

# L<sup>6</sup>σ S.T.E.M. Skills, Real World Problems

Megan Worcester  
Technical Services Engineer  
Rumford, ME

## How did I end up in a S.T.E.M. field?

Background – Parent and relatives in S.T.E.M. related fields

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Exposure –  
• High school teachers that brought “real life” into the class room  
• MERITS internship (disappeared for a while but is BACK!)

– Lack of awareness of possible career choices

This could make the difference!

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**B.S. Chemical Engineering from UMaine**

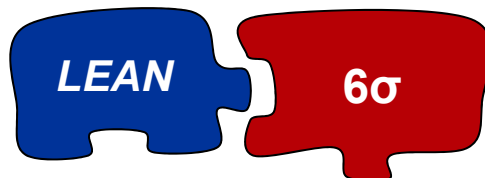
## Company Overview



- Headquartered in Miamisburg, OH
- Largest fine coated paper manufacturer in North America - 4.4 billion in net sales for 2008
- Employs approximately 7800 employees located in the US and Canada.



## Lean and Six Sigma (LSS) at NewPage



### Speed + Low Cost

- **Goal** – Reduce waste and increase process speed
- **Focus** – Identify non-value added steps and causes of delay
- **Method** – Value stream tools, Kaizen events, Everyone Participates

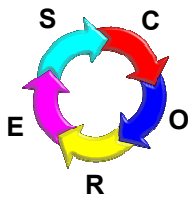
### Culture + Quality

- **Goal** – Improve performance on customer CTQs (critical to quality)
- **Focus** – Use structured process with data analysis tools to eliminate variation and defects
- **Method** – Management engagement, 1-3% dedicated as Deployment Champions & Black Belts

## Current NewPage LSS Deployment Resources 2008

<b>Master Black Belt (MBB).....</b>	<b>18</b>
<b>Black Belt (BB).....</b>	<b>43</b>
<b>Green Belt (GB).....</b>	<b>240+</b>
<b>Yellow Belt (YB).....</b>	<b>3360+</b>

## Three Basic Project Types



- S** SELECT the process to be worked on
- C** CLARIFY the problem or objective
- O** ORGANIZE the team and train them
- R** RUN the event
- E** EVALUATE the results

**Intense 5 Day Project**

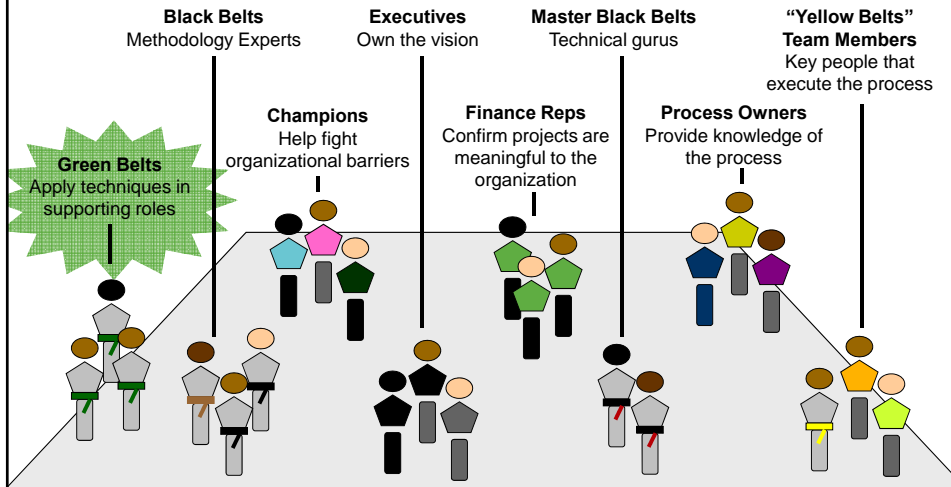
**RLSS**

**Rapid Lean Six Sigma Projects – Finished in 90 Days**



**Finished in 6 months**

## LSS Roles – Employee Engagement



## What Type of Projects Can LSS Tools Be Used For?



- Improve Safety Involvement of Middle Management at Ruppert Mill
- Develop a Co-op Feedback Measurement System
- Develop a Paper Replacement Process for Tissue Paper
- Optimize Chip Scaling Hours
- Reduce Mill Kappa Variation
- Increase Pulp Dryer Production Rate
- Reduce Paper Production Cost

## Examples of Projects Belts Have Completed

- This was all accomplished using statistical tools
- Chip testing showed that good chips were getting into the waste streams in the chip thickness screening process
- Using the LSS tools – reduction in good chip losses from simple improvements
- The project ended up saving \$68,000 per year



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## What Can S.T.E.M. Do For You?

- NewPage's LSS program saved **tens of millions of dollars** last year
- STEM focused education prepared me well for my career (courses, internships/co-op/projects)



Question "When will I actually use this stuff?"  
 ★ Answer EVERY DAY

Question "Are students being hired out of college for engineering jobs?"  
 ★ Answer YES – NewPage hired **25** engineers that graduated in 2009 and plans to do the same in 2010

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