

# Red Dot's Lean Journey

**Randy Gardiner**

**President**



# Red Dot Corporation

***“We Create and Deliver  
Innovative Climate Control  
Solutions”***



# Facilities



**\$100 Million In Sales World-wide**

- **Seattle**
- **Memphis**
- **Ipswich**



# Core Customers



JOHN DEERE



# Diverse Product Applications



# Army & Marine Kits

**DESIGNED AND BUILT LIKE SOMEONE'S LIFE  
DEPENDS ON IT!**



**BUILT TO SURVIVE  
RED DOT CORPORATION**



# Red Dot's Lean Journey



Why?

**Red Dot's business landscape has  
changed.....**

**Red Dot must change to survive  
and....THRIVE!**





# NEW LANDSCAPE

- **More Products**
- **Shorter Deliver Schedules**
- **Smaller Runs....More Set-ups**
- **More Inventory....More Cash**
- **More Competition = Lower Prices**
- **Lower Prices = Cost Pressure**
- **Employee Ownership**



# Employee Ownership



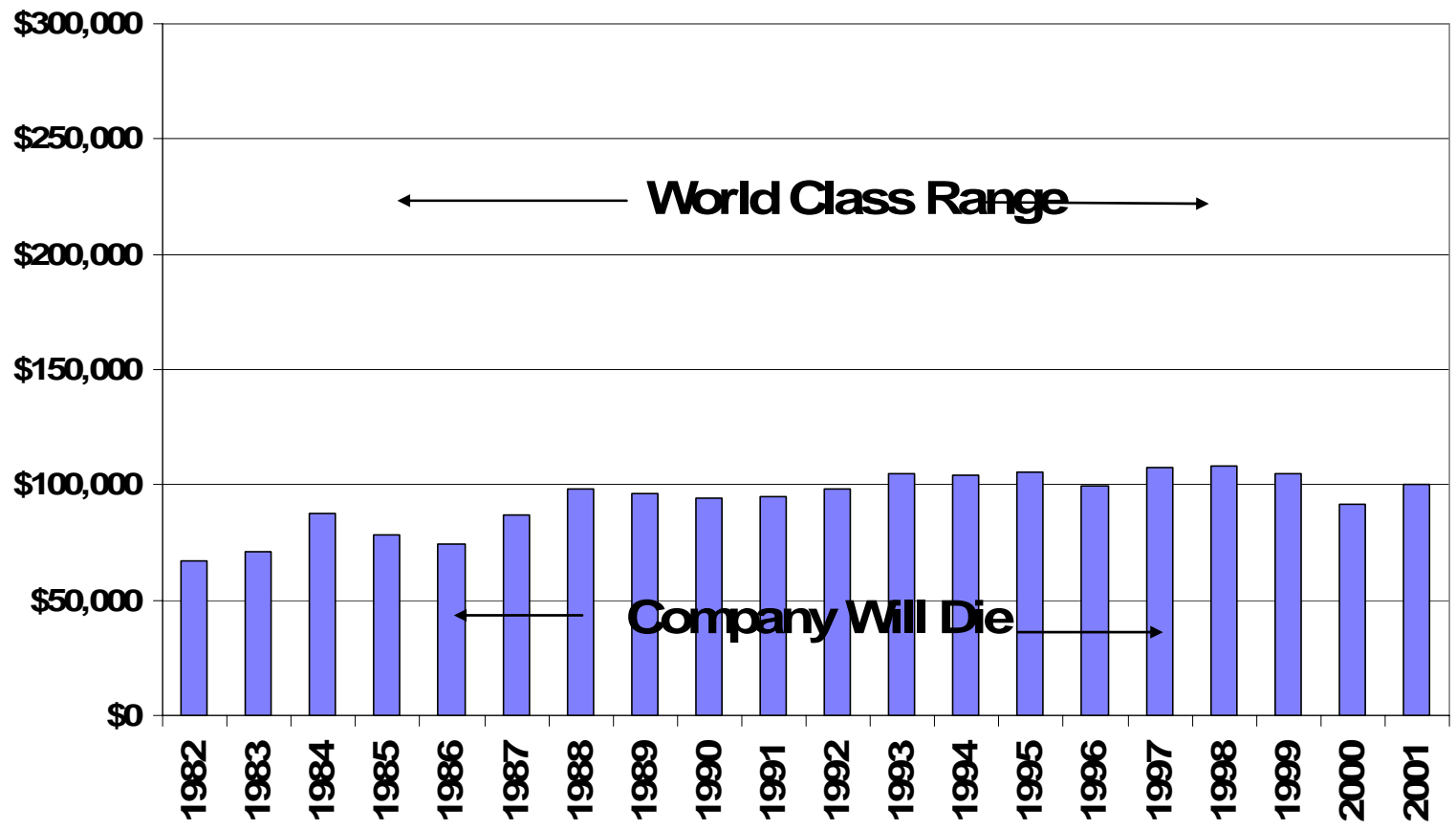
# MYTH

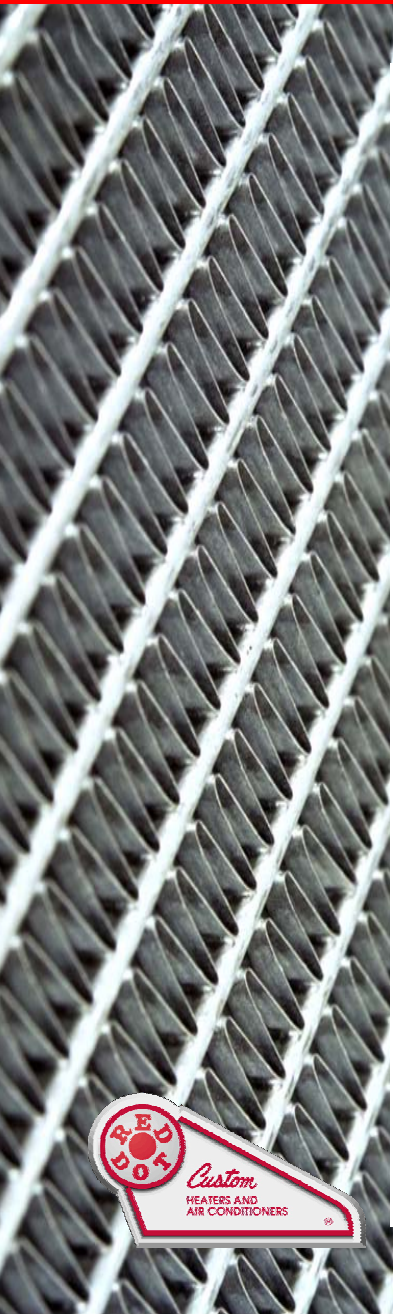
**“We’re just in a  
down cycle.....**

**things will be better  
when the economy  
picks up”**

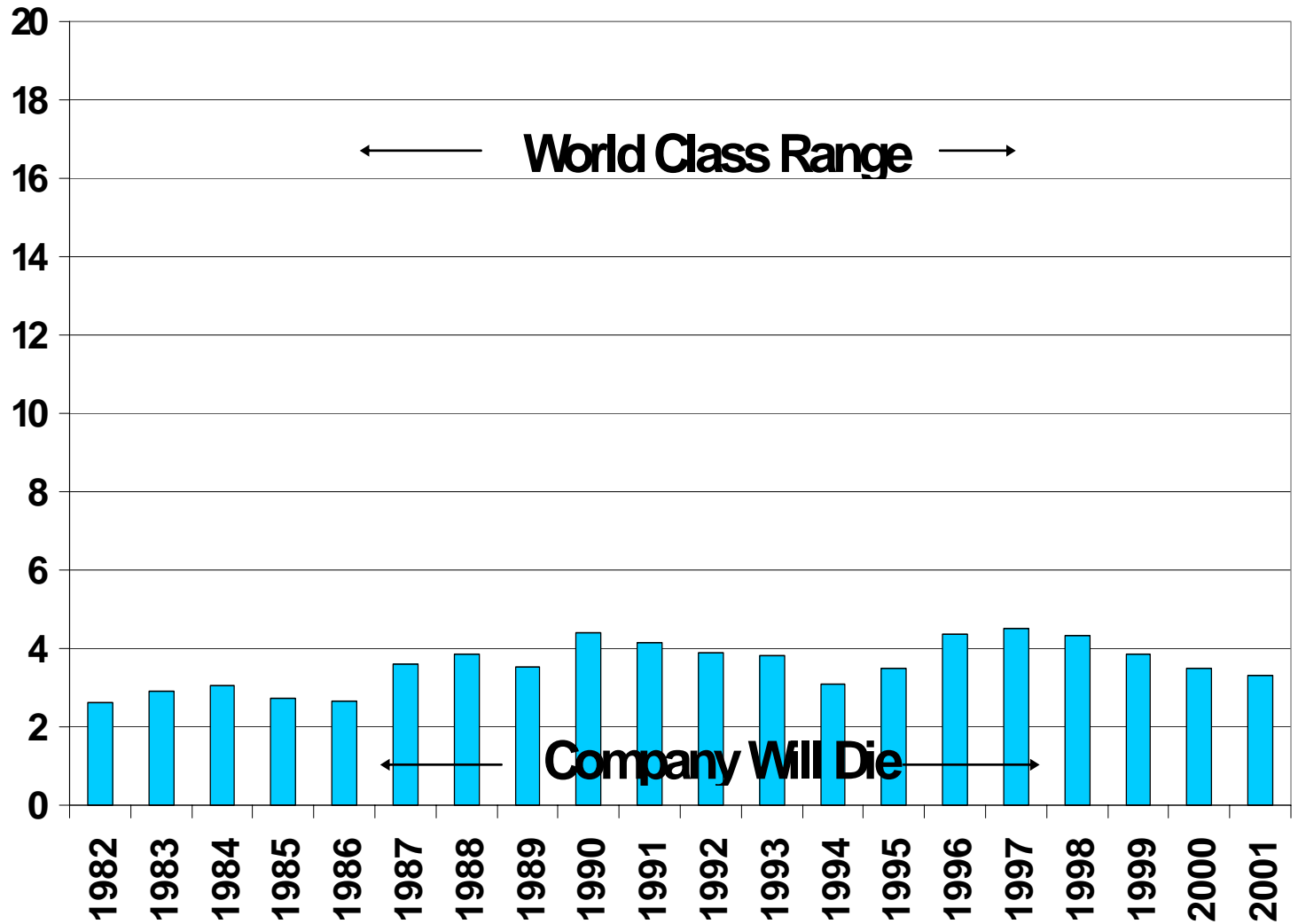


## "VALUE-ADDED" SALES PER EMPLOYEE



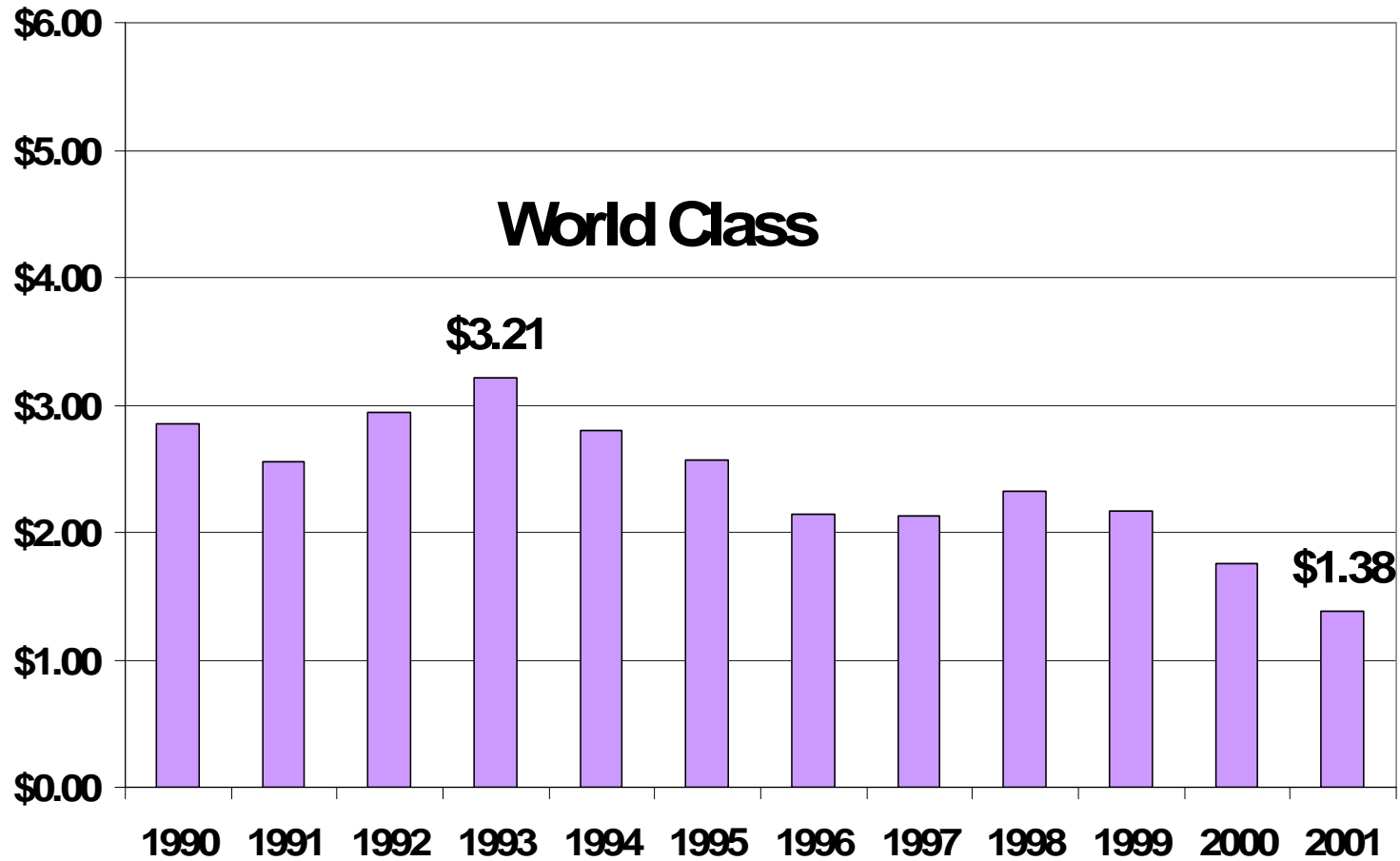


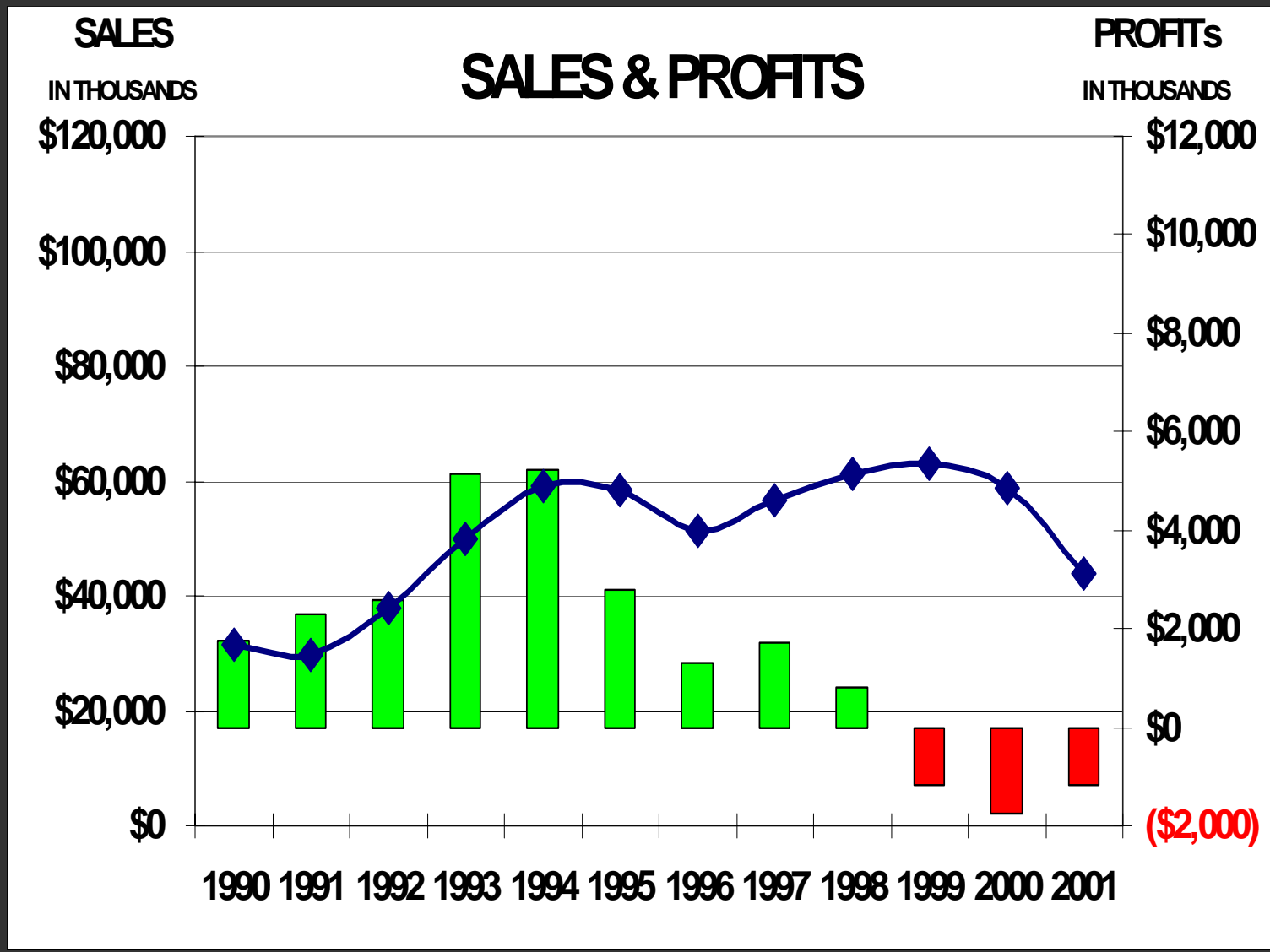
## INVENTORY TURNS





## ASSET UTILIZATION





**Red Dot must change to  
survive**

**and....THRIVE!**





# RED DOT "LEAN" PRODUCTION SYSTEM

**What did we do?**

- **Hired A Lean Consultant**
- **Committed Ourselves Entirely**
- **Held Monthly "Kaizen Events"**



# RED DOT "LEAN" PRODUCTION SYSTEM

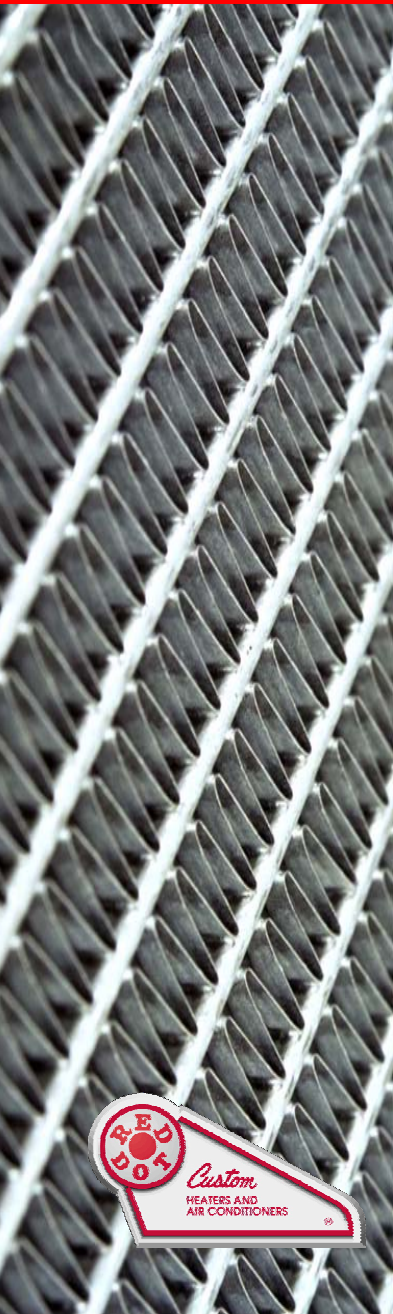
## What is it?

- **Elimination of Waste**
- **Creating Continuous "Flow"**
- **"Pull vs Push" Toyota Production**
- **Cellular Manufacturing**
- **Continuous Improvement System**
- **"Kaizen Events"**



# The "Lean" Journey

60 Kaizen Events since December 2001



# The "Lean" Journey

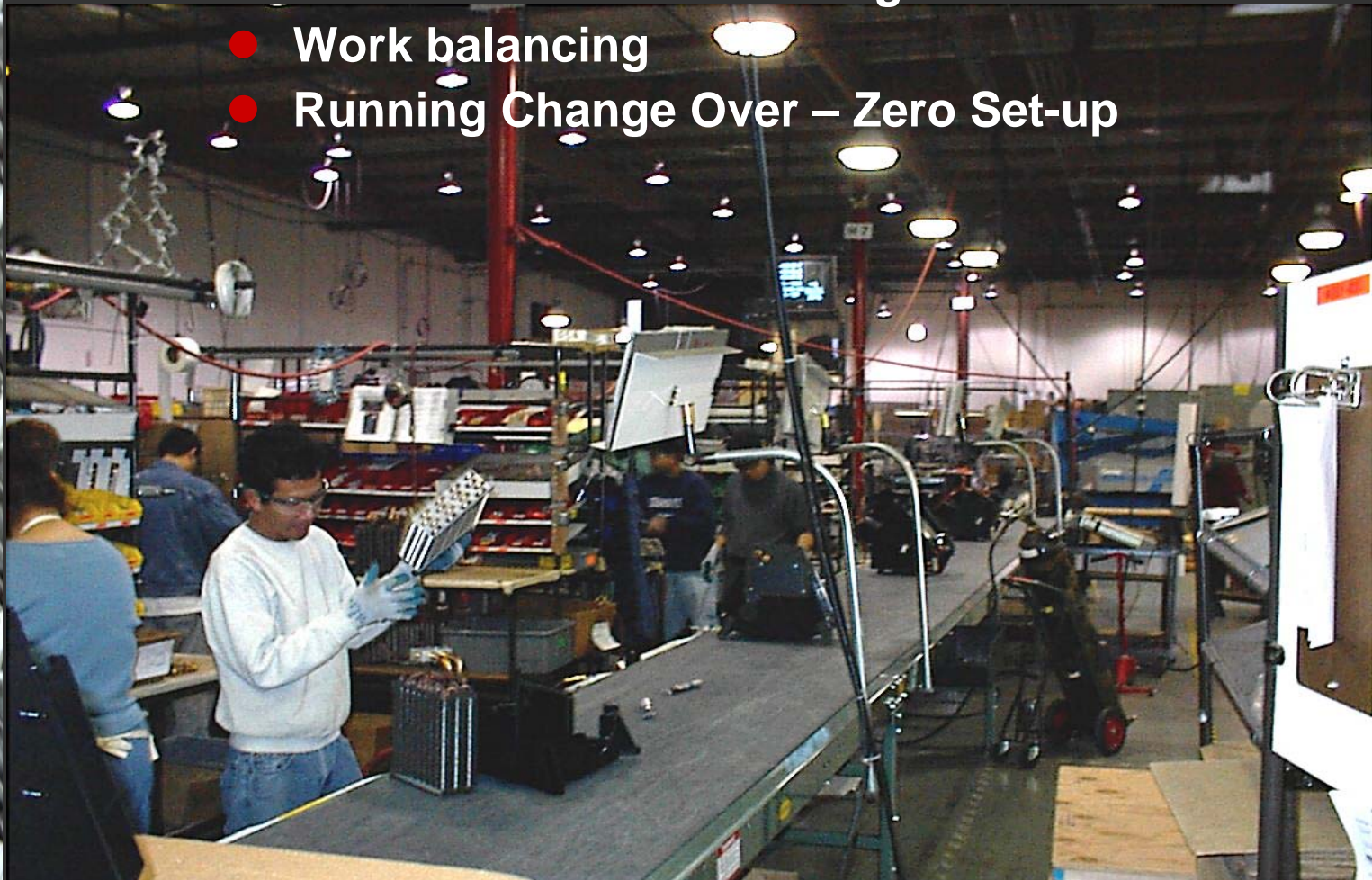
Over 1,000 Kaizen Ideas Implemented



# The "Lean" Journey

## Assembly Lines Revamped

- Continuous Flow – Moving Belts
- Work balancing
- Running Change Over – Zero Set-up



# The "Lean" Journey

## Coil Production Revamped to a Line

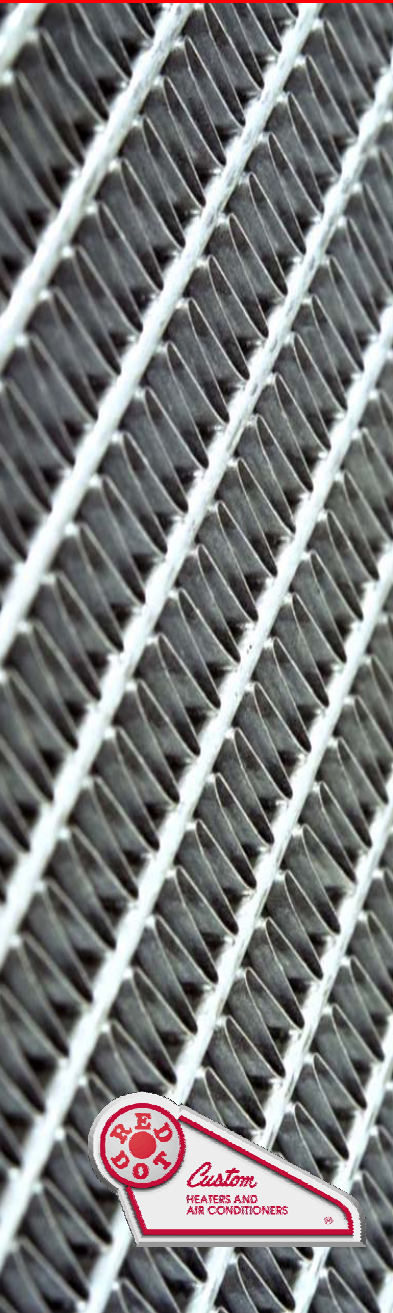
- Continuous Flow vs Batch
- Reduced space from 7,000sq.ft. to 1,700sq.ft.



# The "Lean" Journey

## Sheet Metal Cells Developed

- Reduced Part Travel
- Improved Cycle Times - Responsiveness



# The "Lean" Journey

## Set-up Time Reductions





# The "Lean" Journey

## Management Involvement





### Target Progress Report and Results Sheet

Kaizen Event #: 60  
 Team Name: TELEFLEX COMPRESSOR CELL  
 Department/Area: WC/SSO  
 Product/Process: \_\_\_\_\_

Team Number: 2  
 Date: 10-16-06  
 TAKT Time: \_\_\_\_\_  
 Team Leader: LINDA YANTZER

Measures	Baseline	Target	Day 1	Day 2	Day 3	Final	Percent (to target)
Space (Sq. Ft.)	1,161	580					
Inventory	75	19					
Walking Distance	483	212					
Parts Travel Distance	321	160					
Lead-time	4.1	1.1					
Quality (# Defects)	12	0					
Productivity Gain (# People)	8	-					
Environmental, Health & Safety (5S)	-	-					
Set-Up	-	-					
Cycle Time	1032	774					

Results: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

225

# Standard Work Sheet

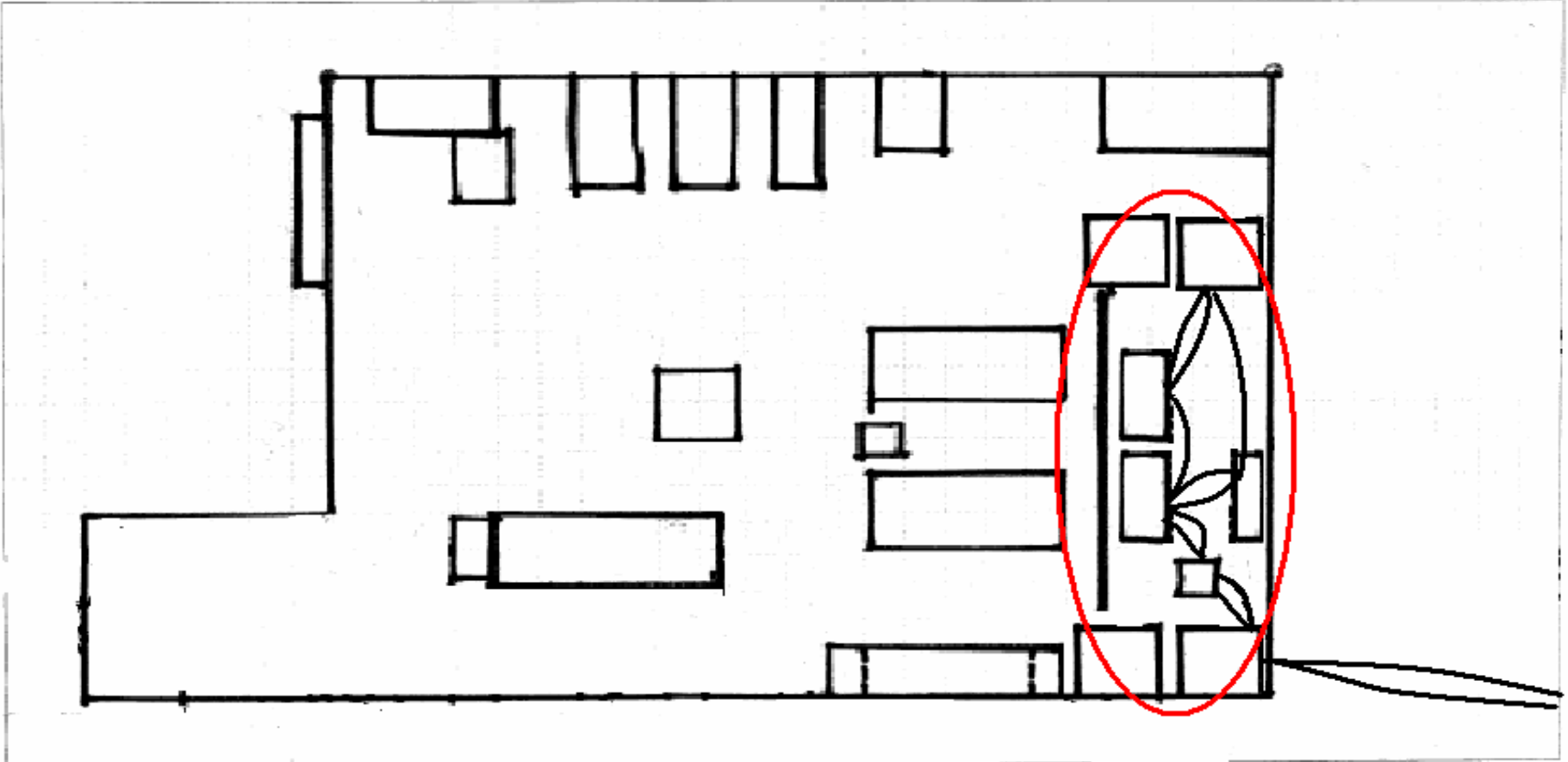
TELEFLEX

Event # 60 Team # 2 Team Name COMPRESSOR CELL  Before  After

Process Name ASSEMBLY  
Part Name TELEFLEX COMPRESSOR

Process Boundaries From WC/550  
To WC/550

Date Prepared Or Revised 10-02-06



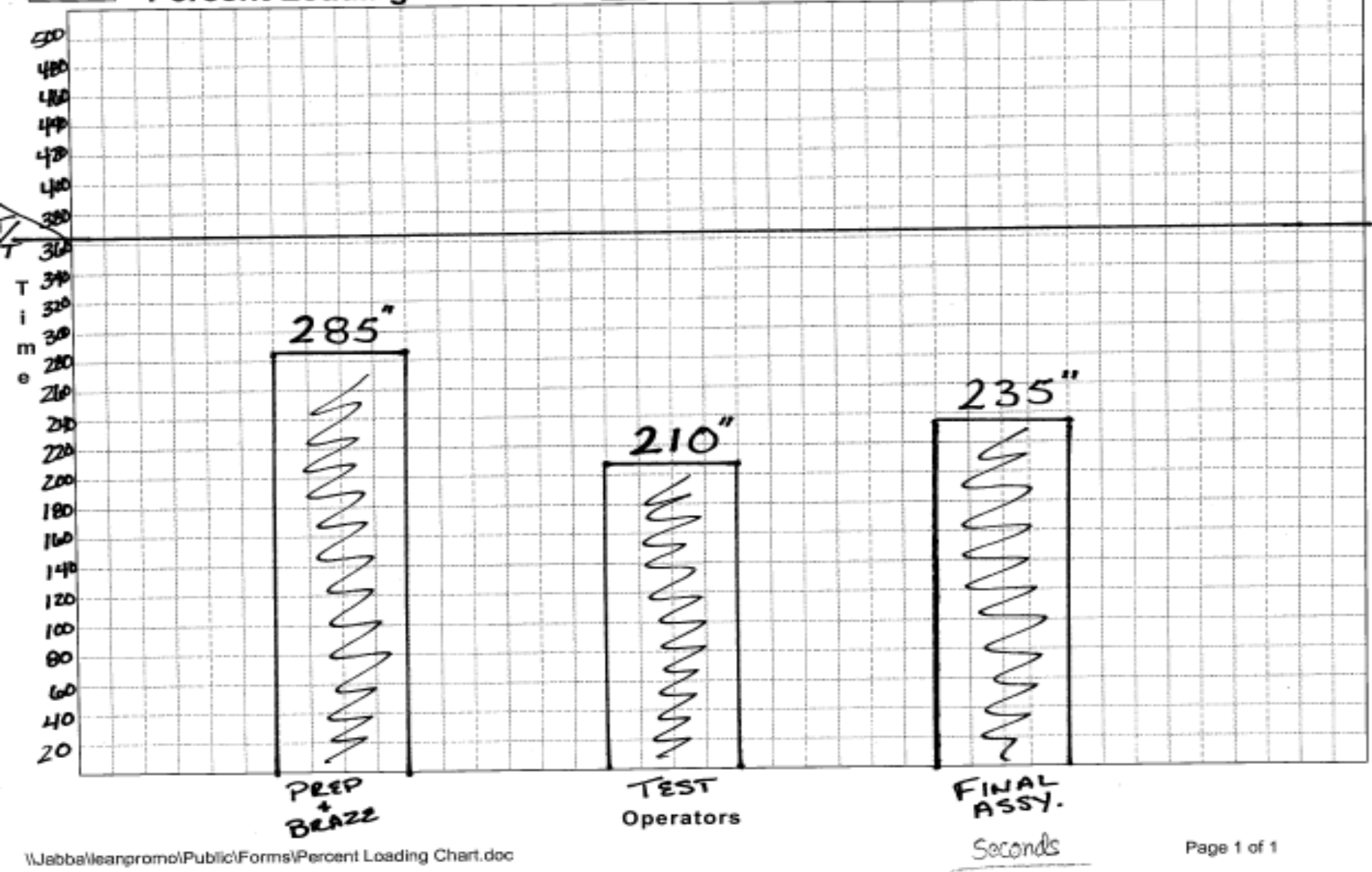
Quality Check	Safety Precautions	TAKT Time	Cycle Time	Operator Number
◇	+	○		

AFTER

CT 7:10"  
T/T 3:42" - MP 3

## Percent Loading Chart

Event # \_\_\_\_\_ Team # \_\_\_\_\_ Team Name \_\_\_\_\_





### Target Progress Report and Results Sheet

Kaizen Event #: 60  
 Team Name: TELEFLEX COMPRESSOR CELL  
 Department/Area: WC/550  
 Product/Process: \_\_\_\_\_

Team Number: 2  
 Date: 10-19-06  
 TAKT Time: \_\_\_\_\_  
 Team Leader: LINDA YANTZER

Measures	Baseline	Target	Day 1	Day 2	Day 3	Final	Percent Change
Space (Sq. Ft.)	1,161	580	1,161	1,161	1441	280	75%
Inventory	75	19	229	230	75	7	90%
Walking Distance	483	242	402	—	—	24	95%
Parts Travel Distance	321	160	—	—	—	20ft	94%
Lead-time	4.1	1.1	—	—	—	1 day	77%
Quality (# Defects)	12	0	0	0	0	0	0
Productivity Gain (# People)	8	—	—	—	—	3 people	50%
Environmental, Health & Safety (5S)	—	—	—	—	—	—	—
Set-Up	—	—	—	—	—	—	—
Cycle Time	1032"	774	1289	1289	740	740"	29%

Results: \_\_\_\_\_

# Lean Results Since 2001

## 20,000sq.ft. in floor space cleared



Lean Results Since 2001

PRODUCTION LEAD  
TIME

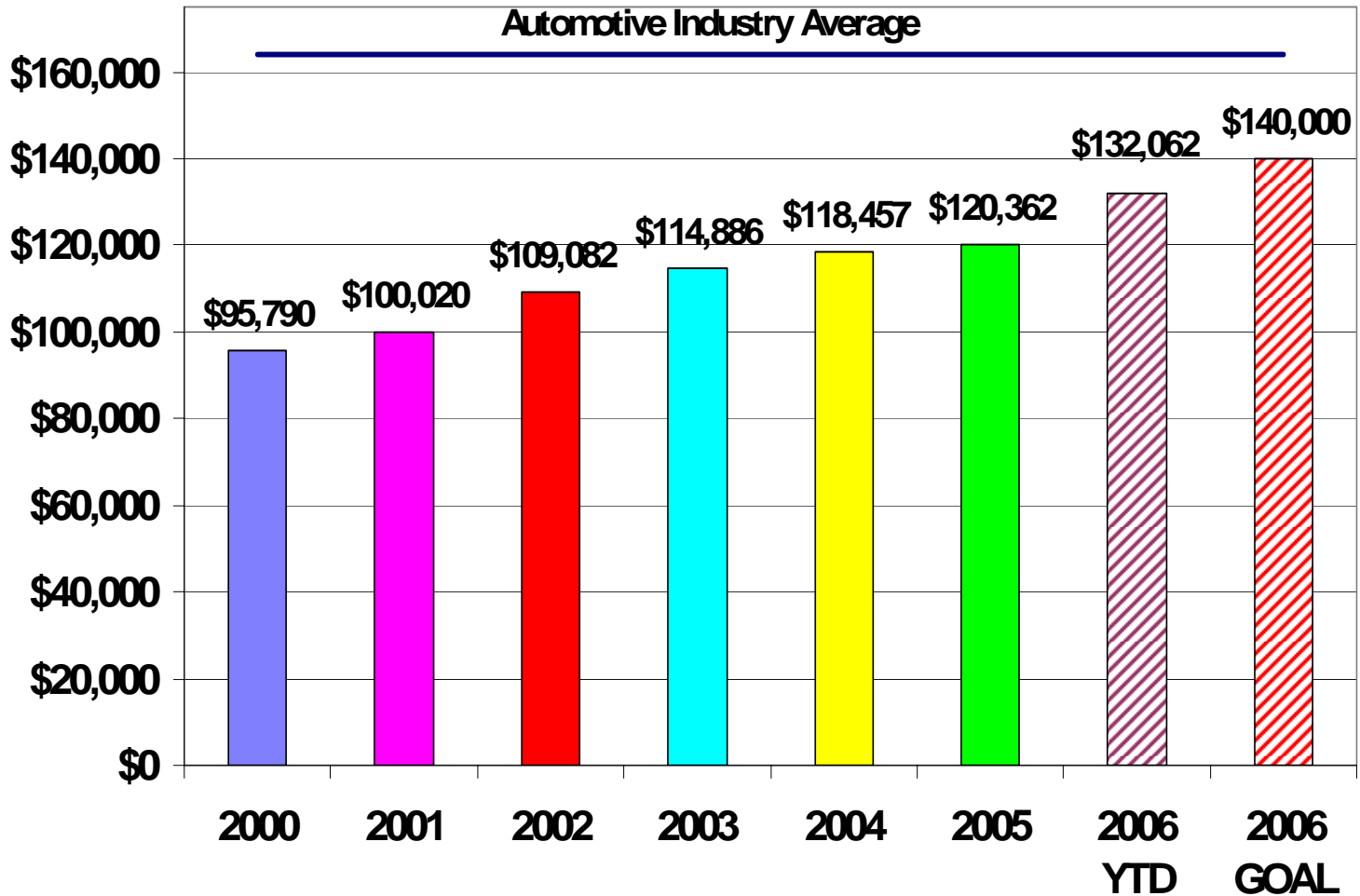
WAS 12 DAYS

NOW 4 DAYS!!



# Lean Results Since 2001

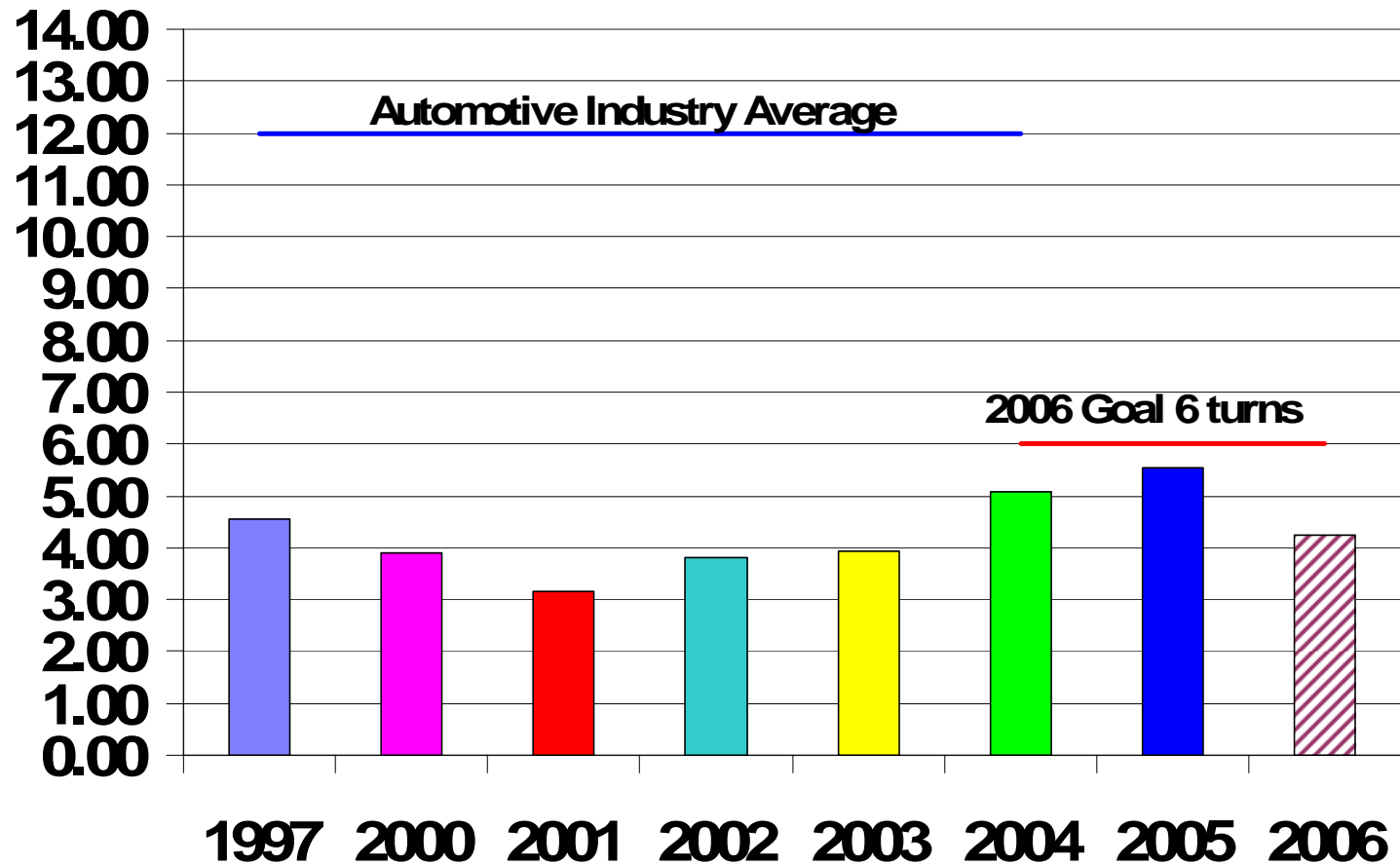
## Value Added Sales Per Employee





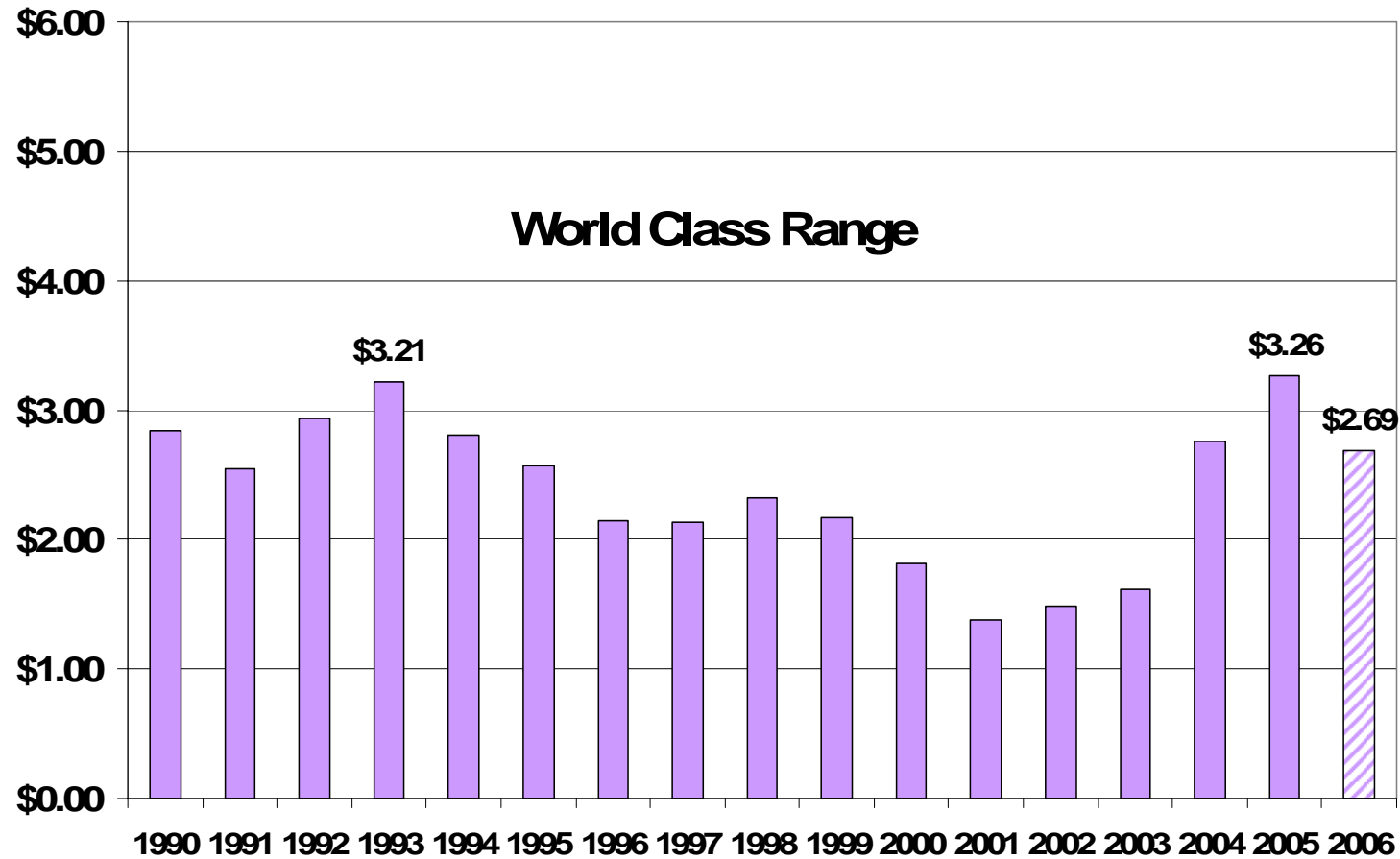
# Lean Results Since 2001

## Company Inventory Turns

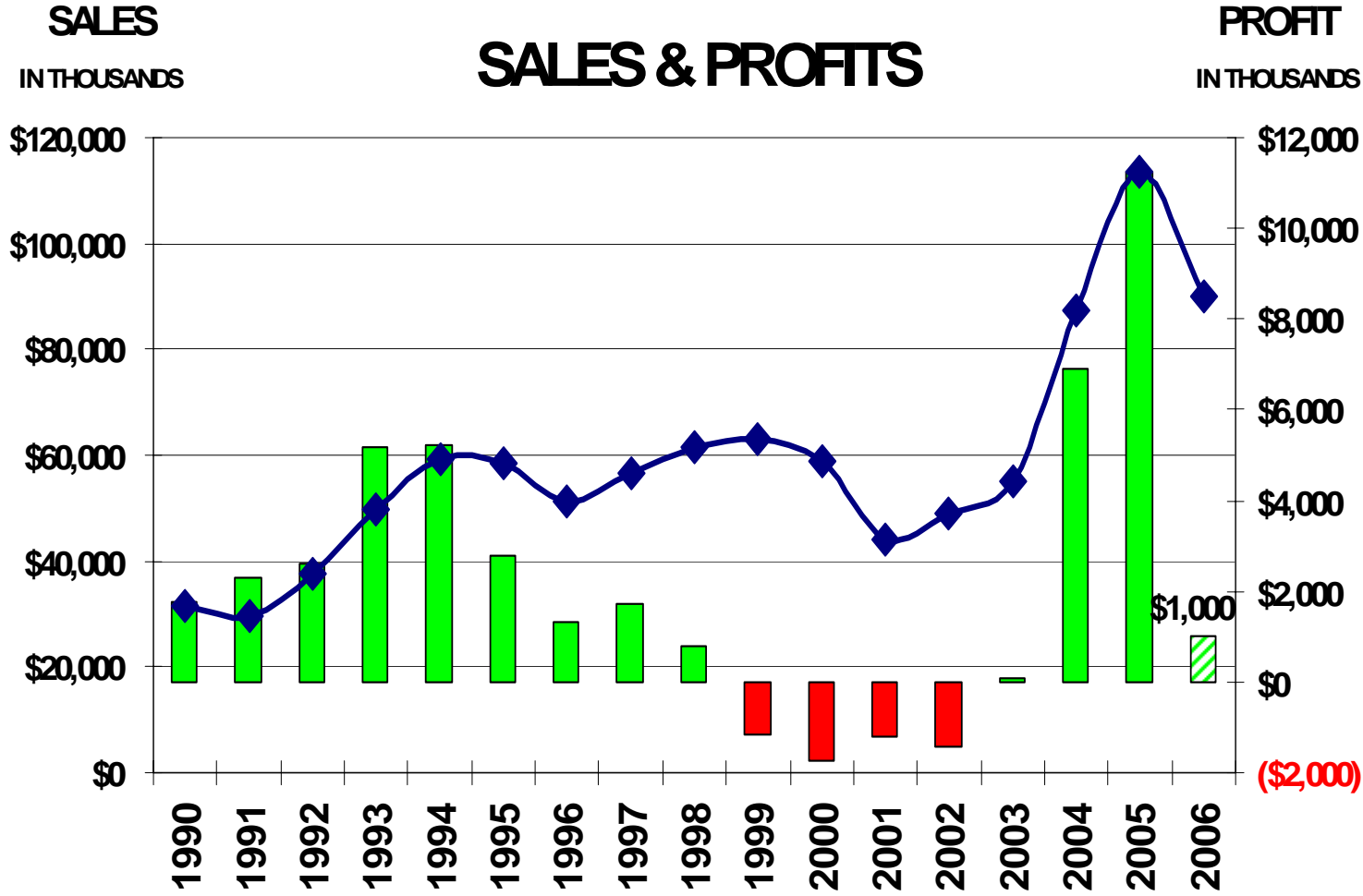


# Lean Results Since 2001

## ASSET UTILIZATION



# Lean Results Since 2001



# Lean Results Since 2001

- **20,000sq.ft. in floor space redeployed (Added 4 assembly lines; totaling 7)**
- **Inventory Turns Increased 46%**
- **Productivity (VASPE) up 32%**
- **Asset Utilization up 95%**
- **Production Lead time reduced from 12 to 4 days**



# Lean Lessons

- **Use a consultant**
- **Create a sense of urgency**
- **Commit “Full Time” Resources**
- **Demand Management Involvement**
- **Implement “5S” First**
- **Anticipate Passive Resistance  
Remove “Concrete Heads”**
- **It’s A “Never Ending Journey”  
Stay The Course!!**



Questions  
Thank You  
Welcome!

