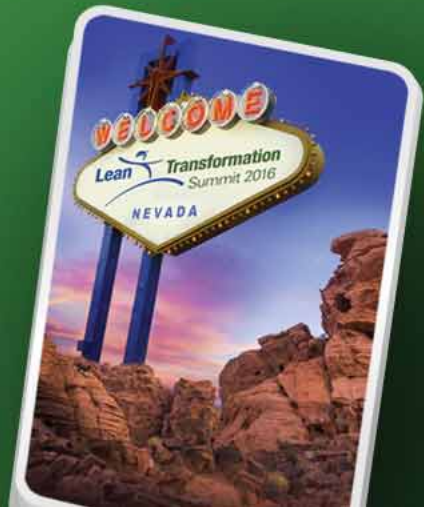


# Phase 2 Medical's Lean Journey & Partnership with Medtronic

Adam Prime



## Let's Deal With The Work

March 17-18, 2016 | Las Vegas

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# General Information



- Contract Manufacturer of Single Use Medical Devices
- Founded 1995
- 150 employees
- Facilities:
  - Rochester, NH
  - Tijuana, Mexico
- ISO 13485, ISO 9001 Certified
- FDA Registered Device Manufacturer

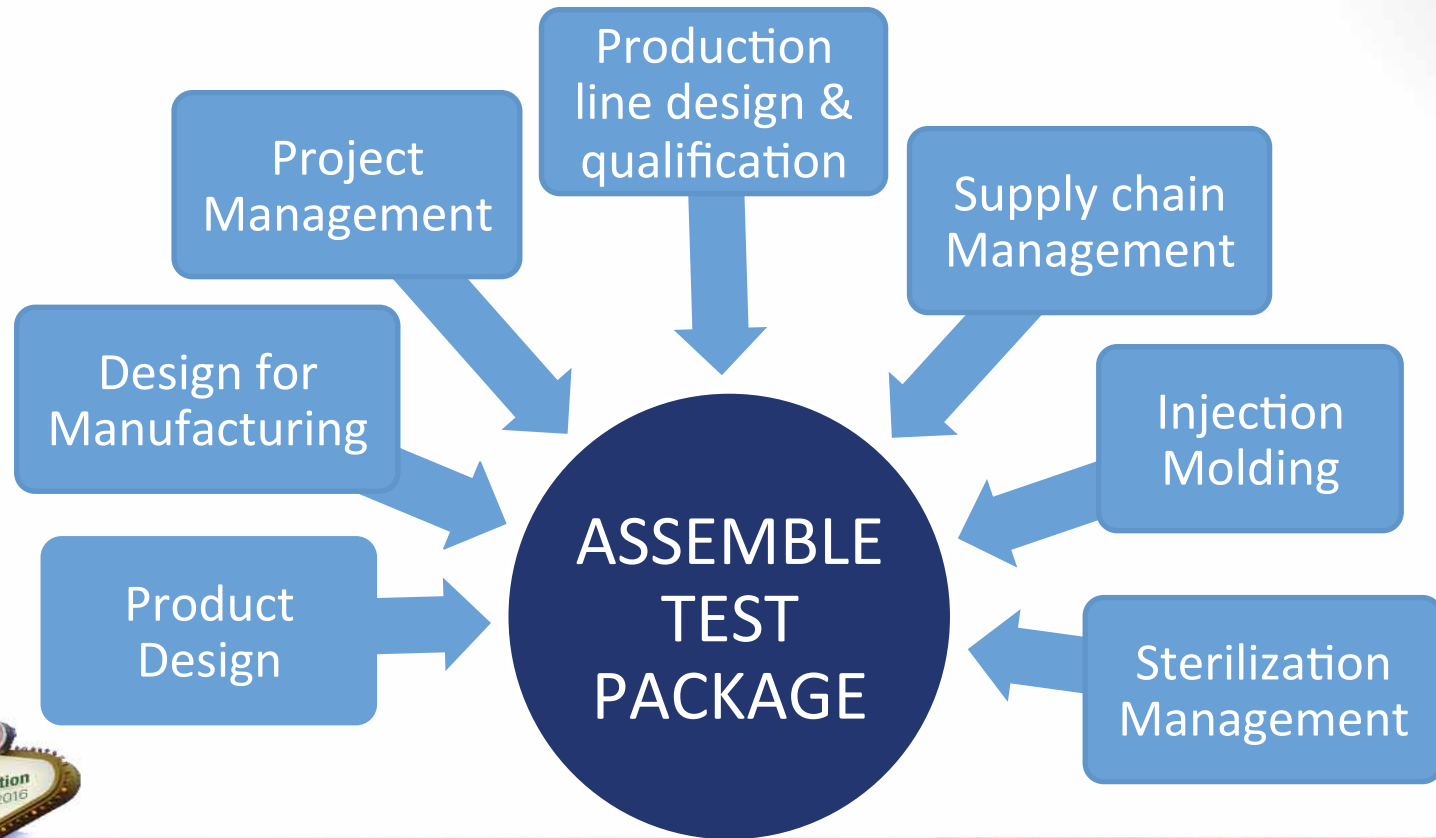


# Culture

- Daily Production, Value Stream & Managers' meetings
- Weekly "all Company" Communication Meeting
- Transparency



# Capabilities



# Products



Navigation Pointer



Registration Pointers



Patient Trackers





# Phase 2 Lean Journey



**1995-** Limited Resources.



**2007-** 1<sup>st</sup> Kaizen.



**2008-** Initiated Lean Training for the entire facility.



# The Lean Journey Accelerator

**2010-** Life is good.



**2011-** Medtronic, our #2 Customer purchased our #1 Customer.



**2012-** Medtronic decided to single source the highest volume product Phase 2 made and sent it out for global quoting.



# Phase 2

**2012-** Phase 2 was awarded the Job!



....and had to prove our ability -- increase capacity by 150% and cut cost by 50%.



**2012-** Medtronic offered to support Phase 2 with a lean project.





# The Partnership



+



+

Medtronic



Dave Errico



# The Plan



## TEAM:

- Medtronic:
  - Dave Errico
- Phase 2:
  - Production manager
  - Supply Chain Manager
  - Team lead
  - Assembler
  - President

## PLAN:

- Level Loading-Heijunka
- Point of Use Inventory
- Single Piece Flow w/  
Flexible Walk paths



# Visual Controls



**Workstation**



Standard Work, Walk Path, Assembly Procedure, Equipment Settings

Hourly Production, Defect & Productivity Trend

Andon Lights

SWIP Locations

Walk Path & Training



**Assembly Line**



# Management Accountability



## Kamishibai

Hourly  
Observation  
of Standard  
Work by  
Management



# Results



BEFORE





# The Results



AFTER



# Results



Finished Good Device Cost:	<b>Reduced by 52%</b>
Capacity:	<b>Increased by 150%</b>
Space Requirements:	<b>Reduced by 45%</b>
On Time Delivery:	<b>Increased by 2%</b>
Quality (NCMRs + CC):	<b>Improved by 2%</b>
Personnel Resistance:	<b>None</b>



# Spreading TPS concepts

Converted all other manufacturing lines to utilize the same concepts



# Value Steam



- Created and co-located Value Stream groups
- Daily meeting with functional team
- Developed Standard work, Visual Controls & Management Accountability





# Kanban System

- Tied to ERP system
- PFEP is “live”
- Developed Standard work, Visual Controls & Management Accountability





# Important Elements to Phase 2's Journey



Hearts, Minds & Partnership



Burning Platform



Tools vs Systems



Golden Triangle



# Break Out Session



- Mark Johnson, VP of Contract Manufacturing for Medtronic RTG, will tell the story from the customer's perspective.
- Dave Errico, Lean Deployment Manager for Medtronic, will explain some of the tools used at Phase 2 in greater detail.
- Simulation of an assembly cell with multiple walk paths and Kamishibai.

