



Jeff Welton
Sales Manager, Central USA
Nautel



Brian Irwin
Head of Operations
Nautel



Episode #48

"Lean" Manufacturing for Broadcasters

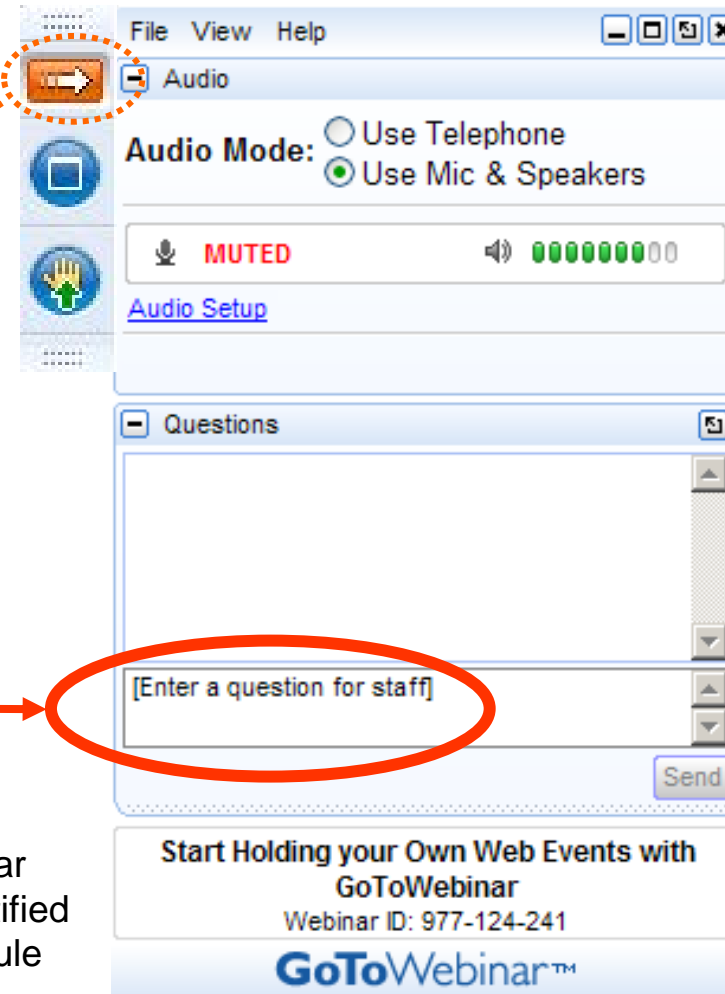
Your questions please?

(if you don't see the control panel,
click on the orange arrow icon to
expand it)

Please enter your questions in the
text box of the webinar control panel
(remember to press send)



Remember: The completion of a Nautel webinar qualifies for ½ SBE re-certification credit, identified under Category I of the Re-certification Schedule for SBE Certifications.



Continuous Improvement at Nautel



What is Lean Six Sigma

Lean Six Sigma is a team-focused approach to performance improvement combining two powerful methodologies.

Lean

- ✓ Toyota Production System
- ✓ Elimination of Waste
- ✓ Focus on Efficiency
- ✓ Removes non-value added process steps
- ✓ Fixes connections between process steps
- ✓ PDCA



Six Sigma

- ✓ Motorola and General Electric
- ✓ Variation Reduction
- ✓ Statistical tools to solve problems and drive improvements
- ✓ Focus on Consistency
- ✓ DMAIC



The 8 Wastes of Lean

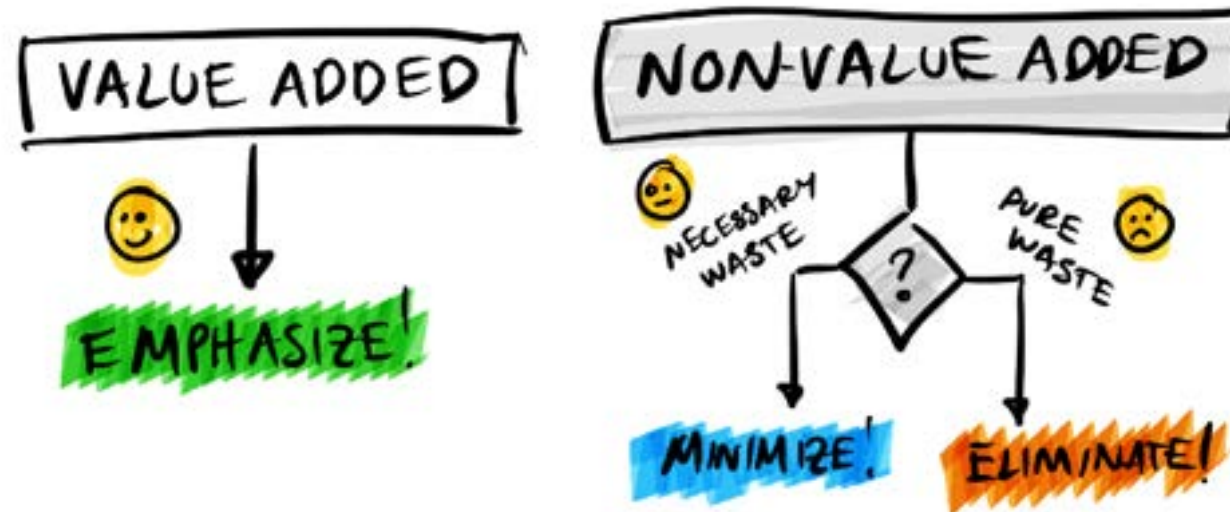
1. Overproduction - making more than needed or before its needed
2. Overprocessing – more work than required
3. Motion – unnecessary movements by people
4. Waiting – wasted time waiting for next step in process
5. Transportation – unnecessary movements of products and materials
6. Inventory – excess products and materials
7. Defects – all effort caused by rework, scrap or incorrect information
8. Lack of Employee Involvement – not utilizing employees skills and knowledge

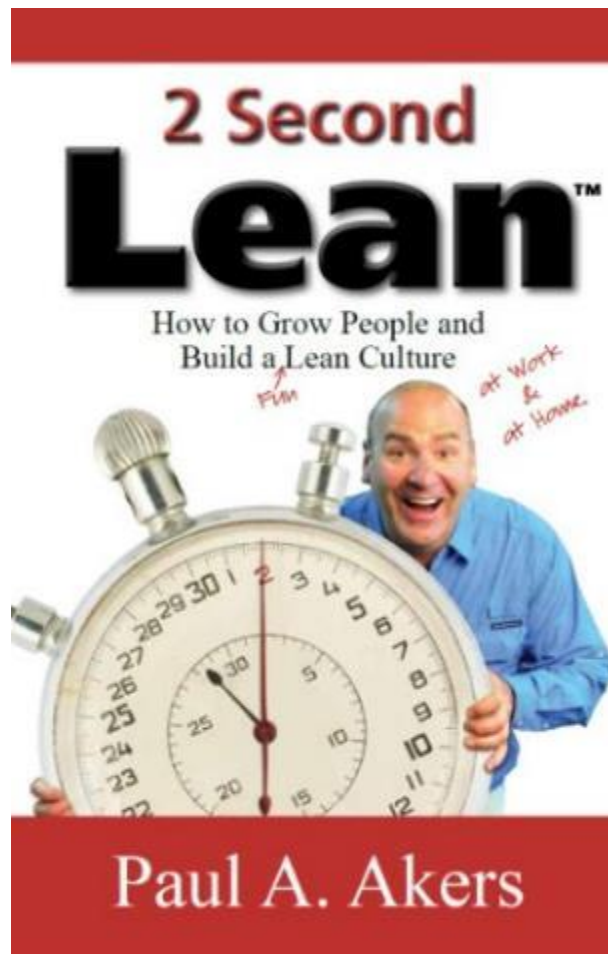


Value Add vs Non-Value Add



KINDS OF ACTIVITIES:





CI Expectations

- ✓ Learn and understand the 8 wastes
- ✓ Understand the concept of Value Added and Non Value added activity
- ✓ Learn how to drive a culture of improvement in your area
- ✓ Fix things that 'bug you' everyday
- ✓ Document your improvements
- ✓ Talk about improvements with your teammates
- ✓ Become a process engineer
- ✓ Be humble and respectful of current processes
- ✓ Have fun



Lean in a Nutshell

1. Continuous improvement comes from daily work to improve processes
2. Lean is about the elimination of 8 wastes
 - Overproduction
 - Overprocessing
 - Motion
 - Waiting
 - Inventory
 - Defects
 - Lack of Employee Involvement
3. Waste is eliminated through continuous improvement



Lean Principles

- Encourage creativity from everyone
- Focus on team efforts
- Be respectful
- Be humble
- 90% of everything we are doing is waste
- Never look at the waste from other departments focus on what you can control
- Small daily improvements from everyone is much better than large improvements from a few people



Building a Lean Culture

- Encourage creativity from everyone
- Focus on team efforts
- Be respectful
- Be humble
- 90% of everything we are doing is waste
- Never look at the waste from other departments focus on what you can control
- Small daily improvements from everyone is much better than large improvements from a few people

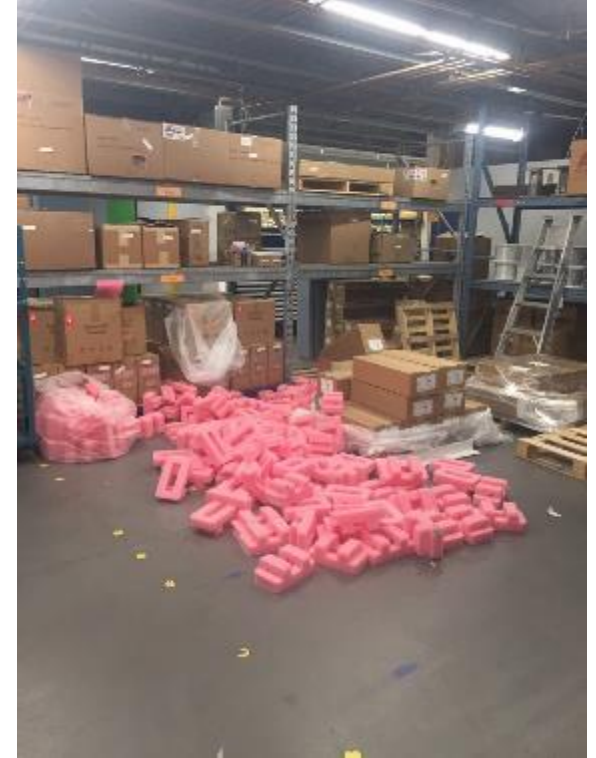


Wire Stamp Quick Change

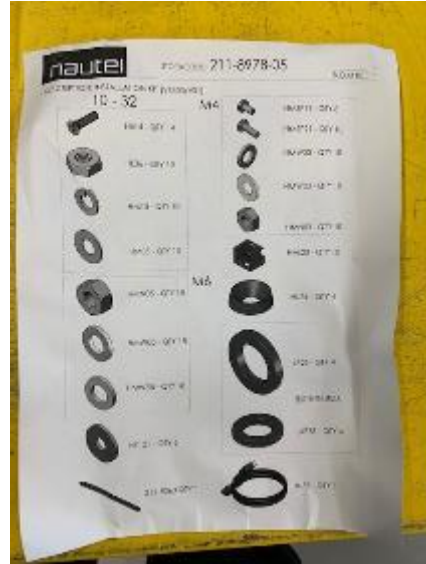
- This is Alana Walters
- Newest hire on LA team
- And this is her improvement
- 25 times per day the guide on the wire stamp machine is changed
- Each change taking up to 90 seconds
- Solution reduced change over time to 30 seconds
- This equates to ~25 additional minutes of value-added time for the machine per day
- ~2.5 weeks over the course of a year



Examples



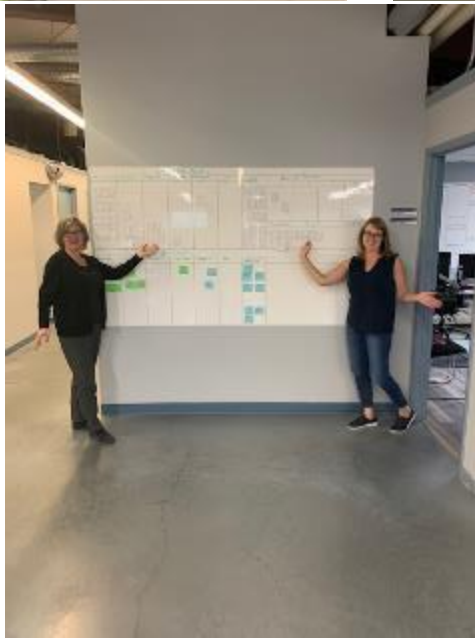
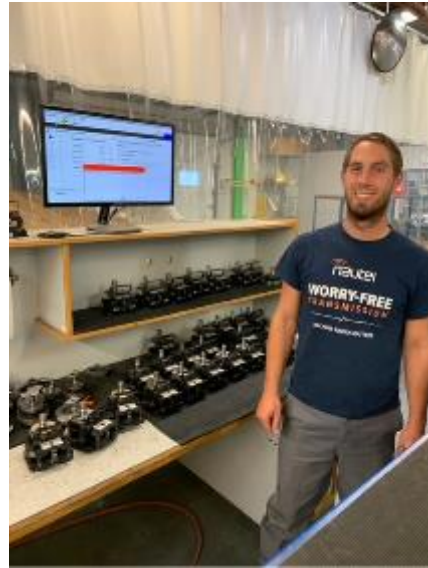
Examples



Examples



Nautel Employee Involvement



Nautel Employee Involvement



Examples



Engineering Lab 3s project

BEFORE



Engineering Lab 3s project

BEFORE



Engineering Lab 3s project

AFTER



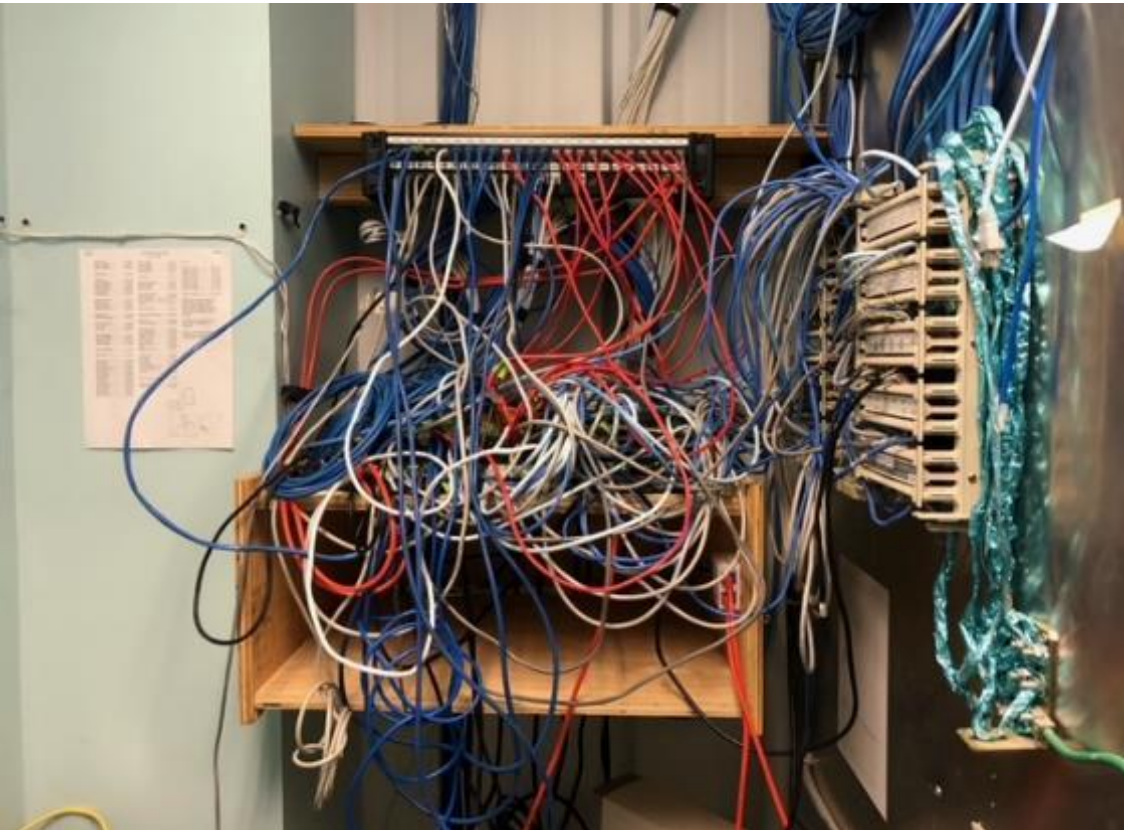
Engineering Lab 3s project

AFTER

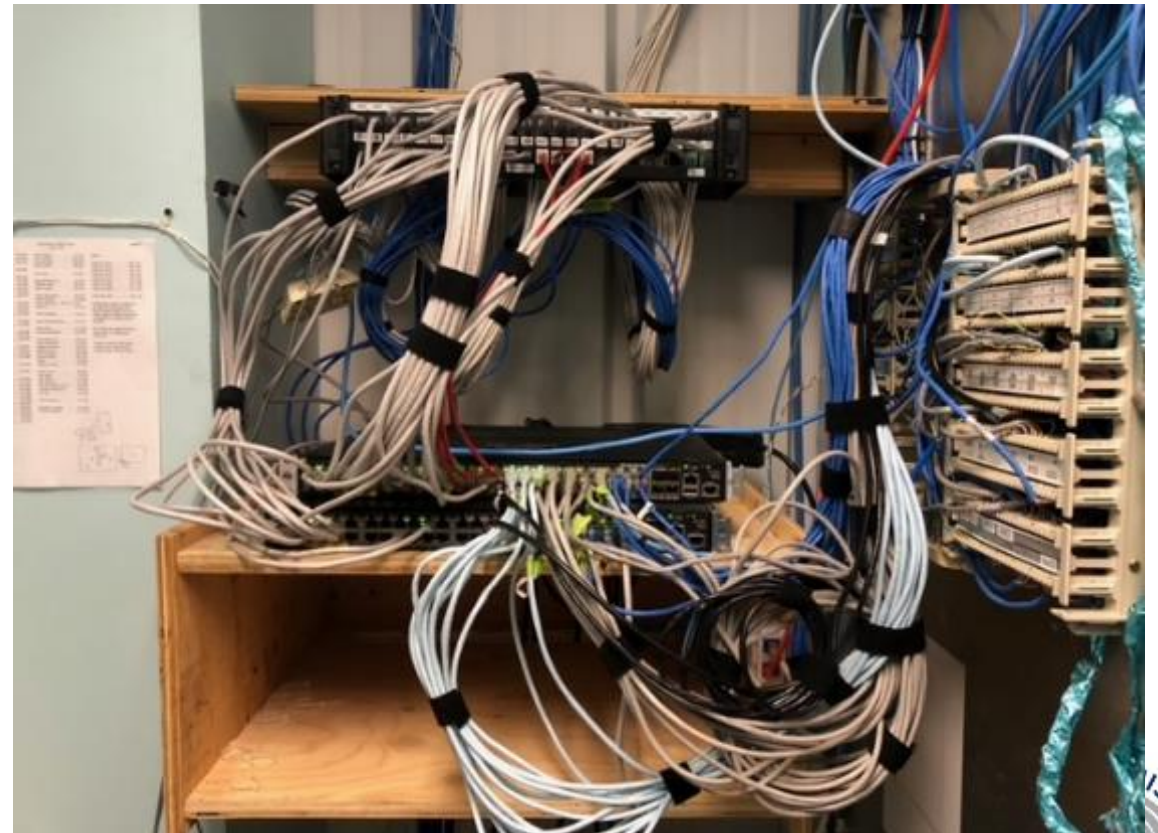


Examples

Before



After



3 Pillars of Lean

1. Understand the 8 wastes
2. Improve everyday
3. Document your improvements

Online Information



Webinars

<https://www.nautel.com/resources/webinars/>



Nautel Waves Newsletter

<https://www.nautel.com/newsletters/>



YouTube

<http://www.youtube.com/user/NautelLtd>



Online Info, such as the Broadcasters' Desktop Resource

<https://www.thebdr.net/>

THANK YOU!

