



# R&R Newsletter

Reducing Risk/Removing Waste

ISO Support Group

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An ISO 9001:2000  
Registered Company

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## LEAN JOURNEY...

Strategy 1:

- Isolate the Value Stream

Strategy 2:

- Specifying Value

Strategy 3:

- Mapping the Value Stream

Strategy 4:

- Making the Stream Flow

Strategy 5:

- Letting Customers Pull Value

Strategy 6:

- Seeking Perfection

## CAN LEAN HELP?

Want to know if Lean  
applies to your business?  
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Assessment Service

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## Removing Waste:

In this Issue under the heading *Removing Waste* I'll be covering the topic of **Lean Operations – Example: Sikorsky Aircraft Corp.**

The following is a brief overview of a Lean implementation story:

**Sikorsky Aircraft Corp., Stratford, CT, facility...** This company produces complex products having high variety with low production volumes which become component parts for military helicopters, including the familiar Black Hawk and Sea Hawk models.

**The hodgepodge of parts**, and resulting changeovers, coupled with high demand variation makes it difficult to establish continuous flow. Despite the challenge, Sikorsky Aircraft believed it could achieve flow in a busy machine shop making critical parts. As part of their lean implementation, a part family matrix was created, which identified spindles and cuffs as a family of parts. To satisfy the growing demand from Customers, while containing costs, Sikorsky's managers had to increase the throughput and output of the cell without making significant capital investments. They didn't believe that continuing to rely on "hot lists" or MRP's "push scheduling" were the answers. "We had to do something different" recalled Scott Bodington, machine department manager.

**With advice from** an outside consultant, Sikorsky managers applied the lean concept of "every part, every interval" (EPEI) to level the mix in demand and create flow through the cell. Driscoll described EPEI as "the backbone" of lean in the machine shop. "We designed a process to support a steady flow of material by leveling demand to a fixed lot size for each part number," explained Driscoll. Flow through the cell was improved further by eliminating non-value-added work for operators that took them away from machines. For example, instead of operators going to the tool crib for cutters, the crib started delivering cutters to operators. Driscoll emphasizes that it is "very important" to designate value-stream managers as part of a lean conversion. By taking ownership for the transformation of an entire value stream, instead of isolated parts of it, value-stream managers can avoid the pitfall of making a change to one process that negatively affects others.

**Some of the key results** for the Black Hawk Helicopter Spindle from Jan to Dec 2003 included:

- Lead time reduced by 73%;
- Changeover time reduced by 90%;
- Output (over a 2-day period) increased 73%;
- Actual run time compared to planned run time improved by 25%.

The results above reflect the improvements for one part number, but they are typical after the cell began applying one lean technique called EPEI (Every Part Every Interval).

**To view more information on this example (and others)...** you can visit our Newsletter page at our website to view the complete article:

[www.isosupport.com/newsletters/newsletters.htm](http://www.isosupport.com/newsletters/newsletters.htm)

PS: Don't forget to look at the Q&A section of this Newsletter for some final thoughts on this Lean implementation example.

## **PUBLICATIONS**

Click [HERE](#) to learn more about the manuals & books that we've recently published:

- ISO 14001:2004 Environmental Manuals
- "The 3 Biggest Mistakes People Make with ISO 9001"
- "ISO 14001: Learn what's driving its double digit growth!"

## **TRAINING:**

- Process/Value Stream Mapping
- Lean Essentials/Kaizen
- Business Modeling and Performance Measure'ts
- Root Cause Analysis and Corrective Action
- Mistake Proofing
- Continual Process Improvement
- Strategic/Business Planning
- Malcolm Baldrige Training
- Privacy Program Training

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**For more information on training provided by ISG on Process Improvement/Lean (Manufacturing/Office)**, please visit our website at [www.isosupport.com](http://www.isosupport.com). Once there, you will also find information about the following:

### **"Process Improvement/Lean Assessment: Can Lean help you?"**

If you want to find out if Lean applies to your business, visit our website and read about our Lean Assessment Service by going to:

[http://www.isosupport.com/services/lean/srvcs\\_pi\\_lean.htm](http://www.isosupport.com/services/lean/srvcs_pi_lean.htm)

### **"The 3 Biggest Mistakes People Make with ISO 9001";** ISO

9001:2000 Tips, Tools and Techniques

Click here: <http://www.isosupport.com/books/books.htm>

If you enjoyed reading our previous ISO Newsletters you'll find that this book contains many of the practical approaches and advice that I've discussed in these Newsletters over the past 5 years.

### **Q: What are the "lessons learned" from this example?**

**A:** The first lesson is that even high variety, low production operations can benefit from using Lean concepts. Second, using "hot lists" and MRP "push scheduling" just doesn't work when trying to meet delivery schedules. Third, although not mentioned above, Sikorsky Aircraft implemented Lean training to the operators in the cell at "lean 101 sessions" at the start of daily production meetings. Each session lasted a few minutes and covered a basic concept, the need for the lean concept in the precision machining department, and how the implementation process would proceed. Fourth, they re-organized and designated value stream managers so that any changes made to one process didn't negatively affect the others. Fifth, they sustained the gains by ensuring that Senior managers also took ownership of the Lean initiative by championing the effort in public statements, visiting the floor to see the improvements, and holding regular but informal "town hall meetings", with the managers leading the transformation by discussing problems and solutions.

**Until next time...**

**Tim Renaud**

### **Helping Business Professionals Reduce Risk and Remove Waste!**

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