

# Torotel Products, Inc.



**Dale H. (Herb) Sizemore, Jr.**  
CEO & President, Torotel Products, Inc.

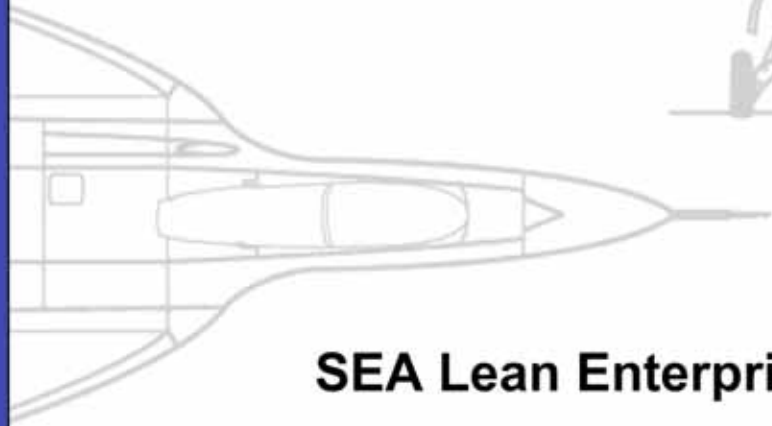
Herb Sizemore has been CEO & President of Torotel Products, Inc. Since 2002 during which he led the company through plant relocation and significant improvements in the reduction of manufacturing lead times. Torotel Products, Inc. manufactures custom magnetic components and value added assemblies for defense, aerospace and industrial applications. Torotel's primary customer base includes Lockheed Martin, Raytheon, Rockwell Collins, Goodrich Aerospace, Honeywell, Hamilton Sundstrand, Astronautics, BAE Systems and ITT. Mr. Sizemore has a bachelor degree in electrical engineering, a masters degree in business administration and a juris doctorate from the University of Kansas.



**Accelerating Supply Chain Performance**



# **Torotel** **Products, Inc.**



**SEA Lean Enterprise System**  
**Phase 1**

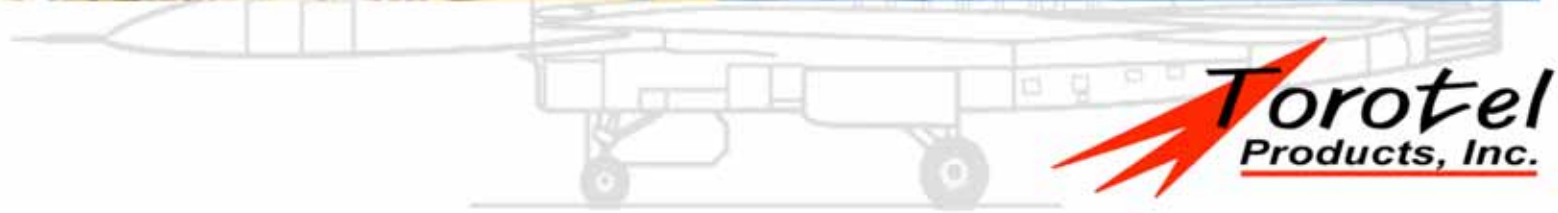




# OVERVIEW

For over 50 years, Torotel has specialized in the design and manufacture of custom magnetic components and electro-mechanical assemblies for the Defense and Aerospace Industries.

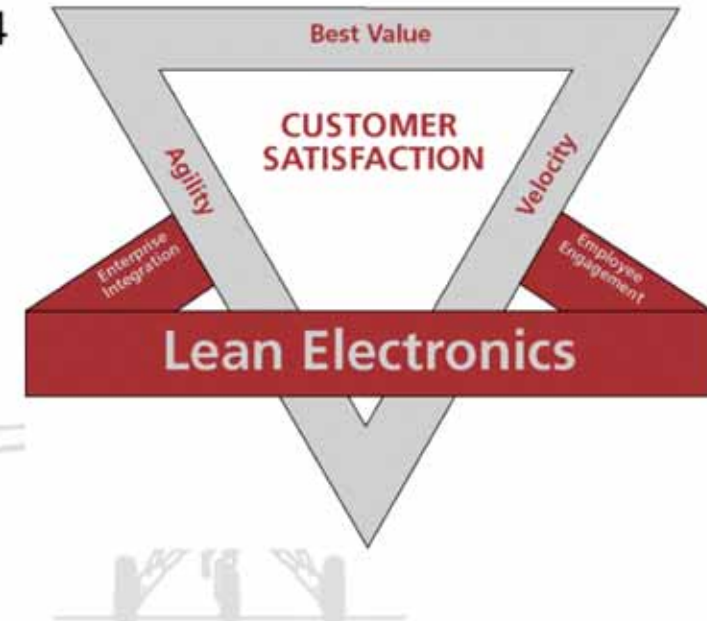




## 5S EVENT ASSEMBLY REPORT OUT

Initial meeting held November 2, 2004

- Assembly chosen
- Case for change
  - Reduce clutter and waste
  - Reduce raw material outlay
  - Organize Workspace
  - Eliminate unneeded travel
- Team Members chosen
- Event to be held November 15-18, 2004
- Budget at request to GM as needed
- Pre-event
  - Photos taken and posted
  - Notification of event
  - Area marked off
  - Materials needed for event
  - Housekeeping guidelines





# AGENDA

## Value Stream Mapping Workshop

December 13, 2004

8:00 – 8:30 am Introductions & Leadership Kick-off

8:30 – 10:30 am Value Stream Mapping (VSM) Training (VSM Team & Leadership)

10:30 – 12:00 pm Begin mapping Current State

12:00 – 12:45 pm Lunch

12:45 – 3:45 pm Walk Current State (gather data, interviews, collect issues)

3:45 – 4:00 pm Lessons Learned / Tuesday Agenda

4:00 pm Adjourn





# TQC & FLEXING



OP 1

OP 2

OP 3

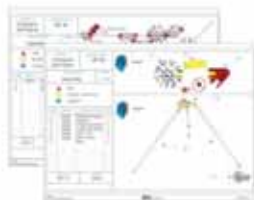
OP 4

OP 5





# TQC & FLEXING



OP 1

OP 2

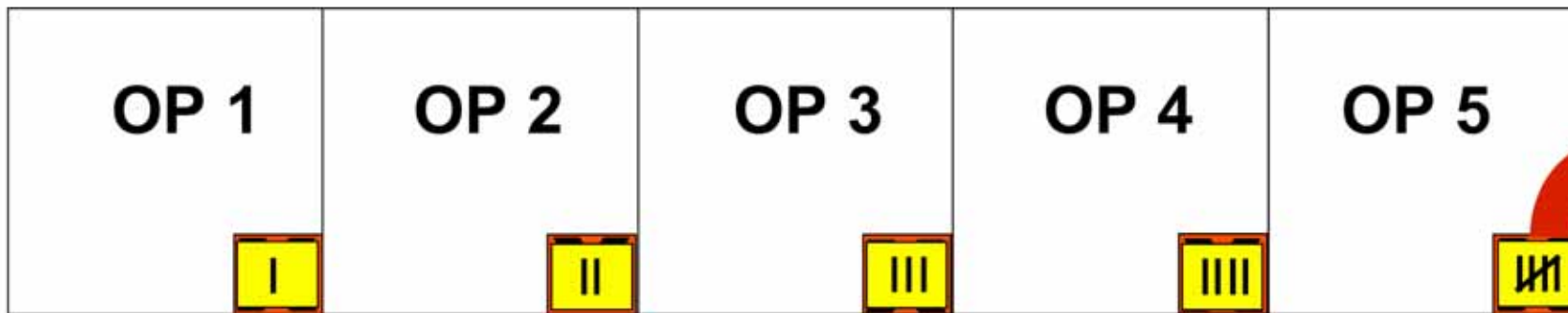
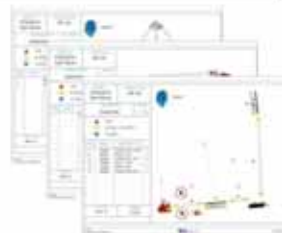
OP 3

OP 4

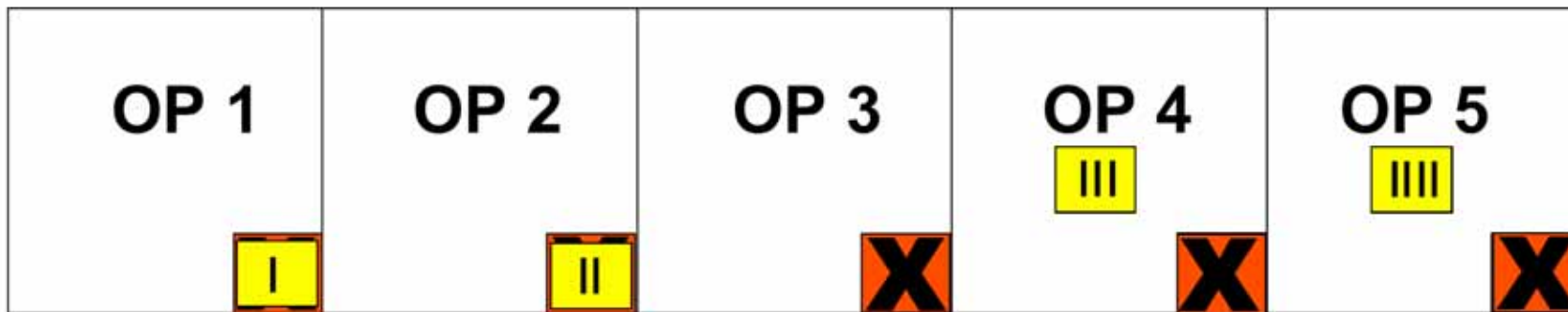
OP 5



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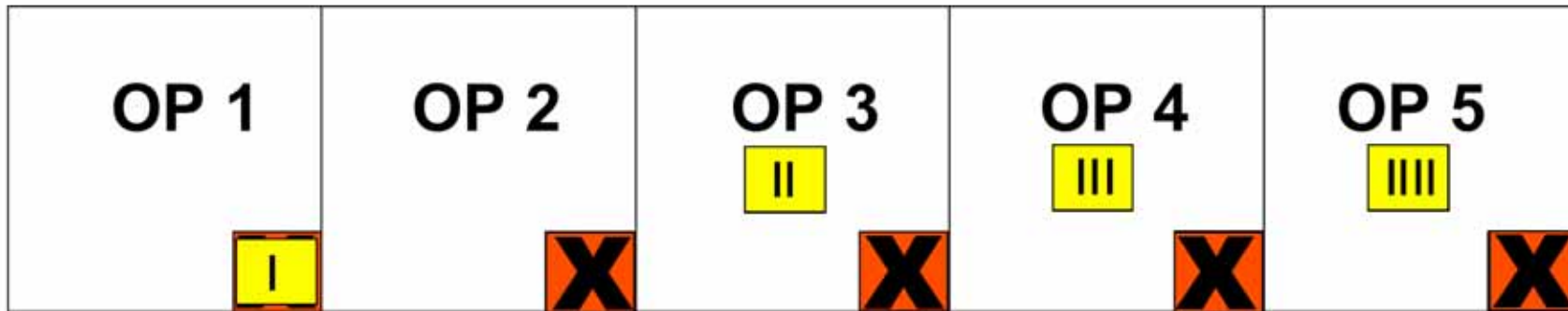
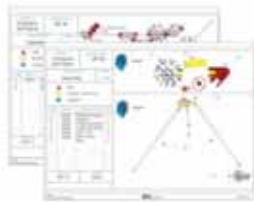


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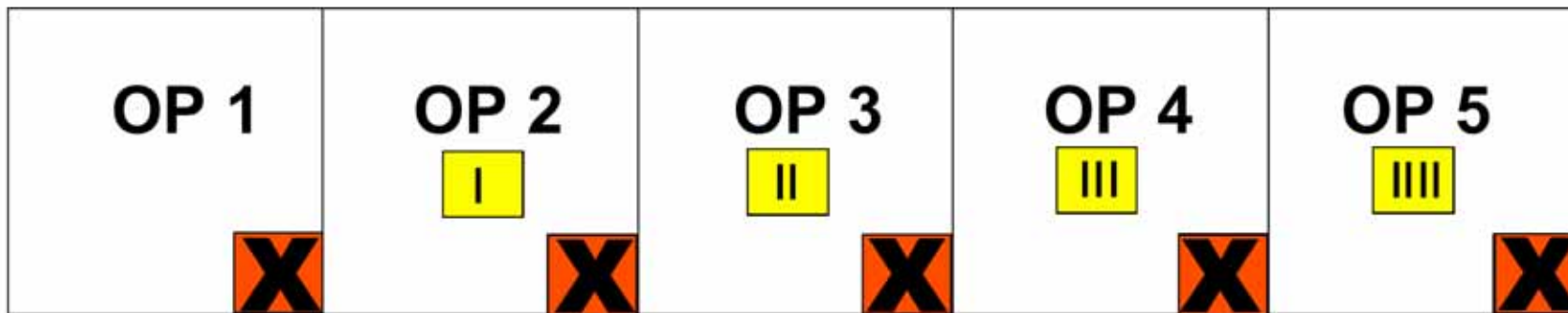
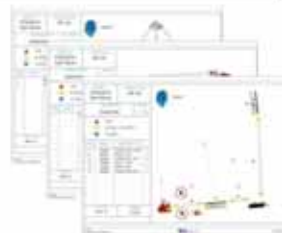




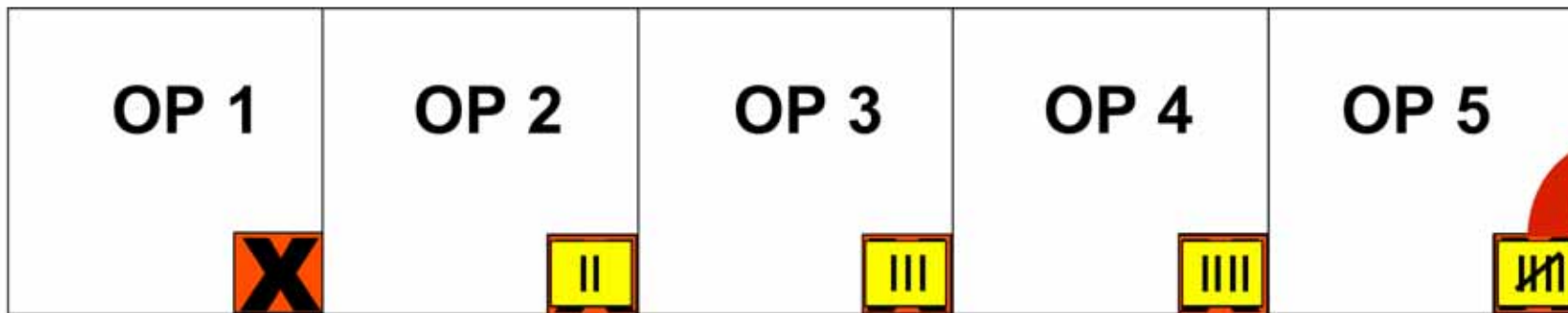
# TQC & FLEXING



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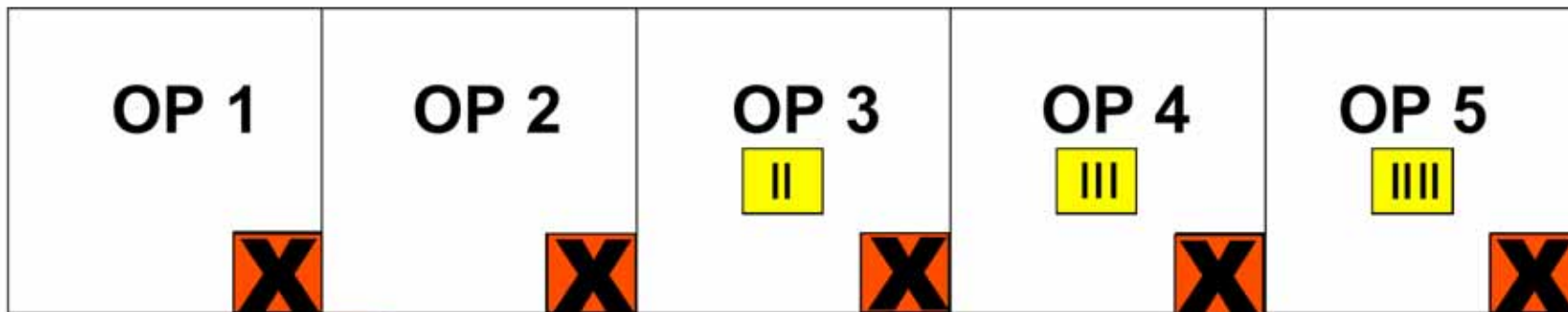
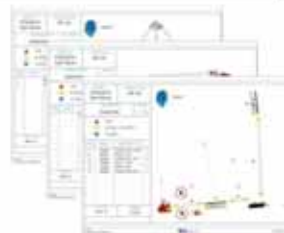


# TQC & FLEXING










# TQC & FLEXING



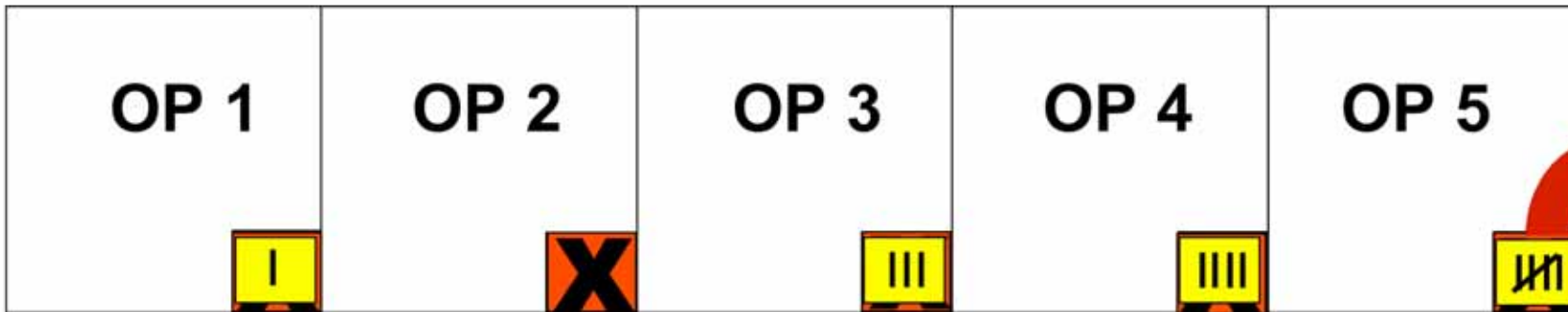
# TQC & FLEXING



<b>OP 1</b> 0 	<b>OP 2</b> 	<b>OP 3</b> II 	<b>OP 4</b> III 	<b>OP 5</b> III 
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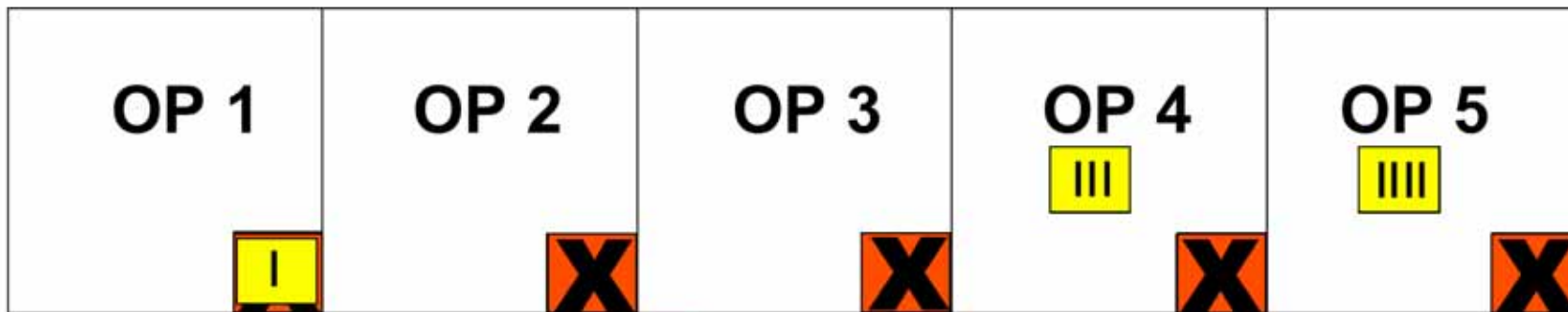
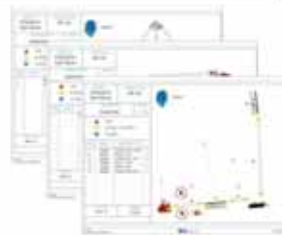


# TQC & FLEXING










# TQC & FLEXING



# TQC & FLEXING



<b>OP 1</b> 0 	<b>OP 2</b> I 	<b>OP 3</b>  	<b>OP 4</b> III 	<b>OP 5</b> III 
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# TQC & FLEXING



OP 1

OP 2

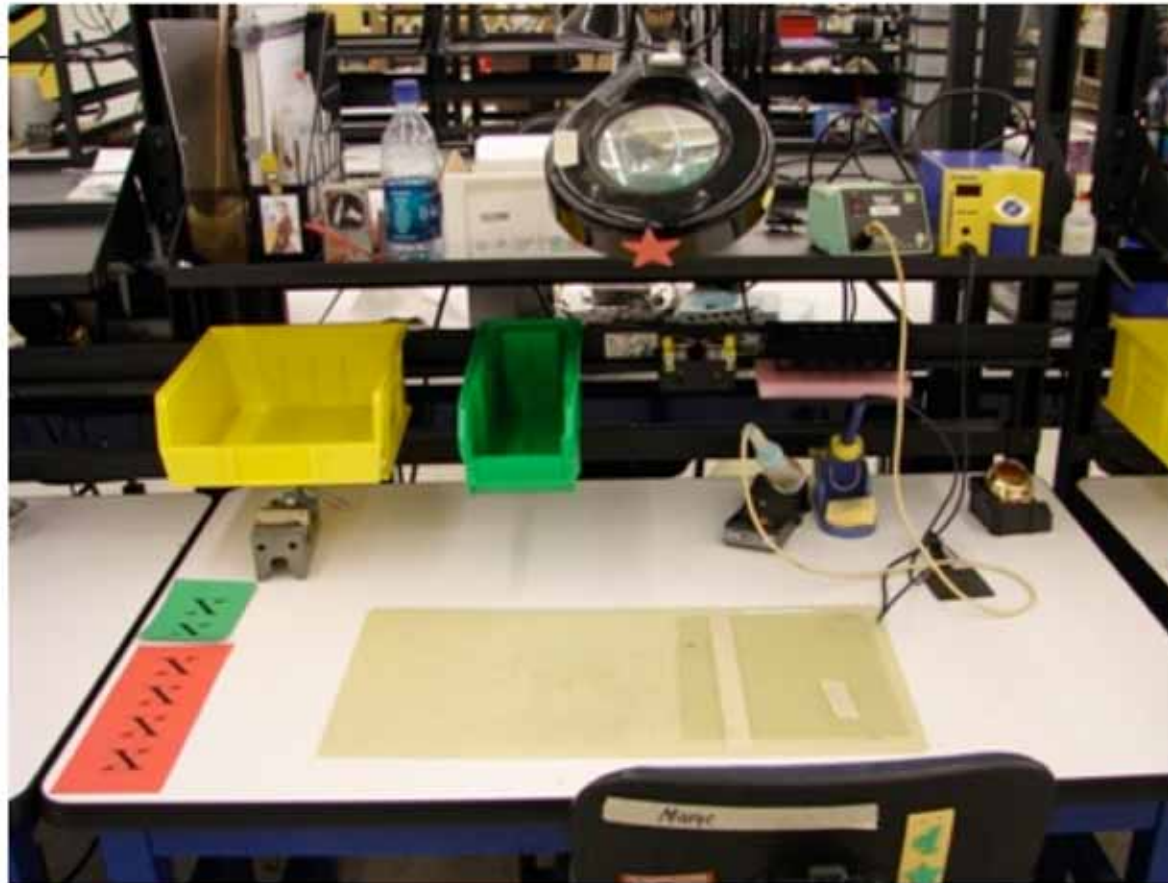
OP 3

OP 4

OP 5



# Assembly Station with downstream to left





“Every morning in Africa, a gazelle wakes up. It knows it must run faster than the fastest lion or it will be killed.

Every morning a lion wakes up. It knows it must outrun the slowest gazelle or it will starve to death.

**It doesn't matter whether you are a lion or a gazelle. When the sun comes up, you better start running.”**

- Thomas Friedman, *The World Is Flat*

**June 8, 2006**

**Hosted by: The Boeing Company**

Washington – Plant 2/Boeing Field

Building 2-22

7755 East Marginal Way South

Seattle, WA 98108

SEA is the Joint Program Office for the aerospace, defense, and space supply chain conversion effort. It unifies the industry's primes, major subcontractors, and suppliers through a shared vision for increasing competitiveness by accelerating supply chain performance. SEA attracts vital resources and support from all sectors, both private and public.

This will be a very informative meeting, you don't want to miss it! - We will hear presentations from suppliers that are currently implementing the SEA LES and from a panel of suppliers that have implemented the SEA LES conversion, will go on a **site visit to Boeing's 737 "moving production line"**, and will close with a panel of primes discussing changes in the industry and how those changes translate to new requirements for suppliers.

**Draft Meeting Agenda (subject to revisions):**

- 7:30-8:00 Refreshments and networking
- 8:00-8:20 Welcome and Boeing presentation
- 8:20-8:30 Introduction to SEA
- 8:30-11:00 Supplier presentations and supplier panel discussion
- 11:00-2:00 Site visit to Boeing's 737 "moving production line"
- 2:00-2:15 Learning from site visit – impact of "moving production lines" on the supply chain
- 2:15-3:30 Prime panel discussion, closing

# TOOLS

*Tools, tools and  
more tools...*

**Kaizen**

**KANBANS**

**Standard Work**

**5S**

**Poke Yoke**

**Value Streams**

**Torotel**  
Products, Inc.

**SEAS**

# SEA

Leadership & Culture

**Value Streams**

**5S**

**Standard Work**

**Kaizen**

**Kanban**

**Poke Yoke**

Operational Excellence

Workforce Development

**Torotel**  
Products, Inc.





SPEED • INNOVATION • DELIVERY • COST



**Torotel**  
Products, Inc.

# IMPROVEMENTS

- Cycle/lead time from 64 days to 14 days
- Delivery from 85% to 96%
- Inventory turns from 4 to 11 times

# RESULTS

## Current Fiscal Year

Revenue Up 50%

No Debt





# **Torotel** **Products, Inc.**

“The Toyota Way” Jeffrey K. Liker

“Getting the Right Things Done” Pascal Dennis

“CREATING A LEAN CULTURE” David Mann

“The Quantum Leap” John R. Costanza

“AEROSPACE FLOW” Gerald Leone

