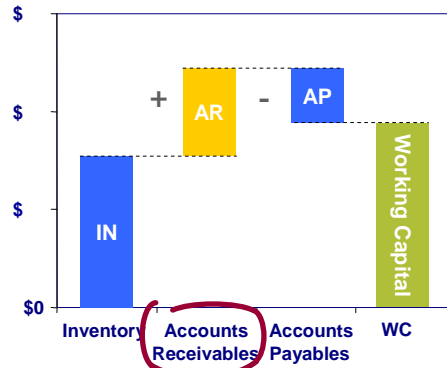
$$\frac{\text{Sales}}{\text{Working Capital}}$$



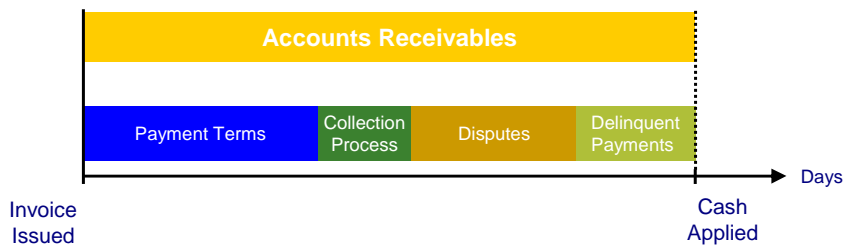
How efficient is the Working Capital used?

II. Accounts Receivables Initiative

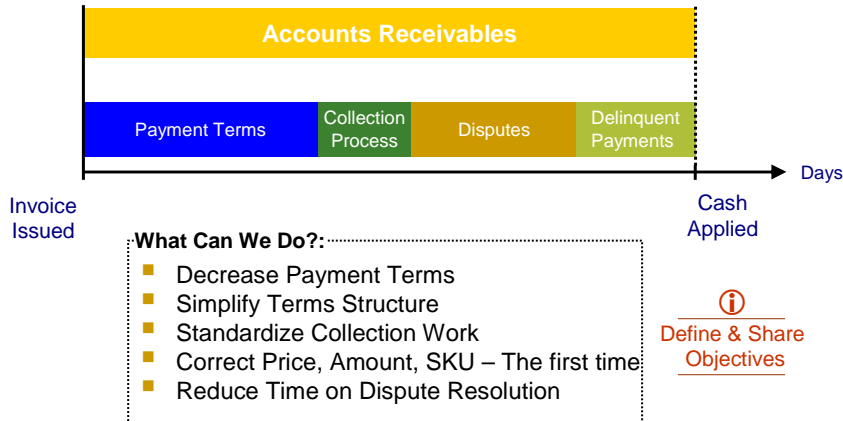
$$\text{Working Capital} = \text{Inventory} + \text{Accounts Receivables} - \text{Accounts Payables}$$



II. Accounts Receivables Initiative



II. Accounts Receivables Initiative



II. Accounts Receivables Initiative

Events & Projects:

- 5 Kaizen events – 3 to 5 days
- 200+ action items – “30 days” tasks
- 10+ Projects – “+30 days” tasks

Locations:

- New Britain, CT
- Miramar, FL
- Kannapolis, NC
- Sheffield, U.K.

Team Information	Name	Position	Name	Position
Project Champion:	Lynn Newton	Credit Manager	Sponsors:	Rob Heide US Finance Director
Team Members:	Julie Walsh	Team Leader		
	Clare Archer	Credit Controller		
	Phil Adelman	Customer Service Manager		
	Richard Dagg	IT Manager		
	Laurent Vuhaltz	Facilitator		
	James Villafuente	Facilitator		



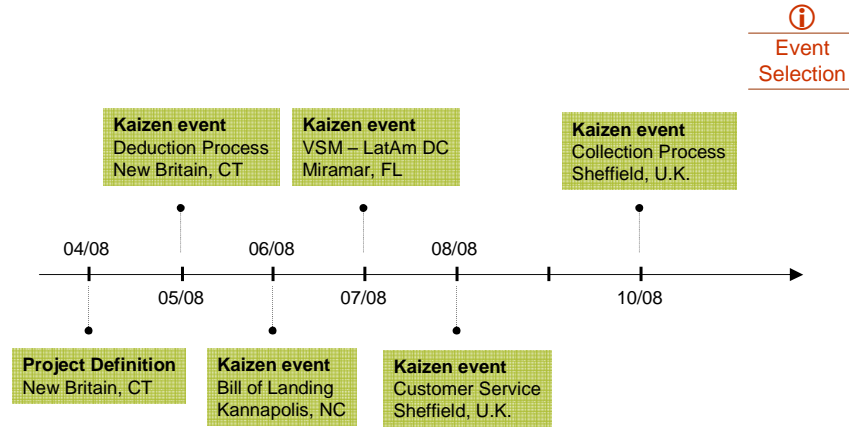
Team Information	Name	Position	Name	Position
Project Lead/Lead:	Thomas Karar	Credit Manager	Project Champions:	Amalid Kunt CFO - Consumer Tools
Team Members:	Heather Hahn	HR Generalist		
	Kathy Jacobson	SHE - IT		
	Audrey Theisbach	Claims Adjuster		
	Heidi Castello	Claims & Adjustments Analyst		
	Lois Drethi	Credit Services (NBC)		
	James Villafuente	Learn Operations Manager		



Team Information	Name	Position	Name	Position
Project Champion:	Tim Tule	Operations Manager	Sponsors:	Emario Ortiz VP - O&M
Team Members:	Armando Oca	Credit Sol. Mgr.		
	James Villafuente	Facilitator		
	Fernando Fueno	Warehouse Manager		
	Angel Ruiz	Finance Manager		
	Angel Gonzalez	General Table Mgr.		
	Maria Sanchez	Product Mgr. Driver		
	Albert Jimenez	IT Manager		
	Angel Espin	Driver		
	Rodriguez	Driver		
	Eduardo Aguirre	WH Supervisor		
	Mabel	Customer Service		



II. Accounts Receivables Initiative



III. Metrics

	Current	Future
<ul style="list-style-type: none"> ■ Dispute resolution (U.S.) <ul style="list-style-type: none"> □ Lead time □ Process time □ Resolutions completed □ Backlog – Transactions and \$M □ Sheets per resolution (paper) 	23 days 4 hrs 19 per day 812 – \$1.6M 23 sheets/dispute	12 days 2.5 hrs 10 per day 413– \$0.7M 5 sheets/dispute
<ul style="list-style-type: none"> ■ Suspended orders (U.K.) <ul style="list-style-type: none"> □ Customers with suspended orders □ Customers exceeded credit limit 	66 cust./day 21 cust./day	45 cust./day 10 cust./day
<ul style="list-style-type: none"> ■ Customer application (U.K.) <ul style="list-style-type: none"> □ C&A 	30%	10%
<ul style="list-style-type: none"> ■ Credit Card payment (U.K.) <ul style="list-style-type: none"> □ Lead time □ Credit card payments 	3 hrs 21 tr./day	1 hrs 29 tr./day

II. Accounts Receivables Initiative

- Lean Six Sigma Methodology: DMAIC
- Set working meetings with key stakeholders
- Avoid using Six Sigma lingo
- Expose tools only when they are needed
- Use kaizen events to:
 - Gain buy-in from users and stakeholders
 - Extend comprehension
 - Execute improvements



II. Accounts Receivables Initiative

Kaizen Events:

- Use PDCA
- Prepare, prepare, and prepare
- Motivate people to look for change and empower users
- Involve IT as early as possible



III. Tools - Define

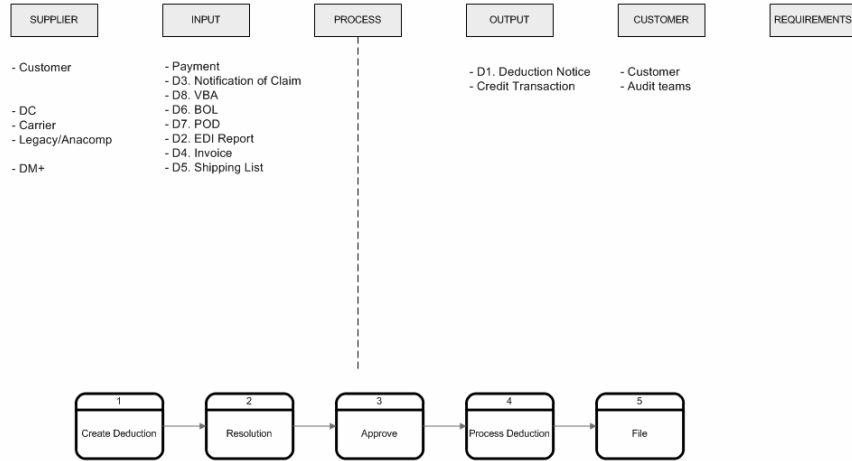
- Project Charter
- SIPOC Process Map
- Value Stream Map



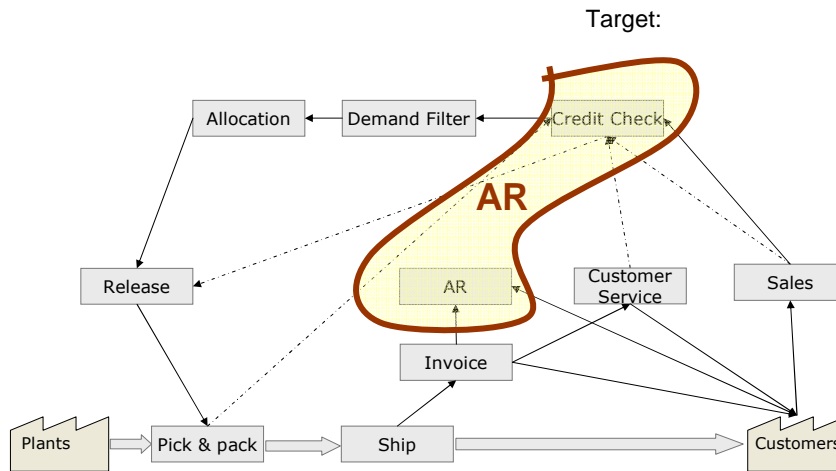
III. Define: Project Charter

Consumer Tools & Storage Deduction Process Improvement							
Improvement Project (Six Sigma / Lean)	Project Title		Version: 05.05.08		Process being Improved: From creation to final resolution		
	Project Scope / Boundaries: Deduction Process (1st part of Project Title)				Process being Improved: From creation to final resolution (2nd part of Project Title)		
	Team Information		Project Champion:		Project Sponsor:		
	Project Leader: Thomas Karas (Chairman)		Arnold Fort		CPO - Consumer Tools		
	Team Members: Heather Halm (HR Specialist)		Team Members: Audrey Thomant (Case Advisor)		Heidi Castillo (Case & Appeal Issue Analyst)		
	James Villaverde (Team Specialist Manager)		Brian Baraso (Process Manager)		Lori Orem (Case Issues (SIC))		
	Project Description			Project Objective: Reduce the cycle time on deduction resolution by 30%.			
	Problem Statement: Too much time and resources spent on deductions. There are three full time and three split resources that do not have the time to balance both.			Business Impact: Increase / Decrease %? (Increase / Decrease %?)			
	Output Metrics			Targeted Metrics			
	Y1: Cycle time on deduction resolution			Y1: # deductions created per day (monthly)			
Y2: # deductions created - # deductions closed per day (monthly)			Y2: # full cycle deductions / # deductions closed per month				
Cost Savings			S. Reduction				
Manpower (\$ / yr)			0				
Capital (\$ / yr)			0				
Capacity (\$ / yr)			0				
Total			\$0				
Project Timing			Duration (M-D)				
Define: 04/14/08 - 04/26/08			4.6				
Measure: 04/26/08 - 04/29/08			0.0				
Analyze: 04/29/08 - 05/03/08			24.6				
Improve: 05/03/08 - 05/19/08			46.0				
Control: 05/19/08 - 06/09/08			0.0				
Summary			92.0				

III. Define: SIPOC – Deduction Process

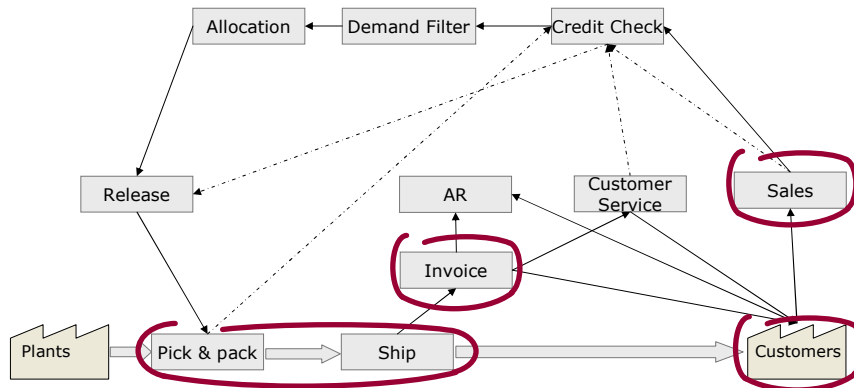


III. Define: Value Stream Map



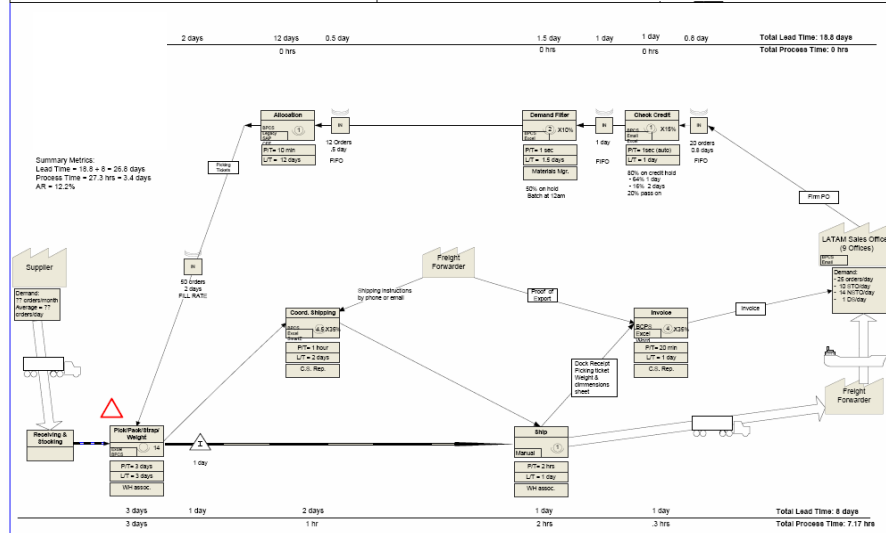
III. Define: Value Stream Map

Target:

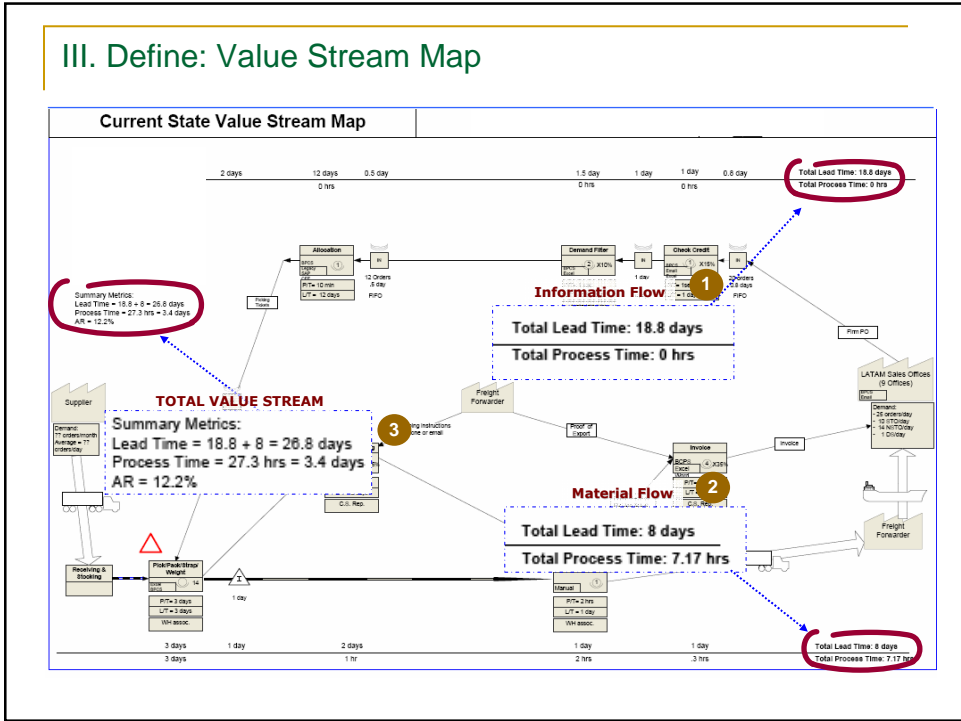


III. Define: Value Stream Map

Current State Value Stream Map



III. Define: Value Stream Map



III. Tools - Measure

- Work Analysis - VA/NVA
- Pareto
- Failure Modes and Effect Analysis (FMEA)



III. Measure: Work Analysis

Current Situation:

- 812 open deductions (\$1.57 million USD) before Kaizen event (April, 08.)
- Current backlog is 413 transactions (\$0.72 million USD) (July, 08.)
- Average Process Time per transaction is 2.12 hrs:

	Activity	Percent	Hours
VA	Matching discrepancies	44%	0.93
NVA	Searching for data	25%	0.53
NVA	Printing	11%	0.23
NVA	Requesting info	10%	0.21
NVA	Filing	8%	0.17
NVA	Requesting approvals	2%	0.04
	TOTAL	100%	2.12 hrs.

56% is Non-Value Added Activity

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Identify Potential

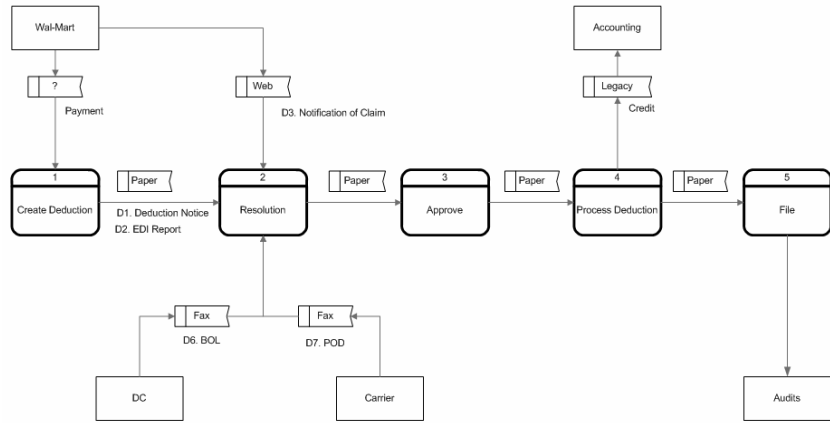
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III. Tools - Analyze

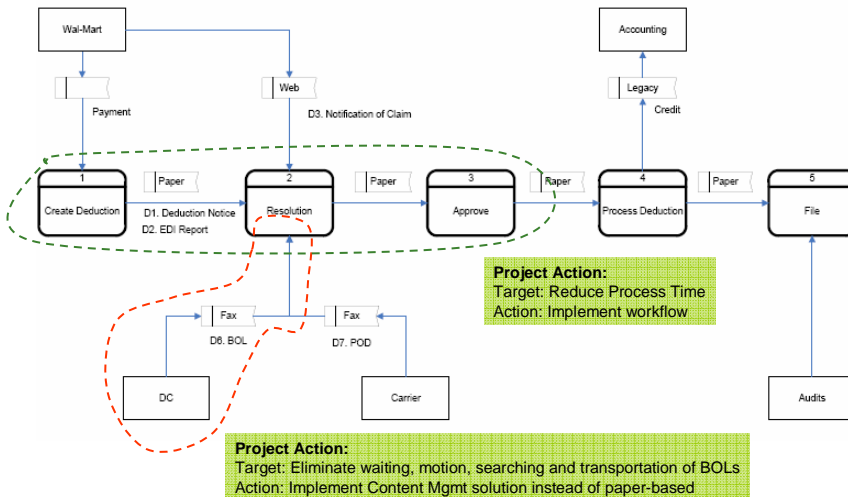
- Process Map



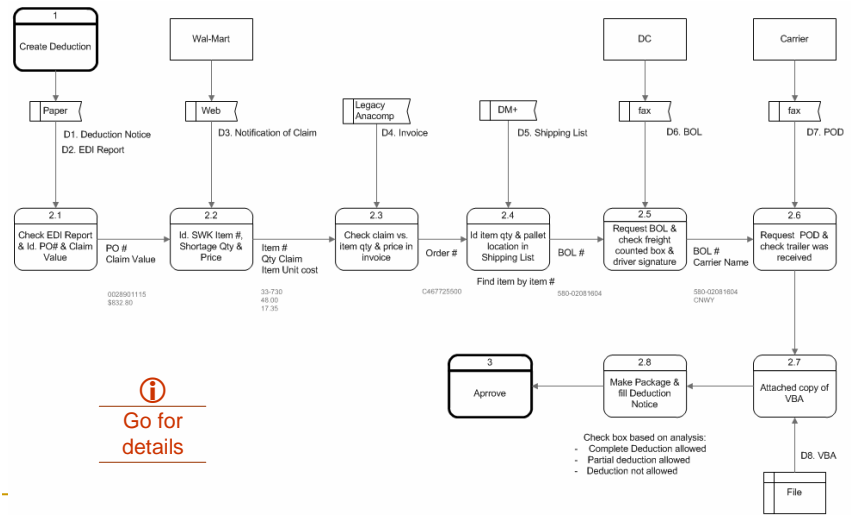
III. Process Map – Deduction Process – Level 0



III. Process Map



III. Process Map – Resolution – Level 1



III. Tools – Improve: Kaizen Event

Date	Activity
05/13	ID of waste
05/13	Learning Theory and Process Mapping
05/14	Mapping Current Process
05/14	Brainstorm and Mapping Future Process
05/15	Pilot Run
05/16	Report Out



III. Kaizen Event – Action Plan

Future State Implementation Plan							
Value Stream				Implementation Plan Review Dates			
NB Deduction Team							
Value Stream Champion Theresa Karas							
Value Stream Mapping Facilitator Jaime Villafuerte							
Date Created 5/13/2008							
Item #	Problem to be Resolved	Kaizen Action Planned	Owner	Type	Target Date	Date Complete	Status
1	Reduce number of created deductions	Increase tolerance from \$100 to \$500. Lowe's and WM currently at \$250 (Exclude HD.)	Theresa	Kaizen	6/1/08	6/1/08	
2	Eliminate waiting for deduction notices	Print deduction notices in local printing instead of sending it to the Xerox room	Kathy	Kaizen	5/15/08	5/15/08	Need to increase font size of report
3	Reduce number of deductions	Process Rebates as they come. Eliminating need to create deductions. Need to write a brief procedure.	Audrey	Kaizen	5/14/08	7/10/08	Run Pilot 1st Qtr. With 3 customers: Ace, TrueValue and ?
4	Eliminate need to use multiple systems/programs: DM+	Add current level of details found in DM+ to Legacy	Kathy	Project	5/15/08		
5	Eliminate need to print all invoice pages from ANACOMP	Include customer number in Legacy	Kathy	Kaizen	5/14/08	5/14/08	Completed
6	Eliminate waiting, motion, searching and transportation of BOL	Implement a BOL electronic database instead of paper-based	Heather	Project	5/22/08		Schedule for 05/22
7	Eliminate excess walking (BOL)	Move Cabinet. Reduce from 150 steps to 54 steps	Heather	Kaizen	5/14/08		
8	Reduce rejects and reduce process time during approval	Add deduction summary description.	Theresa	Kaizen	5/14/08	5/14/08	Completed
9	Reduce waiting and process time during approval	Increase approval level from \$1k to \$2K.	Theresa	Kaizen	5/15/08	5/15/08	Kurt's approval requested. Next step is modification of <small>Link to PDF</small>