

EMPLOYEES ARE YOUR MOST IMPORTANT CHANGE AGENTS

Rick Groleau

Continuous Improvement Leader

Savage Arms

A Vista Outdoor Company

Vincent Carbone

VP Operations

Savage Arms

A Vista Outdoor Company



Savage Arms – Out of the Box Accuracy

Our History . . .



Arthur Savage

The Savage Arms Company was organized in 1894 by Arthur Savage in Utica, New York.

He developed the Savage Halpine torpedo, became the Superintendent of the Utica Belt Line Railroad, and invented the first "hammerless" lever action rifle .

1894
Savage
Arms
Company
founded
by Arthur
Savage

1920
Acquired
J. Stevens
Arms
1920-1930
Became
the world's
largest
firearms
manufactur
er after a
series of
acquisitions

World War II
Contributed
millions of
firearms to the
war effort by
converting its
factories to
accommodate
heavy munitions

1960s
Operations
moved to
Westfield, MA
and were
acquired by a
large
conglomerate
that was
subsequently
acquired by Black
& Decker in 1971

1990s
Developed
disciplined
operating
philosophy
refocused on
producing high-
quality rifles not
available from
other
manufacturers
at competitive
prices

1994
Acquired
Lakefield
Arms in
Ontario
Canada

**EARLY YEARS
(1890-1930)**

**WORLD WAR II
& AFTER
(1940-1950'S)**

**MULTIPLE OWNERSHIP
CHANGES
(1960-1988)**

**CORPORATE RENEWAL
(1989-1994)**

1919
Received
right to use
the "Indian"
head logo
from Chief
Lame Deer

World War I
Manufactured
the first wing-
mounted
machine gun

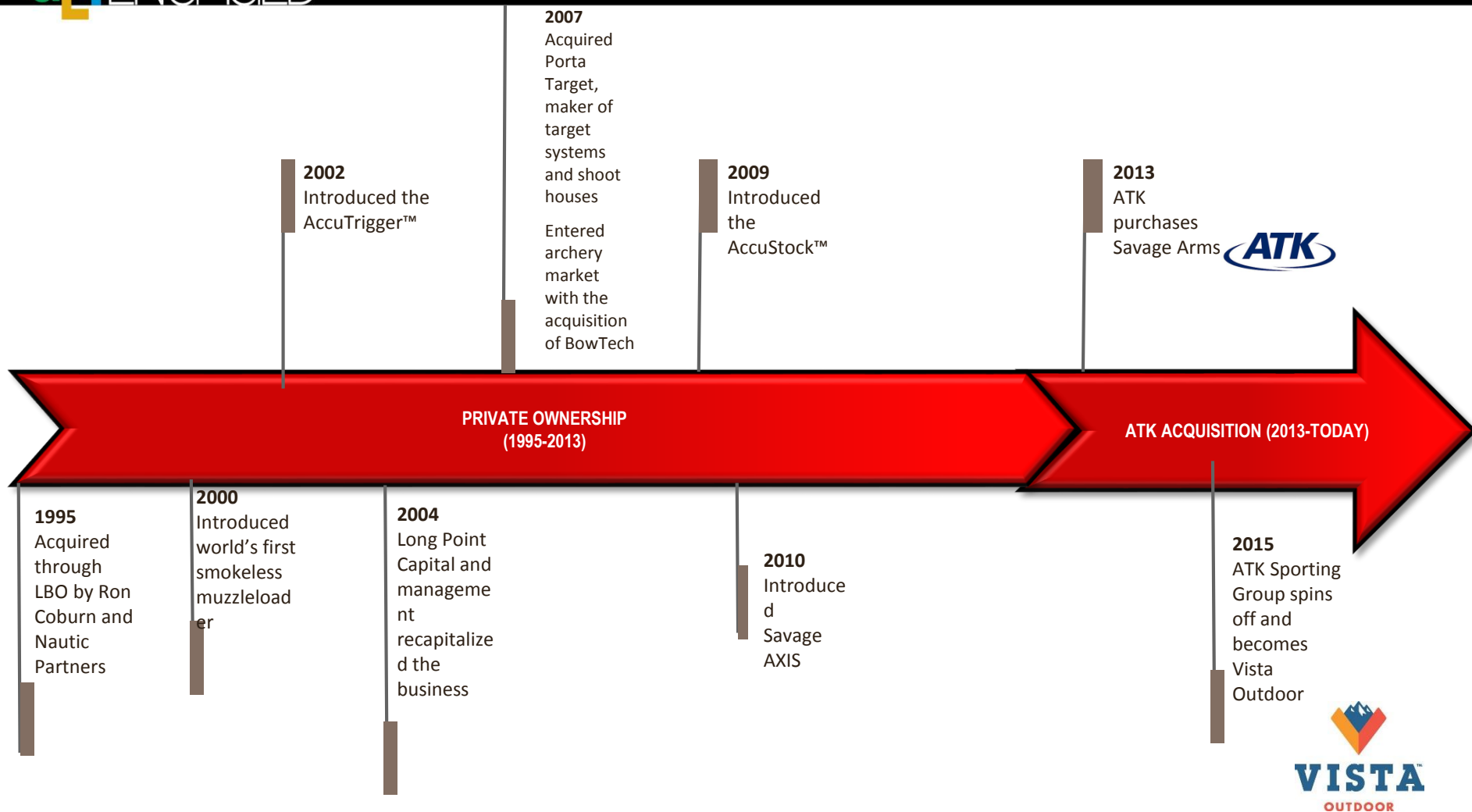
Post WWII
Began producing
alternate
consumer
products
including the
world's first
'push-along' and
'fly-mower'
lawnmower

1988
Filed for
bankruptcy
protection
due to poor
managemen
t and
excess
leverage
after being
sold twice
during the
1980's

1989
Acquired out
of bankruptcy
by Challenger Intl.;
Ron Coburn
named CEO

1992
Savage's
patented
range
systems
and bullet
traps
developed

THE SAVAGE STORY



“Out of the box accuracy”





BRINGING
THE WORLD
OUTSIDE.™

Jimmy Styks

Blackburn

RCBS

FINAL APPROACH®
FA
BRAND
THE WATERFOWLER'S CO.

PRIMOS
HUNTING

BLACKHAWK!

GUNSLICK
PRO

Millett
TACTICAL

FEDERAL
PREMIUM
AMMUNITION

BELL

SAVAGE
RANGE SYSTEMS

tasco

Outervs.

WEAVER

Blazer

C-PREME™



VISTA™

OUTDOOR

UNCLE MIKE'S
THE LEADER IN SHOOTING ACCESSORIES

SAVAGE ARMS™

M-Pro 7

Bushnell
GOLF

GOLD TIP

bolleé

CEBE

Speer
bullets
EST. 1945

BUTLER CREEK

speer

GIRO

Bushnell

NIGHT OPTICS

SERENGETI
PHOTOCHROMIC LENSES

CCI



SIMMONS
HUNTER THE HUNTER

CHAMPION

CAMELBAK

STEVENS

BESTINGER

Grow



Journey Begins

MassMEP Partnership
Lean 101 Training
Continuous Flow Layout



Kaizen Events

Receiver Department 5S
TPM, POU, Pull Systems
Setup Reduction



Leadership Changes

New V.P. of Operations
Lean Culture Traction
Lean 101 Training

2003

2004

2005

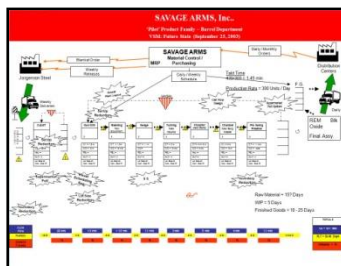
2006

2007

2008

Value Stream Mapping

Receiver Department
Barrel Department
Assembly Department



Pull Systems

2 Bin System
Balanced Flowline
Lot Size Reduction
Supplier Pull System



5S Initiative

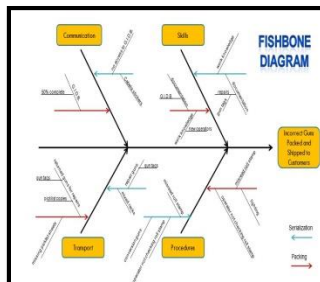
Employee Teams
VSM Events
Lead Time Reductions



Our Lean Journey Begins . . .



Train The Trainer
Westfield & Lakefield
5S Training with
MassMEP Facilitator
Lean 101 Training
Fluting SMED Kaizen



Process Improvement

Packing Process
Shot Blast Process
Finance Processes
Incoming Receiving



TPM /Kaizen Events

TPM Training
Range Improvements
Office Kaizen
Standard Work

2009

2010

2011

2012

2013

2014

Value Stream Mapping

Barrel Department
Receiver Department
Assembly Department
Order Entry Process
Plant Layout Changes



Kaizen Events

Proof & Function
Barrel Bore Finish
Customer Service
RTV Process
Swing Rework



6S/Standard Work

Standard Work Videos
Employee Engagement
Continuous Flow Focus
Lean Training Grant

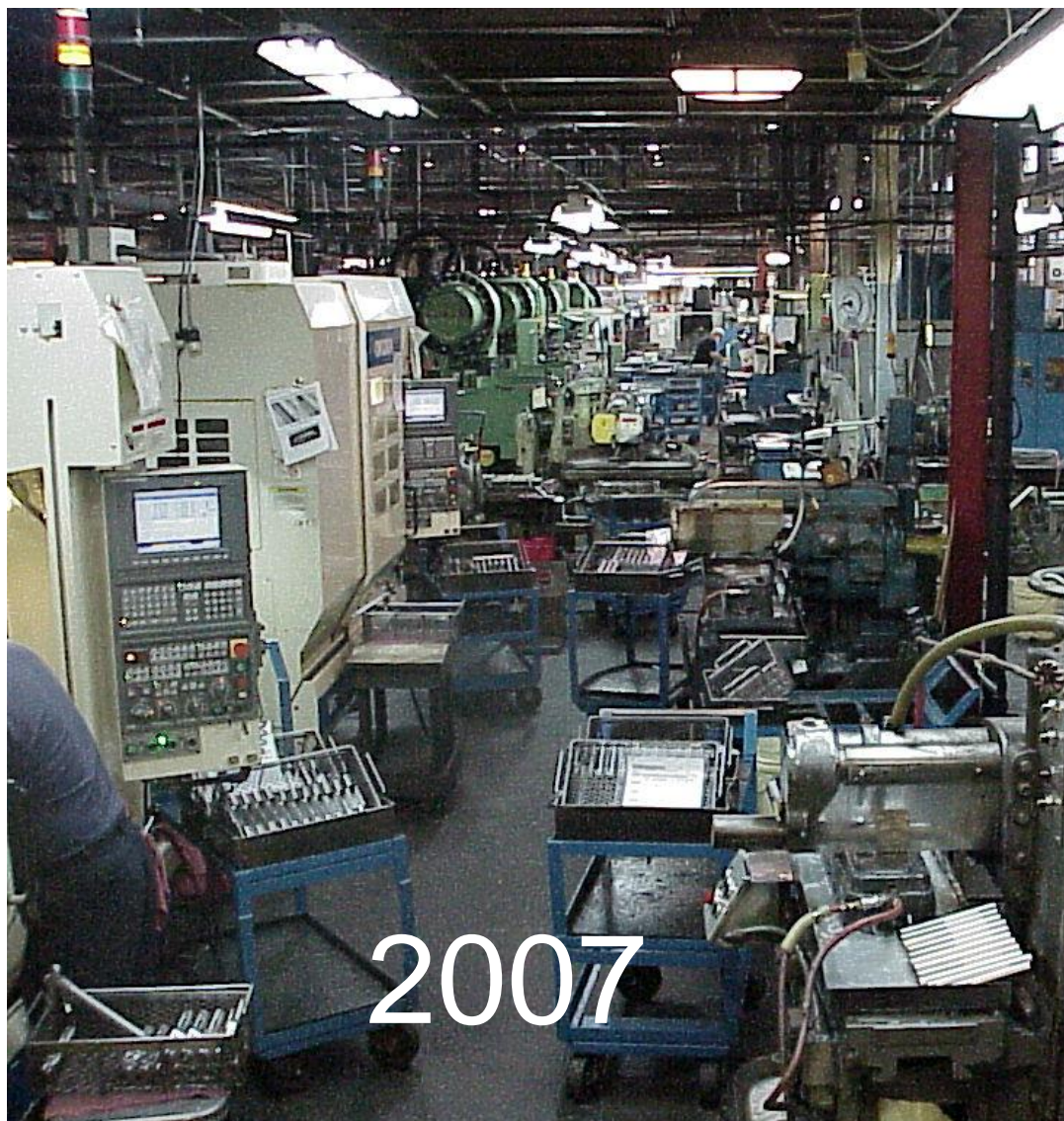


Our Lean Journey Restart . . .

Before Lean Batch & Queue Culture

Our Burning Platform

- Double digit defect rate **23%**
- Long lead time to the customer **Months**
- Large batch sizes **120**
- Multiple non-connected processes **16 Days WIP**
- Unreliable equipment/breakdowns **No TPM**
- Command and control management style
- Could not keep up with Sales at **550 Guns/Day**
- **Dirty and Cluttered Production Environment**
- **BUT VERY SUCCESSFUL !!!**



Batching

The Old Receiver Manufacturing processes that consisted of:

Ten Cells

Mill Line 1

Mill Line 2

Trigger slot

Auto Drill

Mill Line 3

Safety Slot

Mill Line 4

Hand File

Wash

Threading

Twenty four Machines

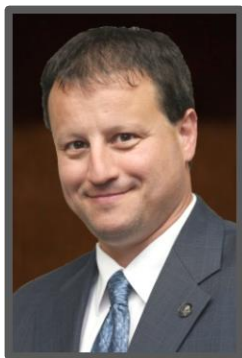
Savage Arms - Westfield



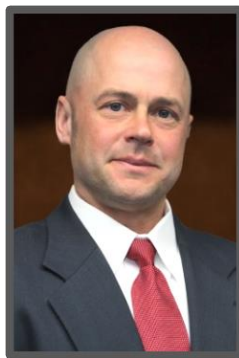
Al Kasper
President/COO



Vince Carbone
V.P. Support Services
Ext. 4127



Chris Bezzina
Director of Operations
Ext. 4109



Dave Piacentini
Director of Finance
Ext. 4133



Bob Browning
Director of Supply Chain
Ext. 4218



Mike Welsh
Human Resource
Manager
Ext. 4101



Rich Groleau
Continuous
Improvement
Leader
Ext. 4108



Lean tools available to Change the Culture

- **Use the tools in your Lean Toolbox where needed**
- Value Stream Mapping
- Start with quick wins like 6S
- Utilize TPM where the need to maintain equipment is crucial
- Use standard work as a compliment to 6S
- Train the Trainers

Our 3 Main Value Streams

Machining Operations
Barrels



Machine Operations
Receivers



Finish & Assembly
Operations



LEAN MANUFACTURING FOCUS

TOOLS

DRIVERS

RESULTS

6S	Mike Greene / Roy Provost All Employees	Cleaner/Safer More Effective Workflow
TPM	Keith Albee All Employees	Increased O.E.E. Equip. Reliability
Process Kaizens	Engineers / Supervisors Maint. / Operators	Robust Process Eff./Lead-times Service/Quality
Pull Systems/Kanbans	Bob Browning Jack Anderson	Lead-times Material Availability Inventory Reduction

HOW ARE WE GOING TO CONTINUE TO DO IT?

EMPLOYEE ENGAGEMENT

Great People Make Savage!

- #1 Rifle Sales
- High Quality Product
- Industry Leading Innovation
- Tremendous Value



2-Year Training Grant \$180K

8 modules

Lean 101	–	400 employees
Value Stream Mapping	–	33 employees
Standardized Work	–	33 employees
Lean Expert Certification	–	30 employees
Champion Training	–	16 employees
Inspector Technician Certification	–	24 employees
Supervisory Skills	–	25 employees
Lean Supply Chain Certification	–	13 employees



Kaizen Events

Continuous Improvement – Employee Driven



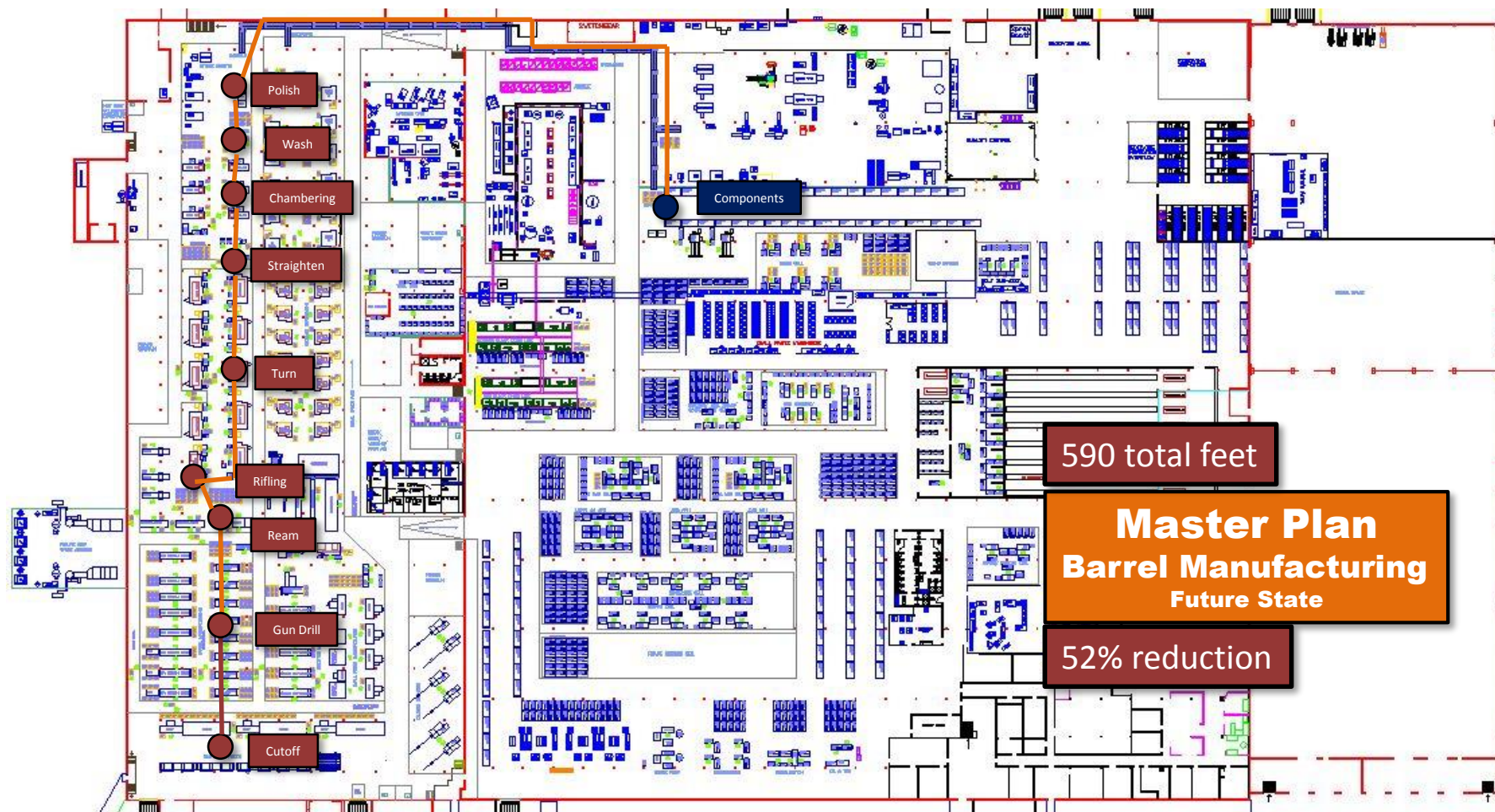
Factory of the Future

New Manufacturing Plant Layout



“Creating a clean, safe, and productive work environment”







State of the Art Manufacturing Equipment

State of the Art Manufacturing Equipment at Savage Arms

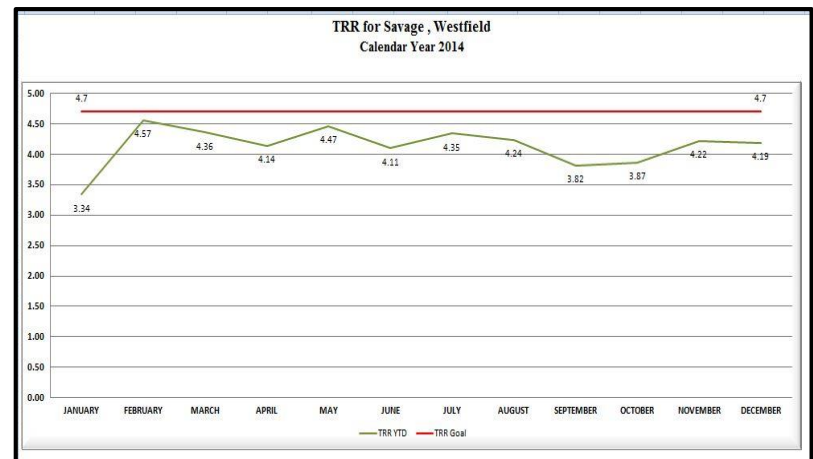
• Barrel Department	16
• Receiver Department	23
• A17/B Mag Lines	13
• Swiss Turn Department	6
• Fluting Department	2
• Engineering R&D Model Shop	3
• TOTAL	63

Safety (SQDEC)

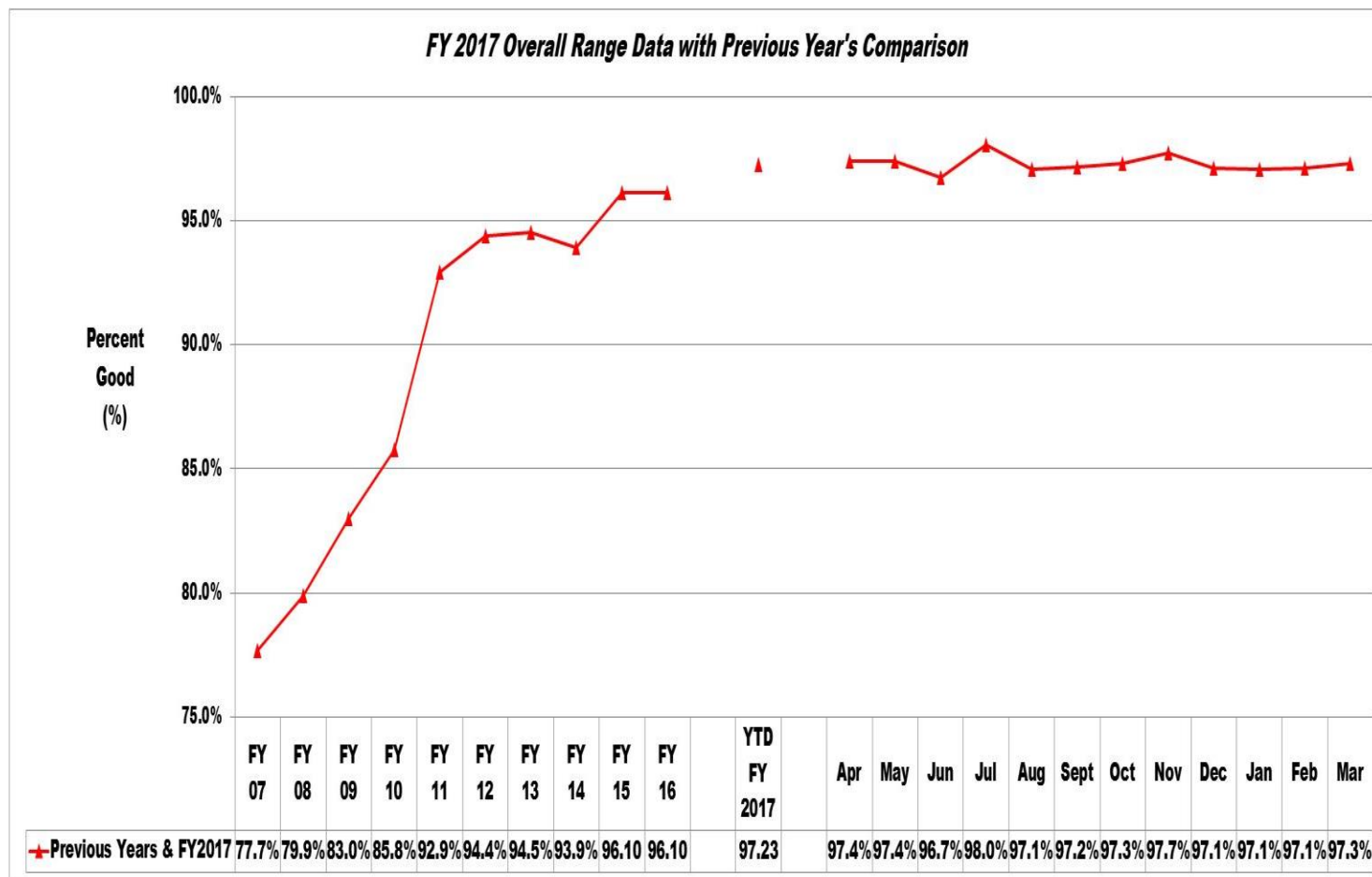
Lean Safety Gemba Walks



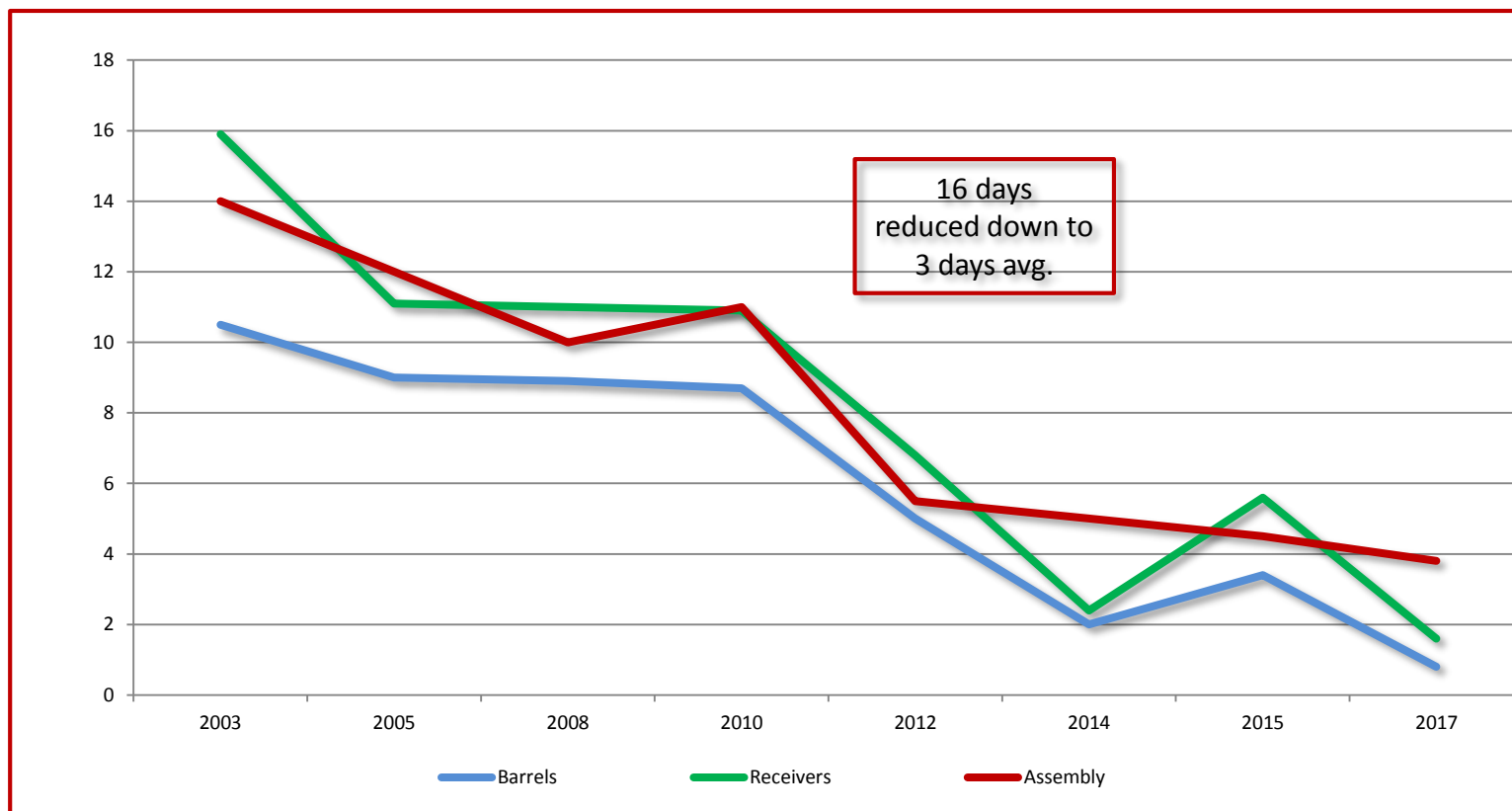
Focus on Safety



Quality (SQDEC)

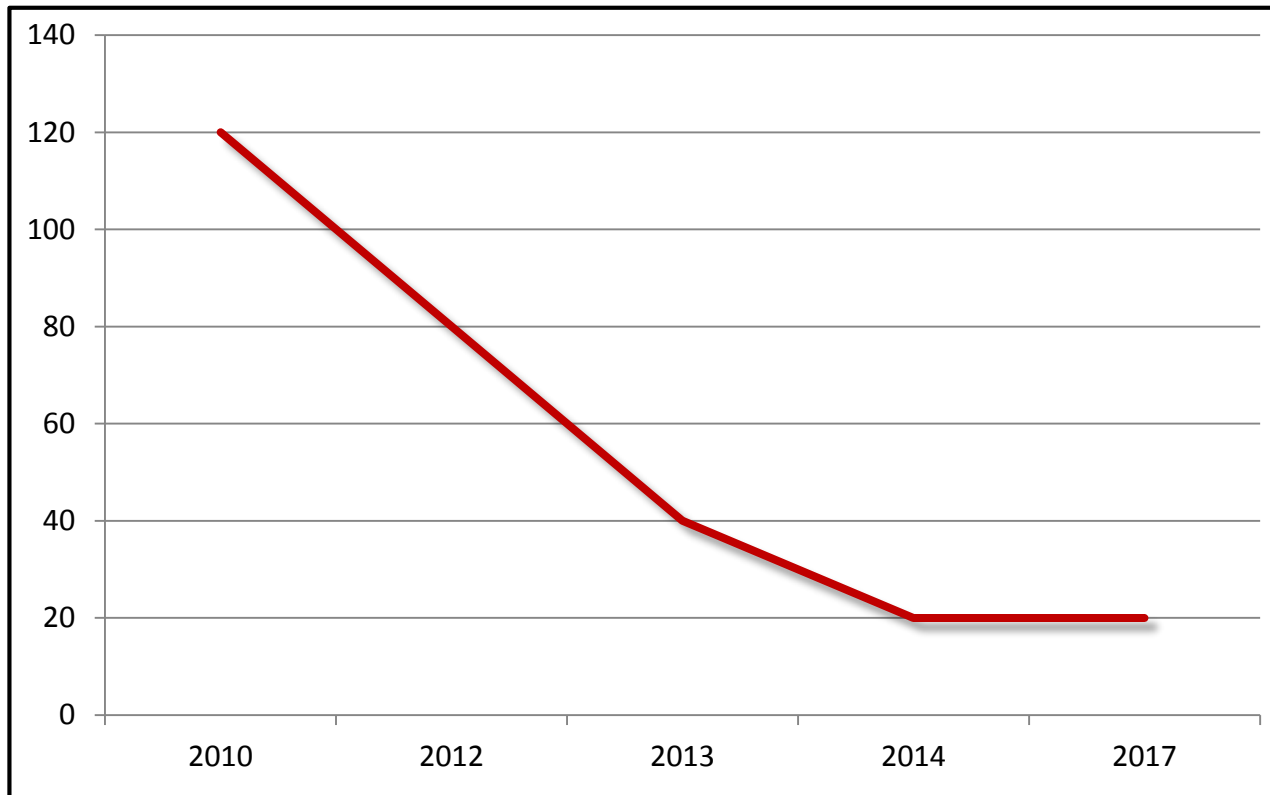


Delivery (SQDEC)



Lead Time Reduction (days of WIP)

Barrel Lot Size Reduction



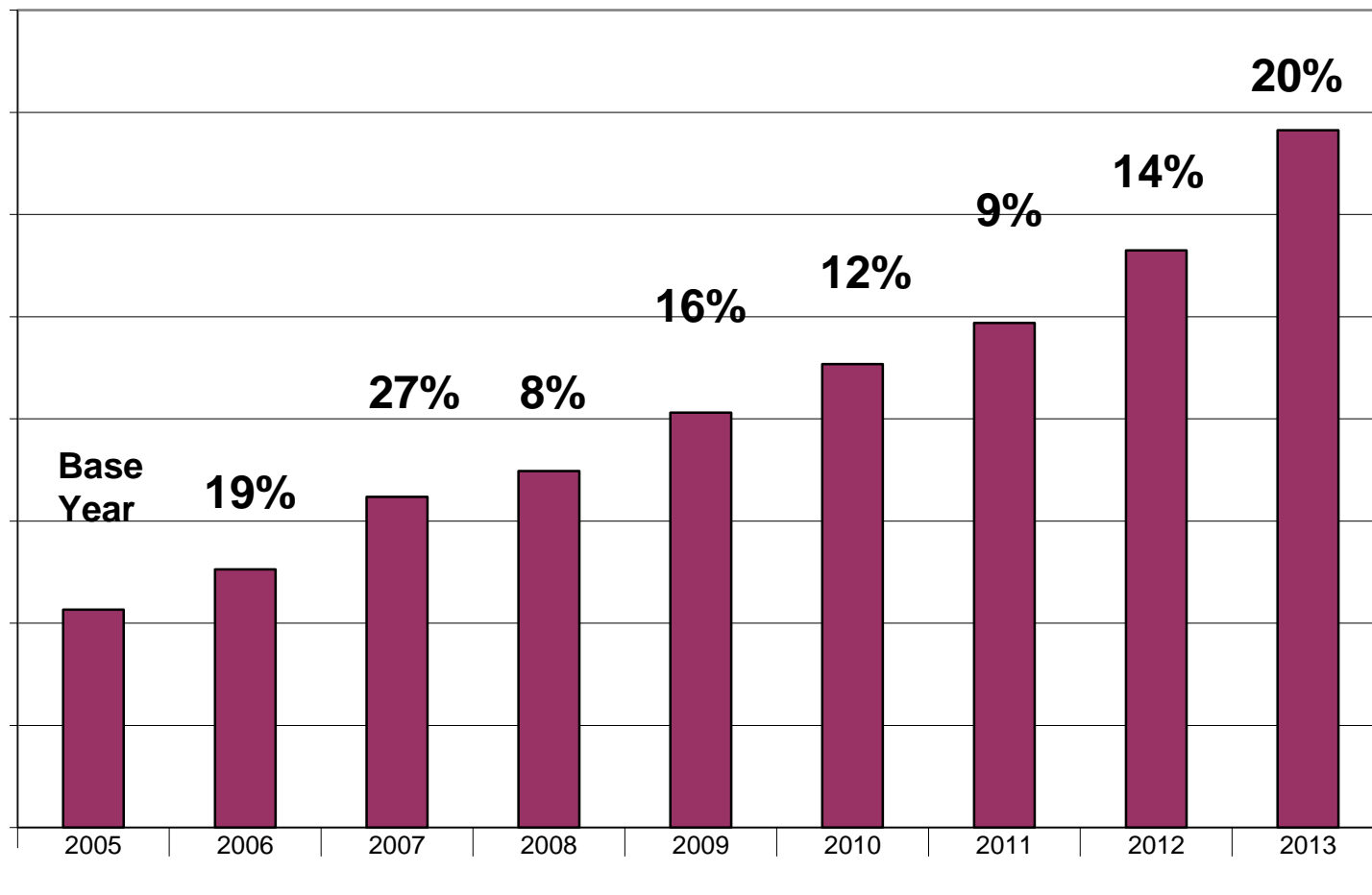
120 per lot
reduced down to
40 per lot
reduced down to
20 per lot
Future state
12 per lot

Cost (SQDEC)

Lean Cost Saving Program Annualized

2008 Total	\$1,054,634
2009 Total	\$2,461,439
2010 Total	\$ 897,961
2011 Total	\$1,078,761
2012 Total	\$1,285,330
2013 Total	\$ 230,822 (4 months switched to ATK fiscal year)
2014 Total	\$2,270,850
2015 Total	\$1,019,387
2016 Total	\$ 960,015
2017 total	\$ 693.572
Ten Year Total	\$11,949,771

Value Added Per Associate



With Lean Culture

Continuous Improvement / Employee Engagement

Our Burning Platform

- Double digit defect rate
- Long lead time to the customer
- Large batch sizes
- Multiple non-connected processes
- Unreliable equipment/breakdowns
- Command and control style
- **550 Guns/Day**
- **Dirty and Cluttered Environment**

• **BUT VERY SUCCESSFUL !!!**

Before

23%
Months
120
16 Days WIP
No TPM
Do as I say
550 Guns/Day
Unsafe

Now

2.5% (97.52% Good)
1 to 2 Weeks
10 / 20
3 Days or Less
TPM every week
Employee engagement
2400 Achieved
Clean & Organized

STILL VERY SUCCESSFUL !!!

Take Aways

- Top Management needs to be totally committed
- Easy to fall back to old habits – “sustain the gains”
- Use Value Stream Mapping to chart the course
- Provide Lean training for all associates
- Create Lean Experts and Champions

Take Aways

- Select the right Lean tool for the right application
- Involve and show Respect for People
- Utilize Standard Work and keep on improving
- Utilize TPM where the need to maintain equipment is crucial
- Go and See the process – Gemba Walks

Thank You!

Your opinion is important to us!

Please take a moment to complete the survey using the conference mobile app.

Session No: WS/25

Employees Are Your Most Important Change Agents

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