

# *How to Sustain a Culture of Continuous Improvement: An Executive Discussion*

*June 11, 2019*

Performance  
Solutions  
by Milliken 

Phil McIntyre, Managing Director

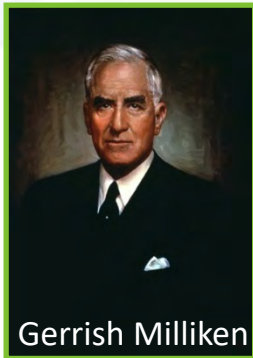
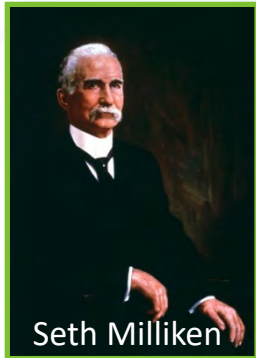
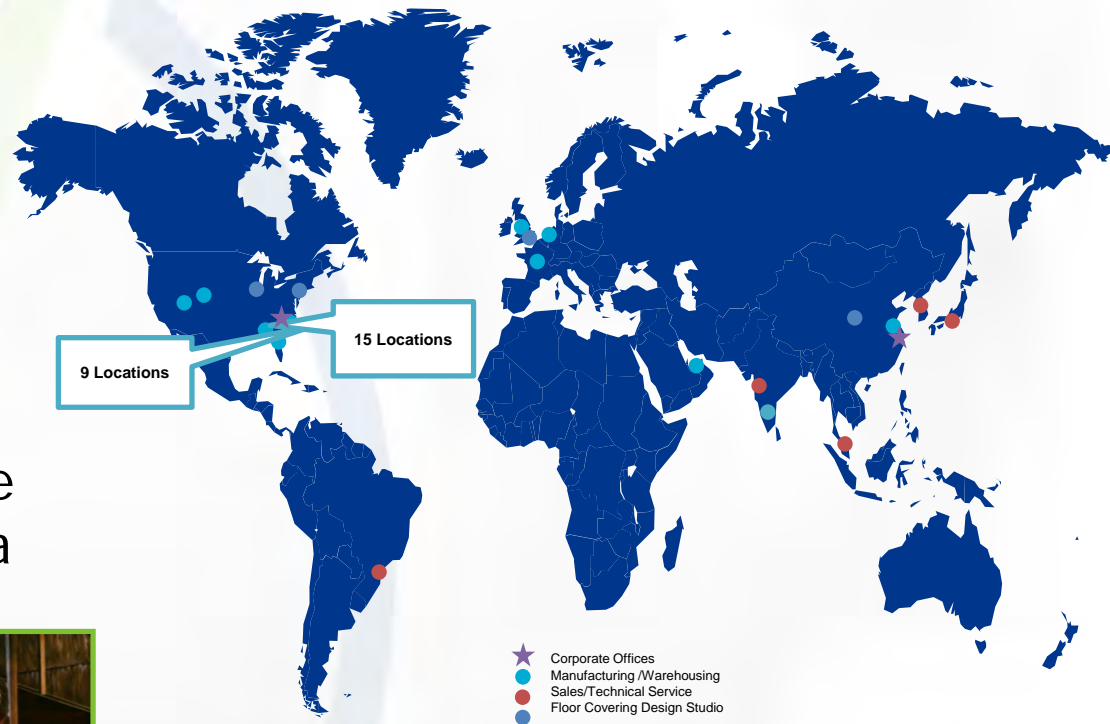
# Discussion Topics

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- Intro to Milliken & Co. and why we began our Journey
- Key Elements to Creating a Culture of Continuous Improvement
- Intro to Performance Solutions by Milliken

# Milliken & Company Background

- Founded in 1865
- Privately held
- ~\$2.5 Billion in revenue
- ~7,500 associates
- 45+ sites in 7 countries
- Operations throughout the Americas, Europe and Asia



# Key Markets

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Chemical



Performance  
Materials



Apparel &  
Specialty  
Fabrics



Floor Covering

***You touch a Milliken product 50x per day***

# Milliken & Co. is...

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... there's a **154 yr-old** American company that has not only survived but thrived in the hyper-competitive global **textile industry** ...

... the company is the **only one in the industry** with sales over \$1bn that still maintains its headquarters in the United States ...

... the company never off-shored its production and yet was able to achieve a **16% CAGR in earnings** over the period 2004-2018 ...

... the company is now roughly 50% **more productive** than it was in 2004, but with 20% fewer plants ...

... the company now operates 44 plants globally with **no managers** present during third shift operations ...

... the company has earned 70% of all the JIPM-TPM **prizes awarded** in N America

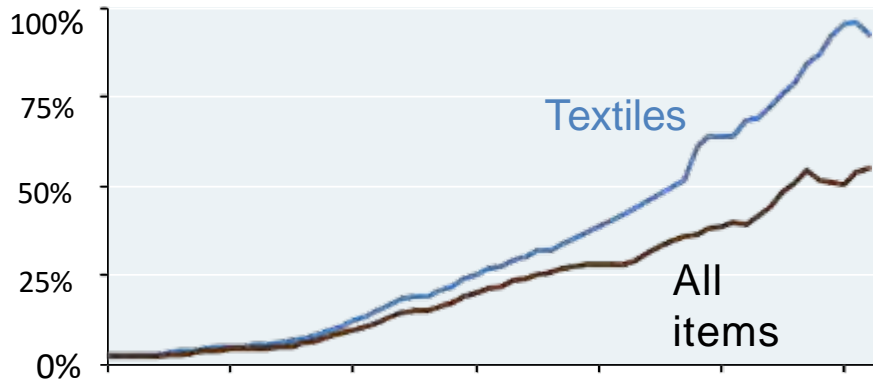
... the company has one of the **best safety** records and most highly engaged workforces of any organization anywhere in the world ...

... the company is one of only a couple included in Ethisphere's list of the world's **most ethical** companies all 13 years the survey has been conducted

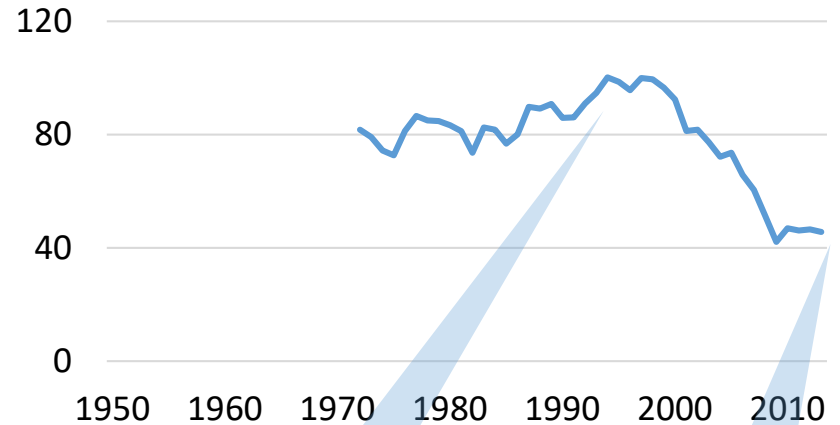
... the company holds approximately 5,000 **patents** and is carbon neutral

# Milliken & Company's Reality Performance vs Domestic Textile Players

Percent of U.S. consumption that is Imported



U.S. Textile Mill Production



## Textile companies with > \$1B sales:

### 1995

Milliken  
Springs  
Burlington  
Collins & Aikman  
Westpoint Stevens  
Fieldcrest Cannon

### Today

Milliken

# How has Milliken survived & thrived ?

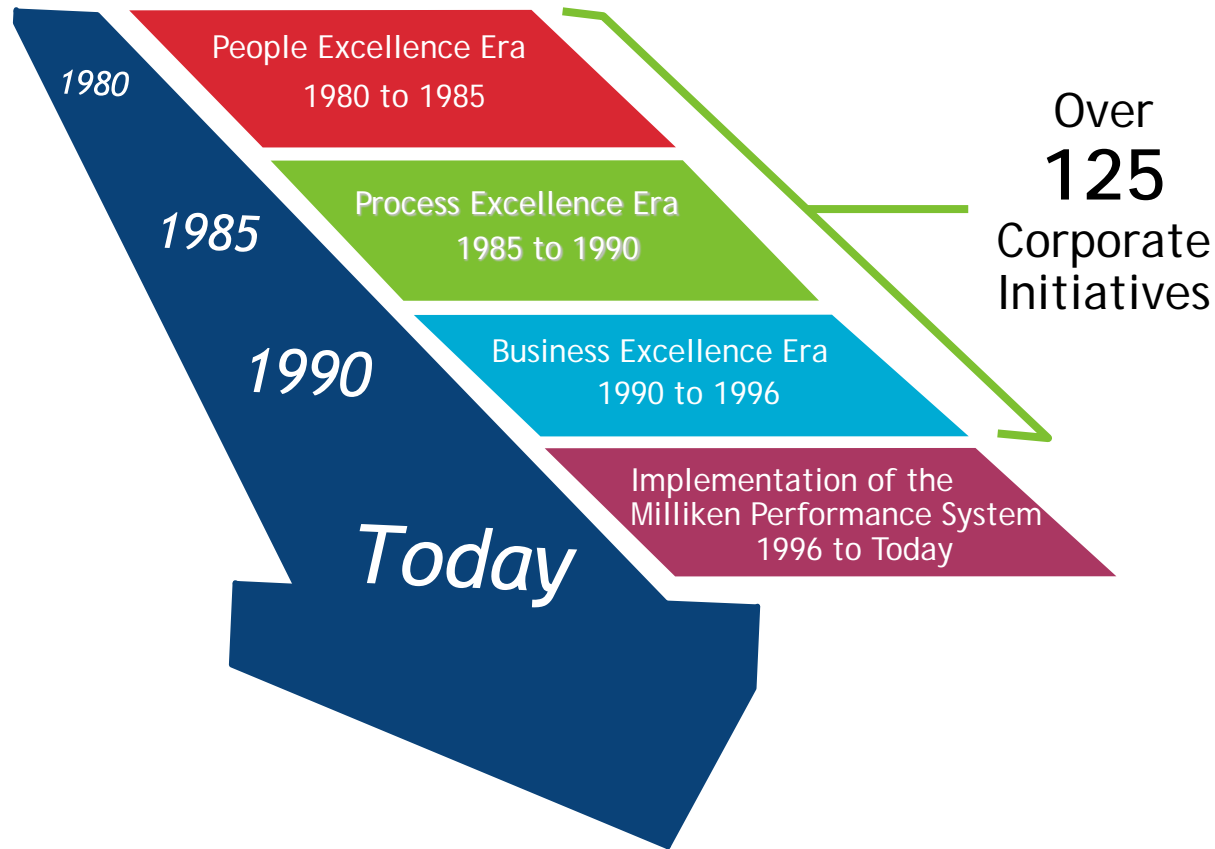
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1. Positioned in the right markets
2. Innovation
3. Operational Excellence

*With Safety as the Foundation*

# Evolution of Operational Excellence

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# Our Business Case for Change

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Benchmarking World-Class Manufacturing Practices

# Study Missions...companies visited

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Company Name	Product Produced	Awards
Dynic Corporation	Textiles	<i>TPM</i>
Gunze	Textiles	<i>TPM</i>
Sekisui Chemical	Plastic Film	<i>Deming, TPM, TPM Special</i>
Daikin Industries	Air Conditioners	<i>Deming, TPM, TPM Special</i>
Toshiba (Himeji)	Lighting	<i>Deming, TPM</i>
Toshiba (Kanuma)	Lighting	<i>Deming, TPM</i>
Nissan	Automobiles	<i>Deming, TPM</i>
Japan Butyl	Butyl Rubber	<i>TPM</i>
NEC	Electronics	<i>Deming, TPM, TPM Special</i>
Nippondenso	Auto Parts	<i>Deming, TPM</i>
Ricoh	Copier Parts	<i>Deming, TPM</i>

# Study Missions...results seen

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Measurement	# of Companies Reporting	Improvement
Productivity	9	61%
Process Reliability	8	32%
Breakdowns	9	92%
Defects	7	74%
Claims	6	85%

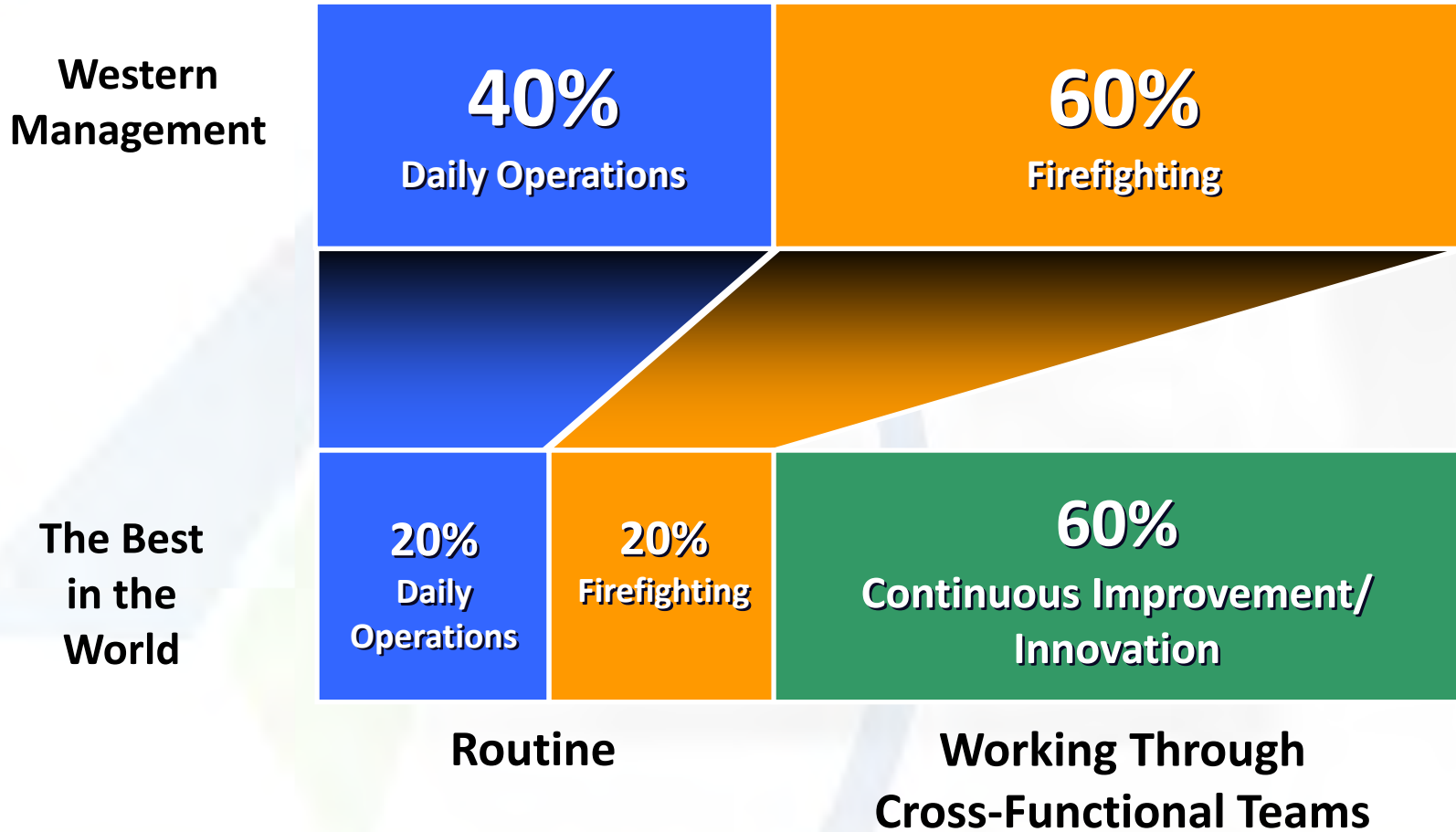
# Audience Question

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Which of these options best describe your organization ?

1. We have a Culture of Continuous Improvement from Leadership to the Hourly Associate (less than 25% FireFighting)
2. We walk a fine line between Daily Operations and Fighting Fires (approx. 50% FireFighting)
3. We're damn good at FireFighting ! (greater than 50% FireFighting)

# The Leadership Challenge



# The Leadership Challenge

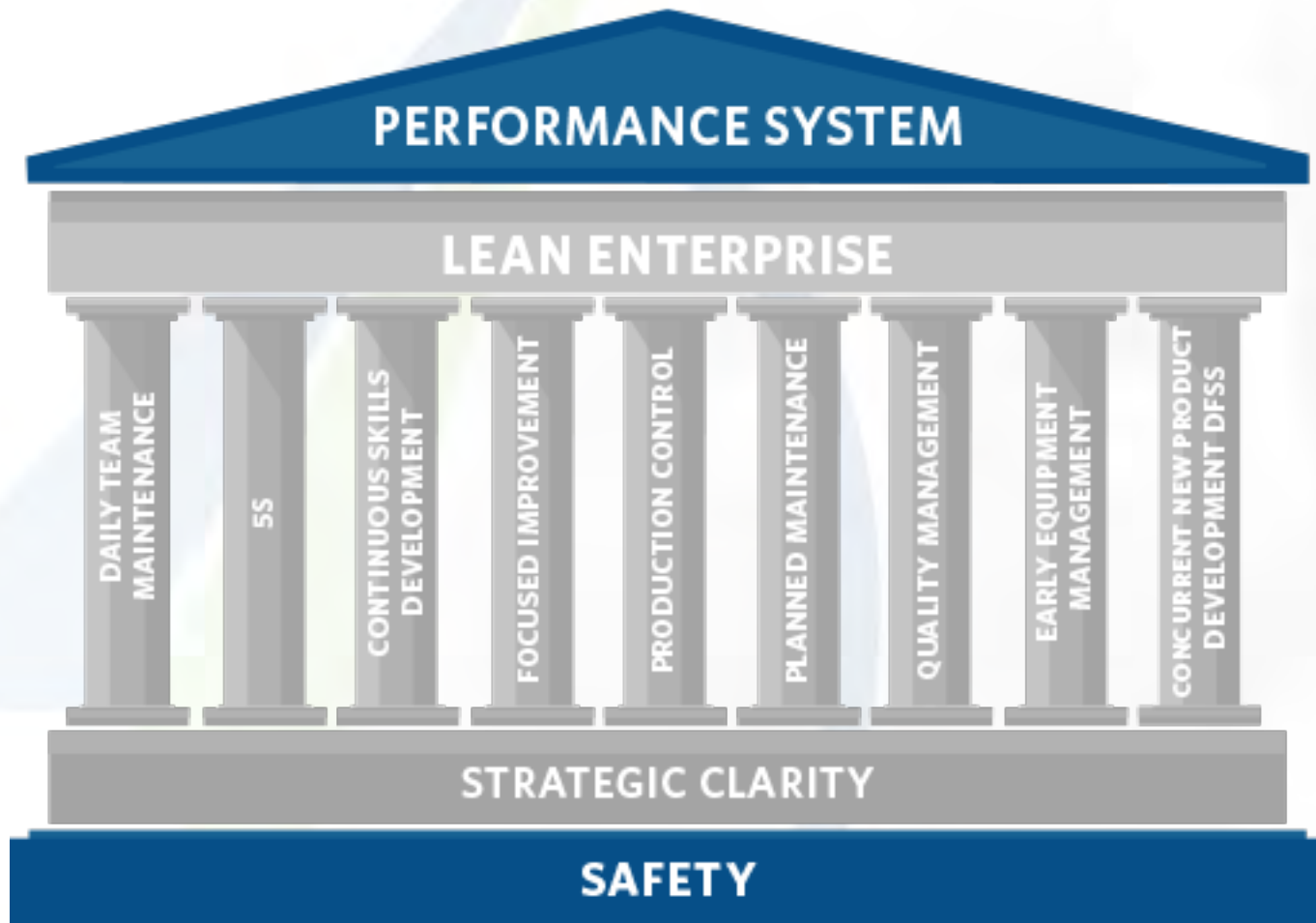
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58%

Firefighting

# The Milliken Performance System

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# Milliken's results in the Journey

Measurement	# of Companies Reporting	Improvement	Milliken Improvement
Productivity	9	61%	78%
Process Reliability	8	32%	30%
Breakdowns	9	92%	88%
Defects	7	74%	80%
Safety	—		36%



# Discussion Topics

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# Audience Question

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Which of these options best describe your organization ?

1. We select projects based on the current opportunity at hand
2. Project establishment is based on experiential knowledge
3. We have a mature process for project establishment based on facts/data and prioritization

# Key #1 - Zero Loss Thinking

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## Embrace Zero Loss Thinking

- Strong benevolent discontent
- Stop measuring success internally
- Celebrate the **RED** as opportunity



# Learning to See

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# Learning to See

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# What is a Loss ?

Actual Cost

The  
difference  
between  
actual cost  
&  
ideal cost



Ideal Cost

Total real dollars  
spent to manufacture  
a product.



*Cost  
Reduction  
Opportunity*

Absolute minimum cost  
required to  
manufacture a product.  
*(theoretical cost)*

# Loss Categories

## Milliken Losses

### OEE Losses (*Downtime*)

1. Breakdowns
2. Change Over
3. Start-Up and Shutdown
4. Minor Stops
5. PM & Cleaning Downtime
6. Planning
7. Material Handling

### Performance Rate (*Speed*)

8. Speed Loss

### Quality Losses (*Yield*)

9. Off-Quality
10. Rework

### Yield Losses

11. Waste
12. Obsolescence
13. Allowances
14. Inventory Variances

### Other Conversion Costs

15. Training
16. Inspection & Testing
17. Indirect Materials
18. Purch. Price Var./Vendor Claims
19. Over/Under Spending
20. Spending Not Captured

# Audience Question

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Which of these options best describe your organization ?

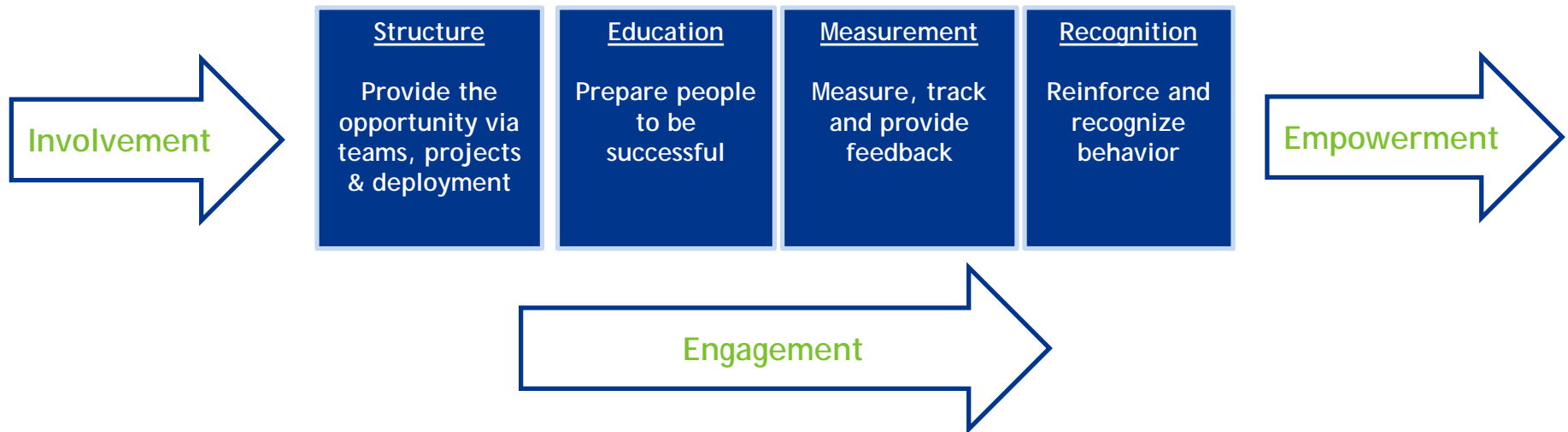
1. Less than 25% of my Hourly Workforce is part of a continuous improvement team or project
2. 25 to 50%
3. 50% to 75%
4. 100% of my Hourly Workforce is part of continuous improvement Team



# Key #2 - Performance Integrated System, not tools

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## Associate engagement is structural

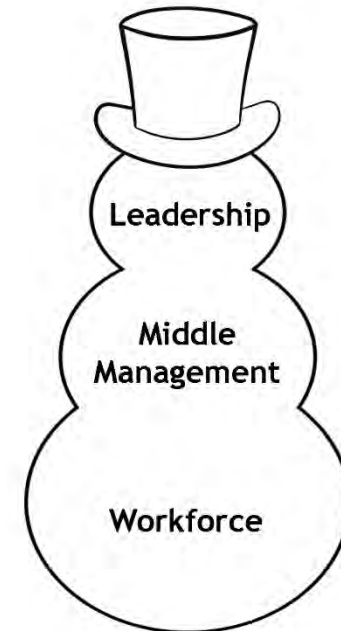


# Key #3 - Leadership Development

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## Model then Replicate

Build stability of  
equipment and people -  
through Proof of Concept -  
before adding complexity  
and speed



# Key #4 - Change Management

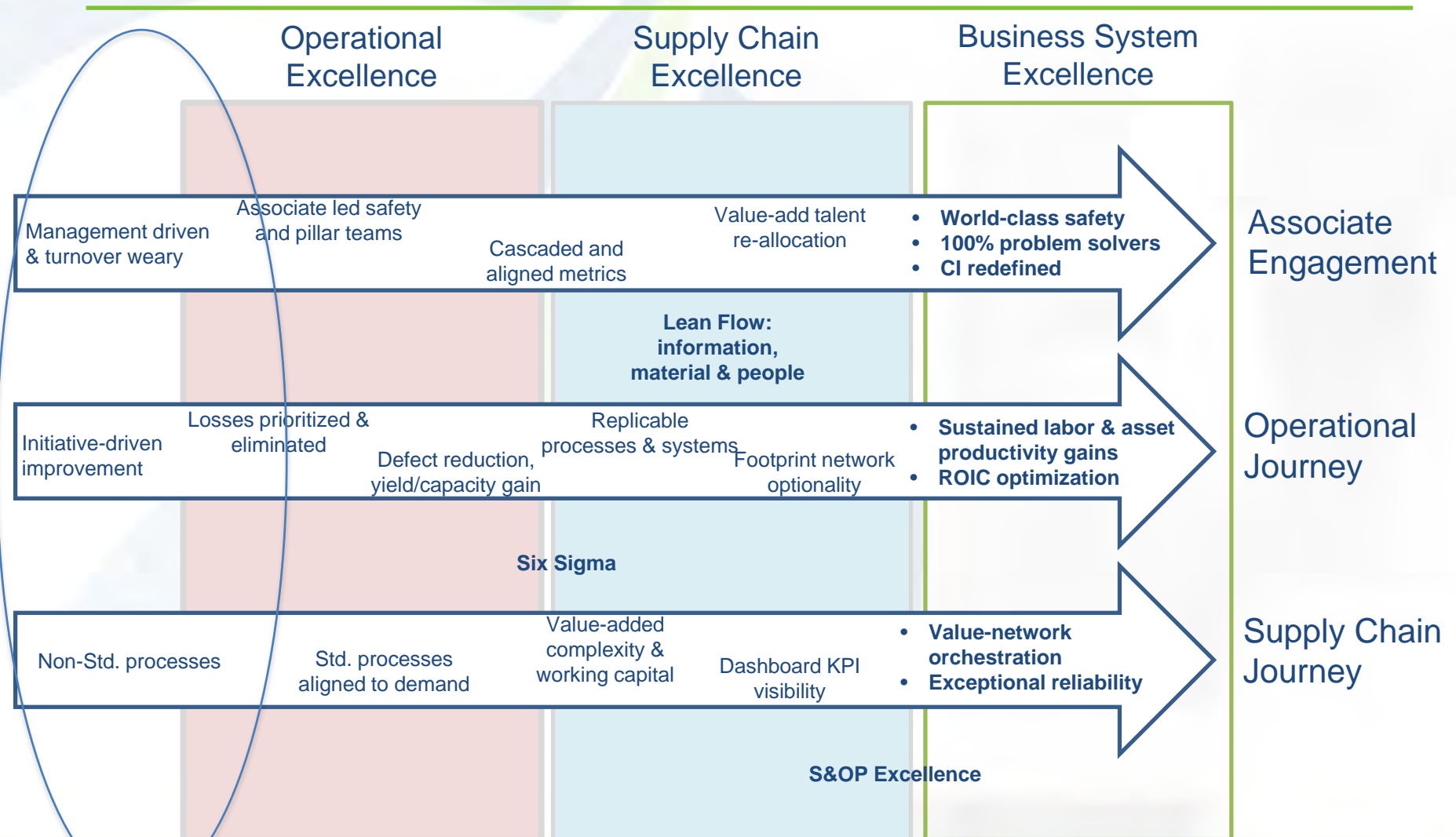
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## **Once Established, Expand, and Evolve**

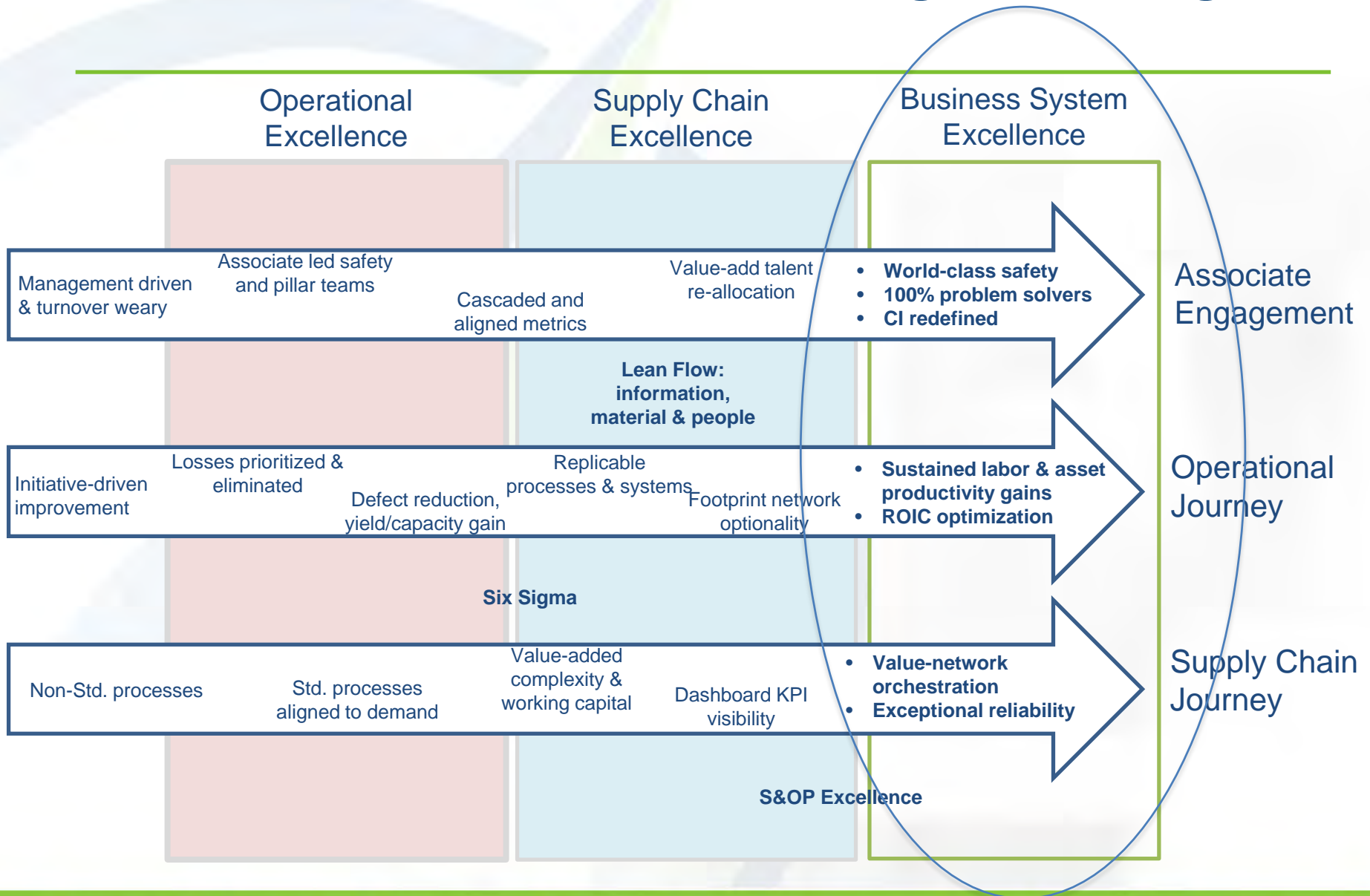
Establishment of the system will be evident through associate “pull”

- Expand the system outside of the plant's 4 walls
- Allow the system to evolve and improve organically

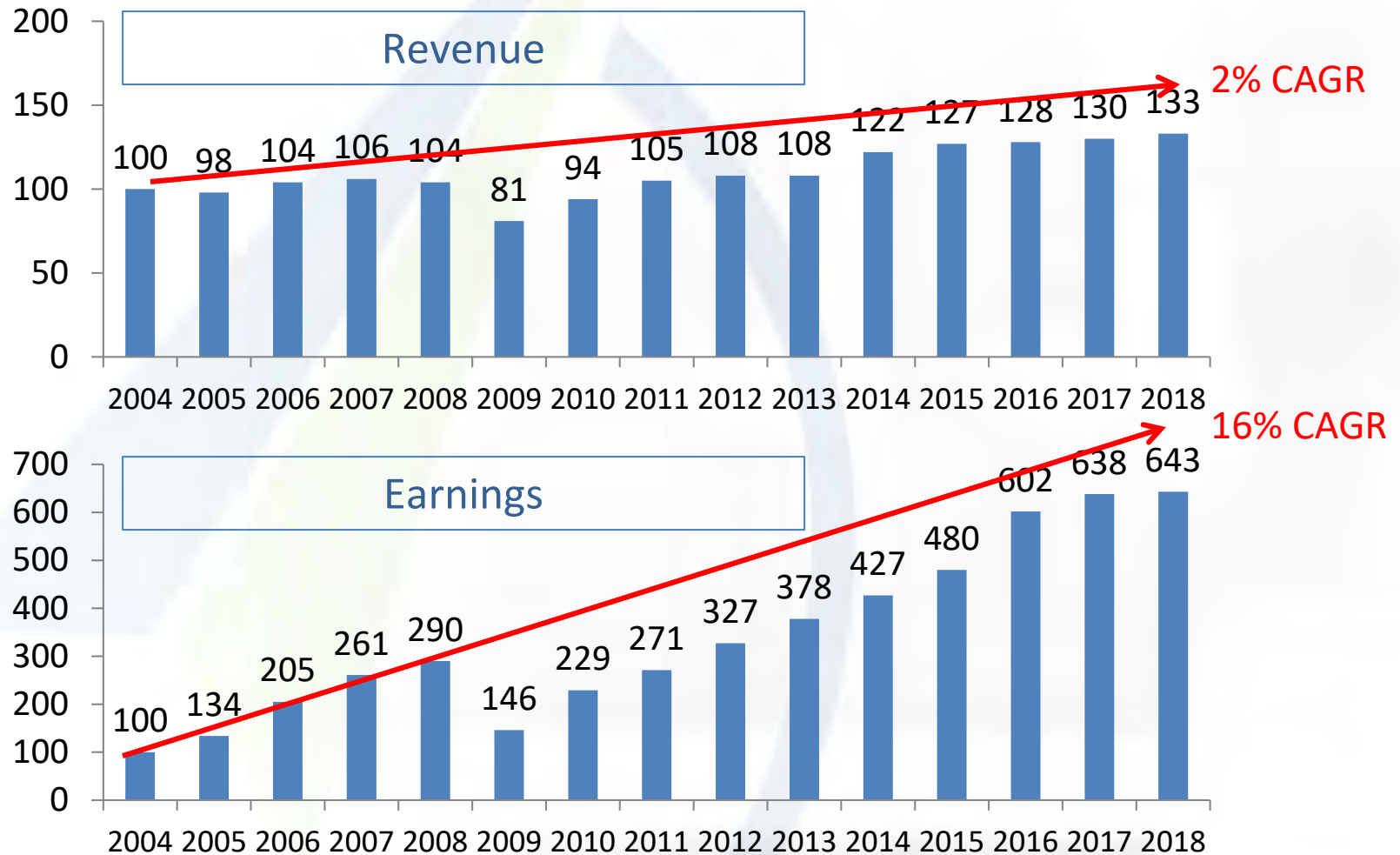
# A Performance Evolution: Starting Point



# A Performance Evolution: Long-term target



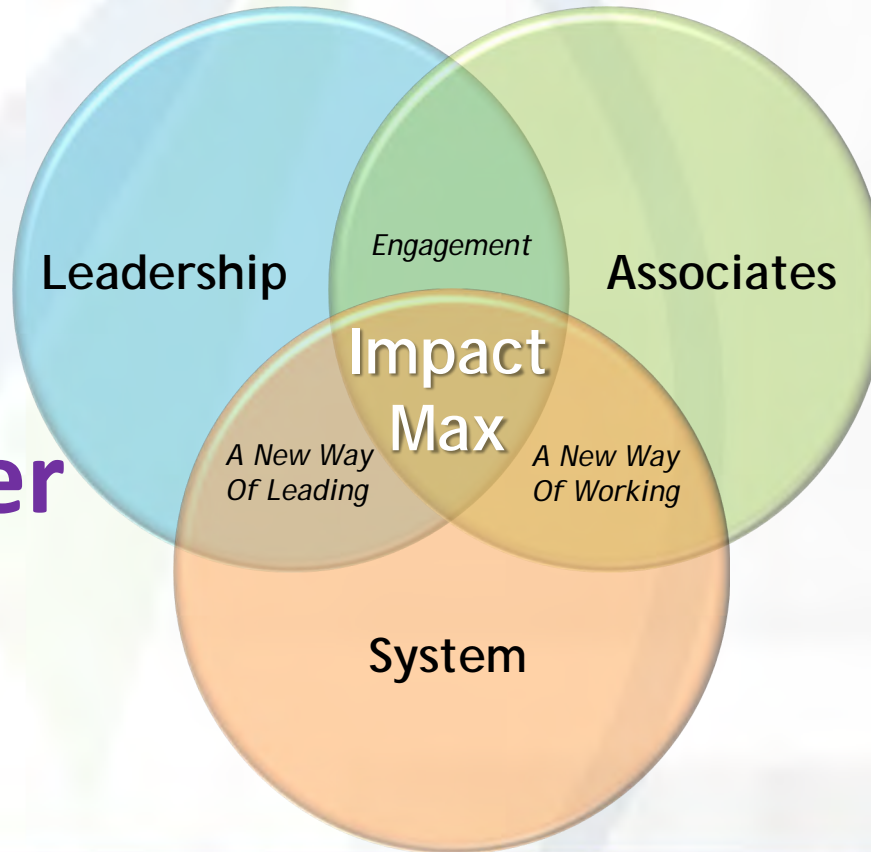
# Key #5 - translate Wins to \$



# View of a Performance System

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**Engage**



**Empower**

**Enable**

# Who we Are

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## Performance Solutions by *Milliken*

### Differentiation

- Our Offer is founded on what we successfully implemented/institutionalized Internally (Plant Visits and Practitioners)
- Our work with clients is rooted on engaging the hourly associate (sustains the gains).
- Our tool for 'project establishment' (where you should work) is unique



# Audience Question

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Which of these options best describe your organization ?

1. I'm highly interested in a Tour of a Milliken site
2. I'm somewhat interested in a Tour of a Milliken site
3. I'm not interested in a Tour of a Milliken site

# Strategic Imperative to Culture Change

## The “Zero Loss Thinking” Analysis

- Challenges existing paradigms as to ‘what’s possible’
- Allows for strategic resource allocation discussions
- If embraced, eliminates wastes as opposed to reduces wastes

## “Proof of Concept (ROI)”

- Allows for ‘intelligent design’ when considering horizontal replication (within the site) and vertical replication (to other sites)
- Validates successes early...step on the gas or step on the brake !
- Drives Capability Building.

## The “Modeling” Approach

- The Model machine approach within a Model site enables Associate Engagement which is key to sustainability
- With Safety, acts a cornerstone to Culture Shifting

# Thank You! Questions?

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