

Creating and Protecting Jobs with Reliability

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What is a job worth in your organization?

In one day more than 50,000 job
cut announcements!

Microsoft

Caterpillar

Intel

Home Depot

Just to name a few!! **WOW!**

"We are further restructuring our business to decrease our expense base in fiscal year 2009 and preserve cash," said Steve Birke, Wireless Ronin's interim CEO

**Our Government
promises to rebuild jobs
in the U.S. ...**

**Yet companies, big and
small, are laying people
off.**

**What are the long-term
impacts of layoffs?**

Layoff Headlines for January 25, 2009

Cooper Industries	- 2,200
Hawker Beechcraft	- 1,500
Volvo	- 650
Summit Polymers	- 215
Stein Mart	-209
Freightliner Portland	-190
Boise Cascade Plywood Plant	-110
Teleflex Marine Closing Plant	-93

“As a leader, your job over the daunting quarters ahead is to block that tendency,”

“People start obsessing on the internal, in particular on who or what will be next to go.”

Jack Welch

Business Week, Jan '09

NEW HEADLINE:

Reliability Protects Jobs!

QUICK WINS for 2009:

- Reducing contract labor costs through formalized work planning
- Improving inventory accuracies to reduce wasteful MRO expenditures
- Replacing costly PM's with predictive technologies to minimize production downtime
- Eliminating waste in the manufacturing process through Value Stream Mapping and SMED

Planner's Impact on Labor Costs

“We are getting more quality work done in shorter time periods.”

“What used to be a three-week outage now takes us 12 days.” – a \$400k savings per outage

“That all comes from planning, executing the plan, and being prepared (to execute the plan) as soon as the unit is offline.”

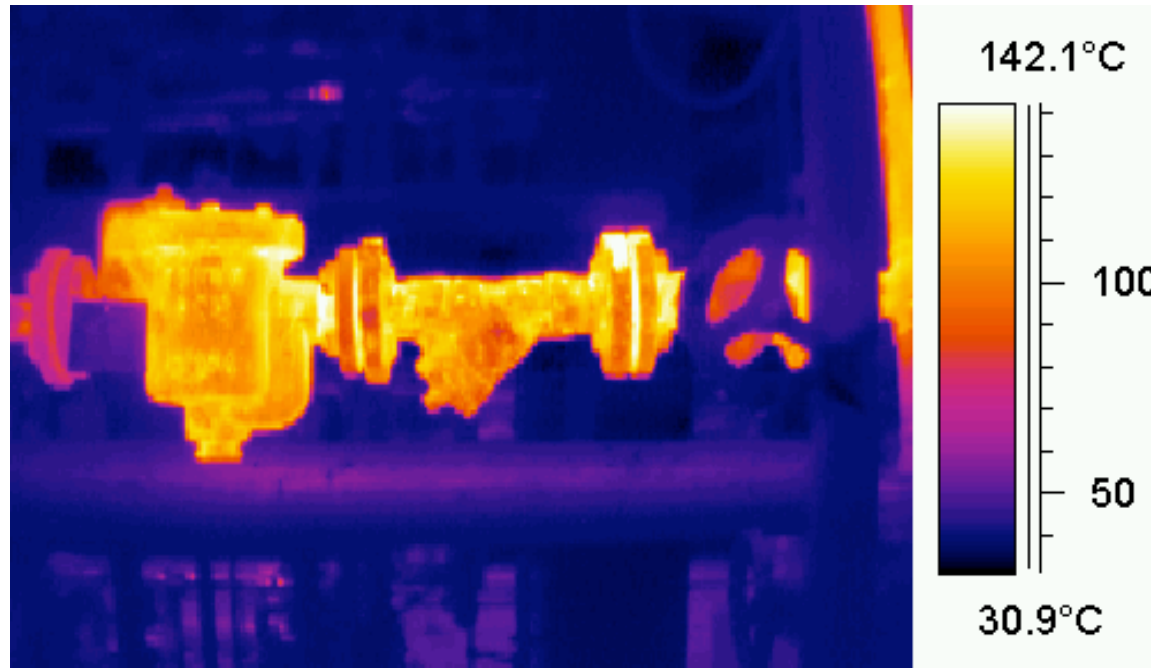
Year end 2006, the plant spent \$2MM in emergent repair costs. Year end 2007 was less than \$650k.

Rick Fox
Alcoa Warrick Power Plant

Inventory Accuracy = MRO Costs

- \$10MM of MRO inventory costs you \$2.4MM in carrying costs
- \$3MM is obsolete or overstock and should be eliminated
- 30% of your annual purchases are redundant
- Inaccurate inventories is the root cause

PdM Reduces Utility Costs



- 20% of steam loss is through steam traps
- 100 lbs of steam costs \$18/hour
- Equates to \$13MM annually in excess fuel costs

Removing Waste from Your Process

- GE90 engine testing plant in Peebles, Ohio, is a leader in the application of Value Stream Mapping to greenhouse gas emissions
- In 2007, GE tested 165 engines and reduced fuel consumption during testing by 3,000 gallons/engine – equating to nearly \$1MM in fuel savings
- Also reduced Greenhouse Gas emissions by 5,000 metric tons from 2006 to 2007
- How did they do that?
 - Developed a new balancing process that only requires the engine be turned on once vs. three times
 - Developed a new troubleshooting process that occurs while the engine is not running

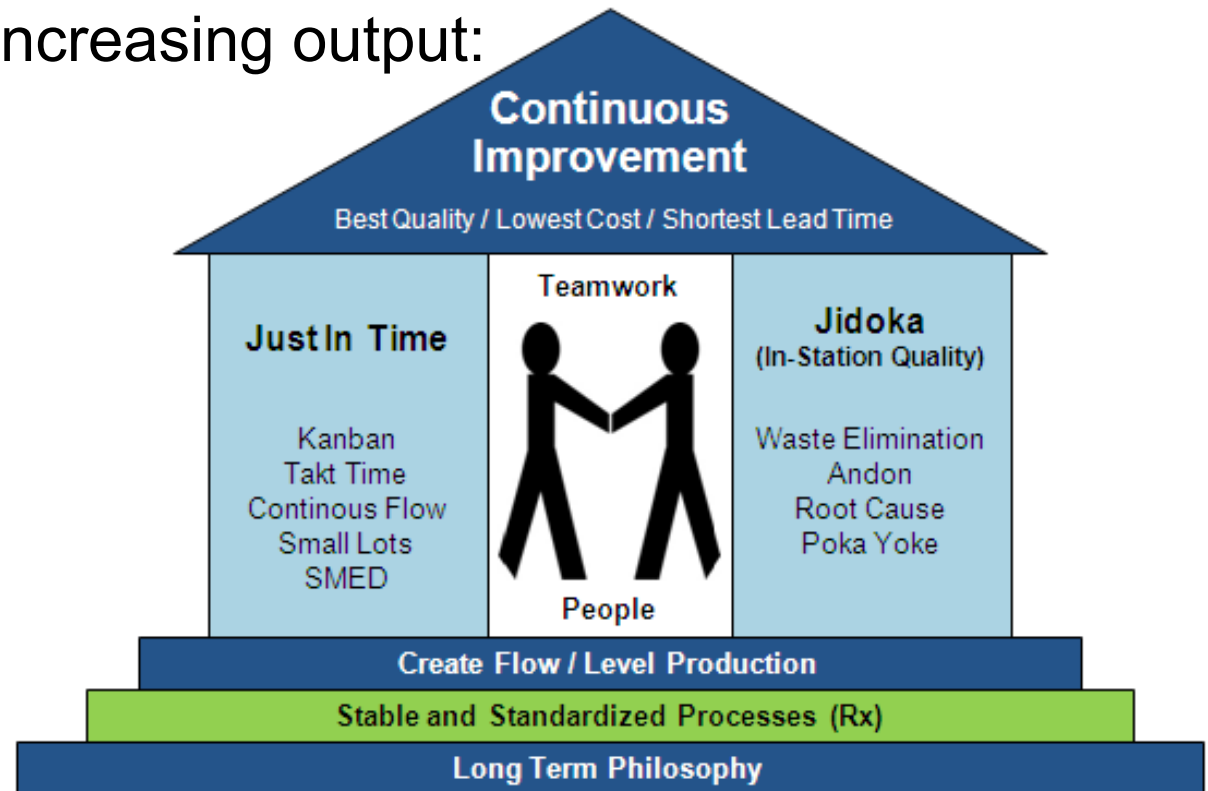
SMED Impacts Production Costs

- Aluminum door and window manufacturing facility in Yankton, South Dakota made the following changes:
 - Moved low-volume part painting closer to the paint booth to eliminate lengthy piping systems
 - Changed-out paint hoses at fixed intervals
 - Standardized operating practices
 - Deployed alternative methods to clean paint lines in place
- Reduced solvent disposal by 40%
- Cut paint disposal costs by \$280K annually
- Cut paint consumption from 50 gallons per day to less than 10

TOMORROW'S HEADLINE: Reliability Created Jobs!

Reliability improvements short-term protect jobs by reducing costs and increasing output:

- Labor Costs
- Materials Costs
- Utilities
- Waste Generation



***Operations improvements are 1.5 to 10 times
maintenance cost savings***

Removing Waste from Your Process

SUSTAINABILITY							
RELIABILITY ENGINEERING	AUDITS	EQUIPMENT HISTORY	CONFIGURATION MANAGEMENT	BUDGETING & COST CONTROL	MANAGEMENT REPORTING		
OPTIMIZATION							
CMMS/EAM	SUPERVISION	ORGANIZATIONAL STRUCTURE	TRAINING	WORK PLANNING	WORK MEASUREMENT	LOSS ELIMINATION	FACILITIES & EQUIPMENT
PROCESSES							
WORK CONTROL	SCHEDULING & COORDINATION	OPERATOR CARE	EQUIPMENT & PROCESS DESIGN	PREVENTIVE / PREDICTIVE MAINTENANCE	PROCUREMENT	MATERIALS MANAGEMENT	
CULTURE							
STATUS ASSESSMENT	GOVERNING PRINCIPLES	OBJECTIVES & GOALS	MASTER PLAN	ORGANIZATIONAL BEHAVIOR	PERFORMANCE MANAGEMENT		
PRINCIPLES							
PLANT PARTNERSHIPS				MANAGEMENT COMMITMENT			