



## Documenting Financial Impacts of Performance Supervision

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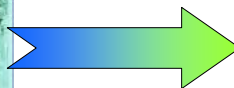
## Delivering Bottom-Line Benefits

You must show the value:

- in Economic Terms

Move from “abstract” to “concrete” measures

The work is not “nice to do”, it delivers profits



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## Manufacturing Reality

Many Things are Important

- Cost
- Quality
- Safety
- Reliability
- Throughput
- Maintenance Costs
- Energy Costs

Current Performance?

Which are the most Important?

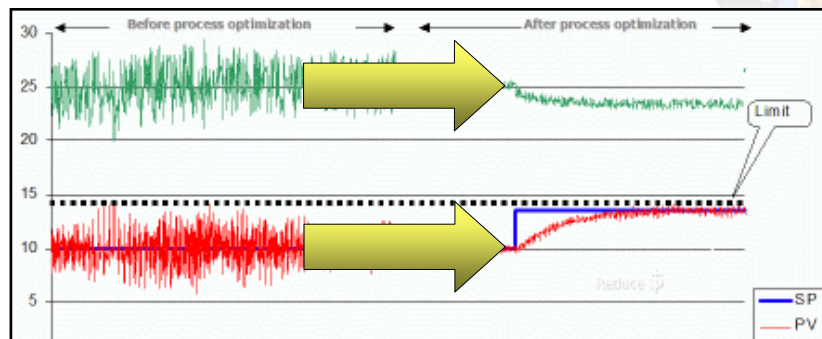
Focus Improvement Efforts

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## Process Shifting An Example



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# Calculating Energy Reduction

## Reduction in Natural Gas Demand

- Reduced from 196 SCFM to 183 SCFM
- Gas Pricing: \$10.89/MCF
  - From [http://tonto.eia.doe.gov/dnav/ng/ng\\_pri\\_sum\\_dcu\\_nus\\_m.htm](http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm)
- 24 x 7 operation, 330 days/yr

### Energy Savings

13 SCFM  
Gas @ \$10.89/MCF

### Gas Saved

13 SCFM X  
60min X 24 hr X  
330 day/yr  
=6178 MCF/yr

### Total Savings

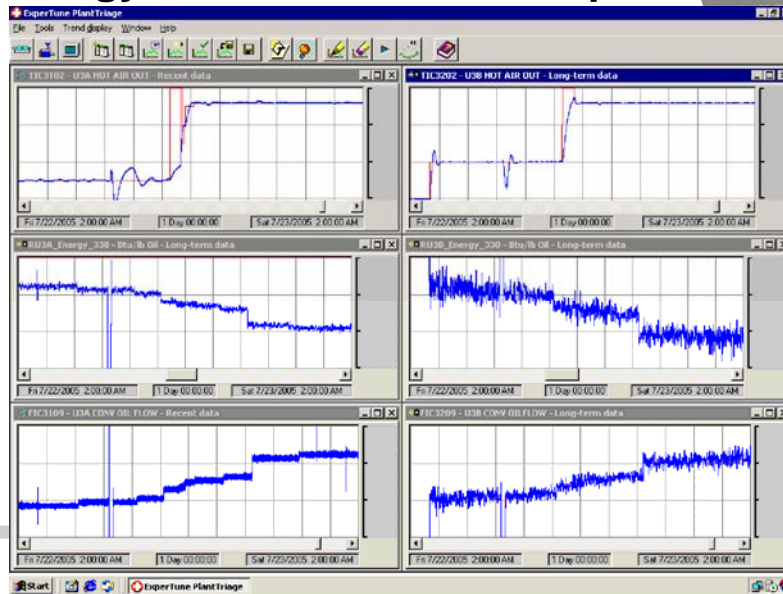
6178 MCF/yr X  
\$10.89/MCF  
=\$67,274/year

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# Energy & Production Rate Improvement



## Control Improvements

### Variability Reduction

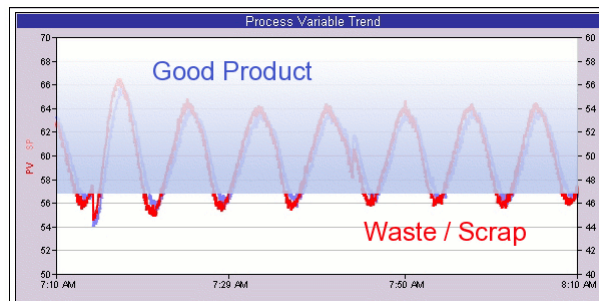
- Close the Opportunity Gap
- Reduced Waste/Scrap
- Reduce Unplanned Downtime
- Reduce Maintenance Costs
- Improved Process Efficiency

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## Reducing Waste/Scrap



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## Reduction in Waste/Scrap

Product Wasted as Scrap  
13 tons/day (wet) Pulp (48% moisture) reduced to 2 tons/day  
Landfill costs = \$112/ton  
Product value = \$387/ton (dry)  
Value = Landfill savings + production increase

**Landfill Savings**  
11 ton/day x  
\$112/ton x 297  
day/yr  
=\$365,904 / yr

**Product Increase**  
11 ton/day x 0.52  
ton/ton x \$387/ton  
x 297 day/yr  
=\$657,451 /yr

**Total Savings**  
\$365,904 + \$657,451  
=  
\$1,023,355 / yr

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## Ensure Success...

Training  
Baseline Economic Conditions  
Incorporate in Daily Routine  
Track & Document Major Improvements  
Track Economics for Unit Operations

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## Track Economics for Unit Operations

Trend Over Time  
Compare to Baseline Conditions  
Align with Major Improvements  
Document in Report or Study

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## Realities

Many Changes at Once  
Many People to Claim Responsibility  
Direct Correlations Sometimes Difficult

**Baseline Data Up-Front**

**Involve Operations Managers**

**Share the Results**

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**Questions?**



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