

Automate with Purpose

Strategies for a Productive Workforce

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Business Growth Consultant

September 9, 2021

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Five Solutions for Growing Profitably



Zoom Instructions

The image shows a Zoom meeting interface with several callout boxes pointing to specific features:

- Top Left:** A callout points to the "Mute" button and the "three dots" menu icon on the video tile.
- Top Right:** A callout points to the "Speaker View" button.
- Center:** A callout points to the "three dots" menu icon on the video tile.
- Bottom Left:** A callout points to the "Mute" and "Stop Video" buttons.
- Bottom Center-Left:** A callout points to the "Chat" button.
- Bottom Center-Right:** A callout points to the "Reactions" button.
- Bottom Right:** A callout points to the "Closed Caption" button.

Other visible interface elements include the "Participants" button, "Share Screen" button, and an "End" button.

Automate with Purpose

Strategies for a Productive Workforce

Agenda

Challenges

Opportunities

Strategies

- Approaches, Methods & Tools
- Skills

Action Plan



Automation Challenges



What comes to mind when you hear the word “automation?”

Automation Defined:

The application of a wide range of technologies, software and equipment that reduces or eliminates human intervention in:

- the transfer of data/information within a process
- the control/monitoring of a process.

The use of a technology as a process aid that improves safety, quality and/or productivity.

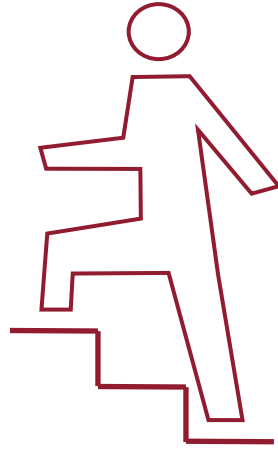
“When you come to a
fork in the road, take it.”

Yogi Berra



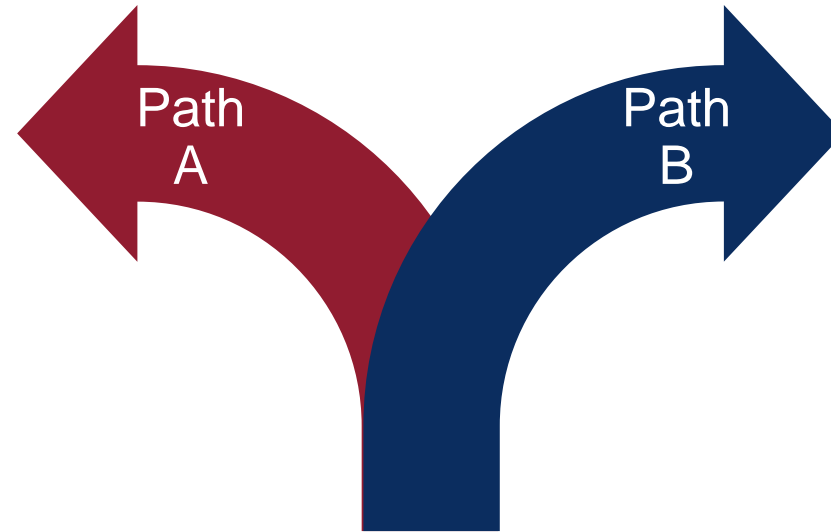
Automate with Purpose

Full Automation



Characteristics

- ✓ Higher volume
- ✓ Dedicated product(s)
- ✓ Common applications



Manual Processes

Full Automation



Characteristics

- ✓ Volume challenges
- ✓ Flexibility required
- ✓ Custom applications

Agenda

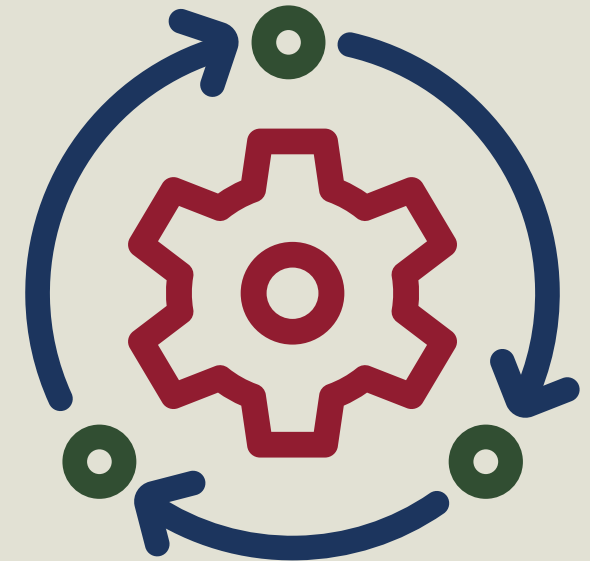
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Automate with Purpose

Automate with Purpose requires a long view while focusing on specific **process** details.



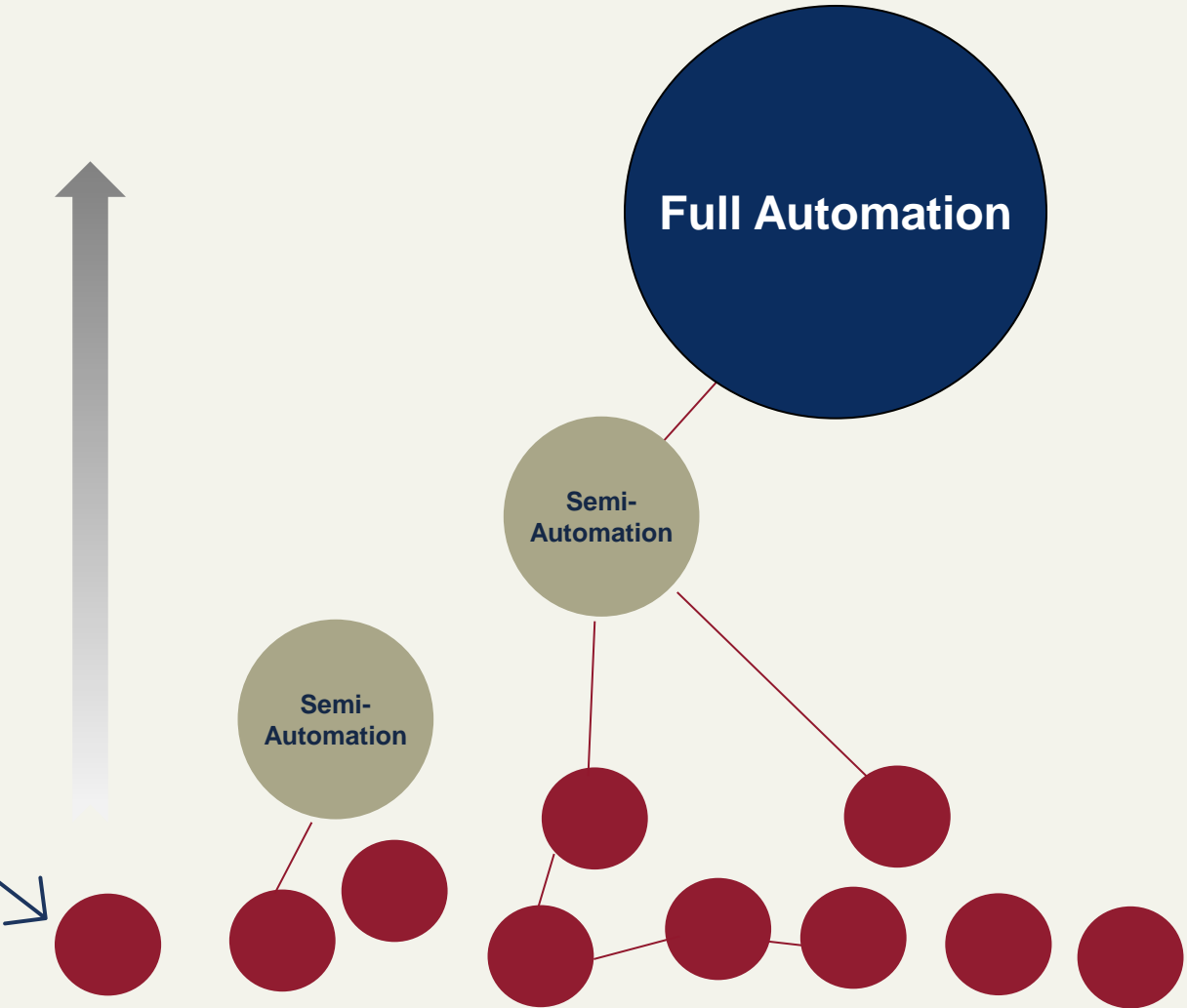
Process Methodologies

- **Lean Thinking** – hates *process* “wastes”
- **Six Sigma** – hates *process* “variation”

Process Focus

Automation Opportunities

- ✓ Start as small process improvements
- ✓ Provide foundation for larger process improvements or semi-automation
- ✓ Provide connections for significant process improvements and full automation



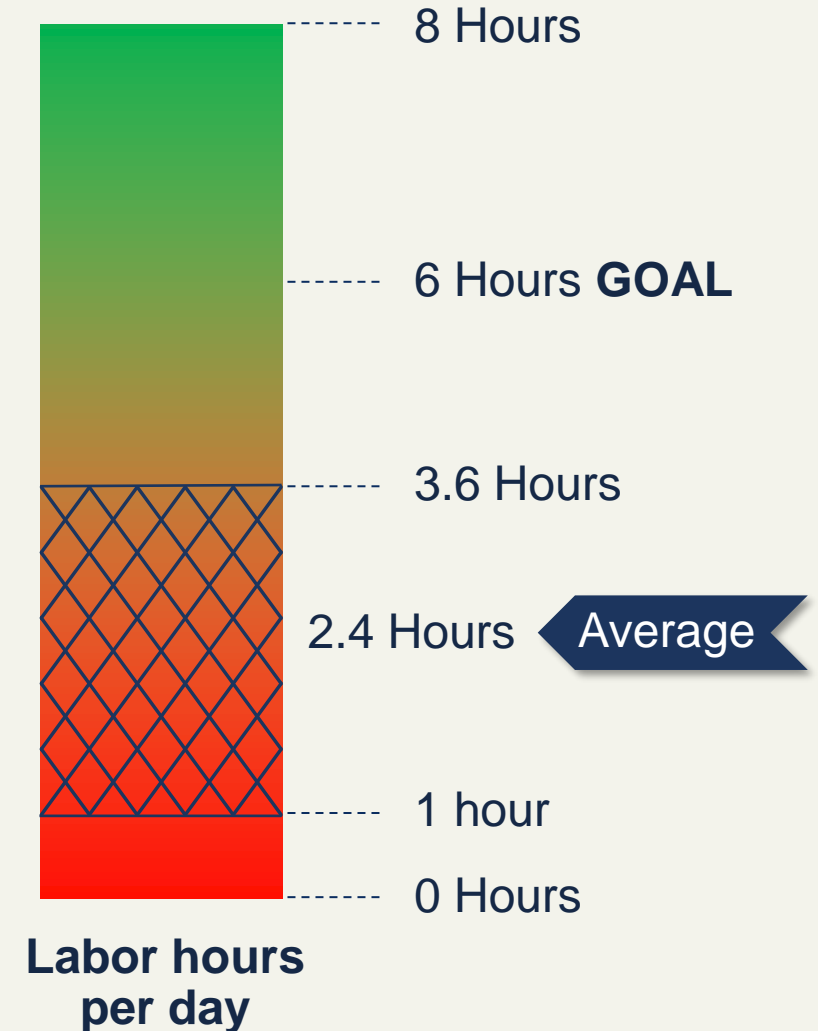
Process Improvement Opportunities

Employee Value Add

- ✓ Process steps that change the form or function of product, service or information
- ✓ Customer willing to pay for the change
- ✓ Done correctly the first time



Employee's Value Add Utilization



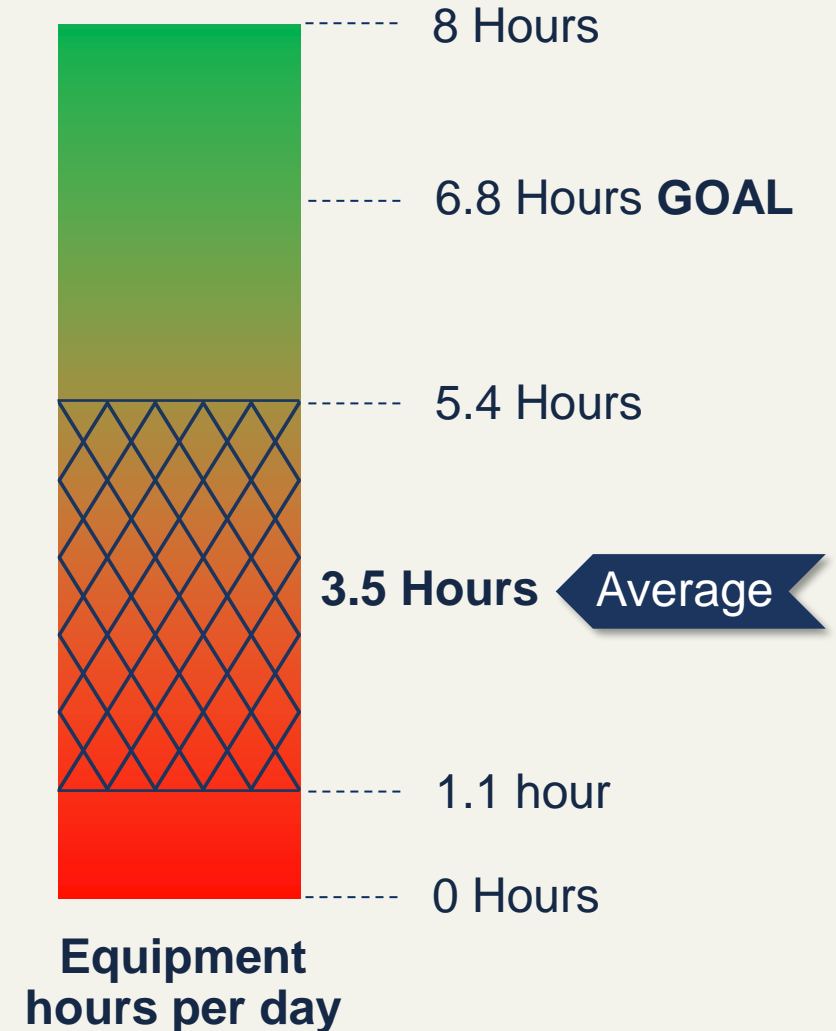
Process Improvement Opportunities

Equipment Value Add

- ✓ Process steps that change the form or function of product, service or information
- ✓ Customer willing to pay for the change
- ✓ Done correctly the first time



Equipment's Value Add Utilization



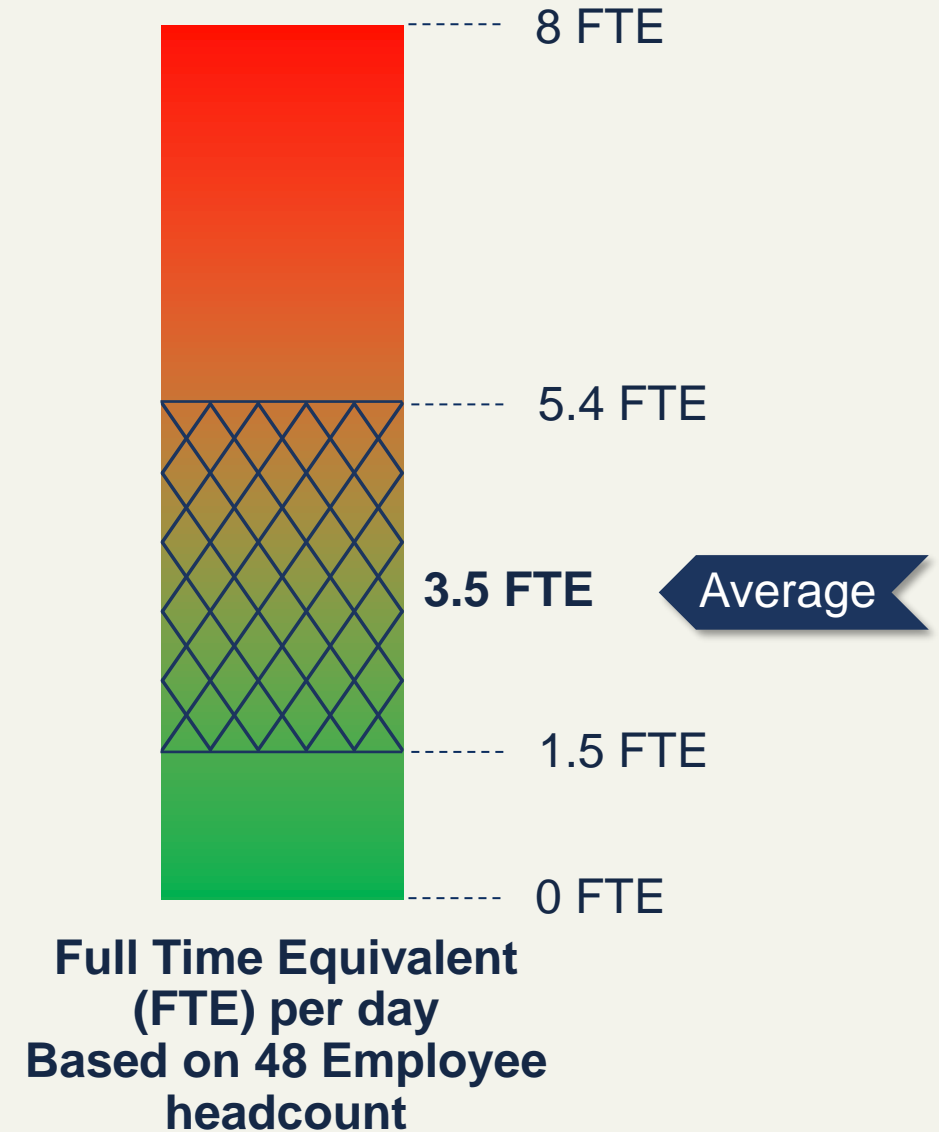
Process Improvement Opportunities

Employee Non-Value Add

- ✓ Process steps that consume time and energy without providing value.



Employee Motion

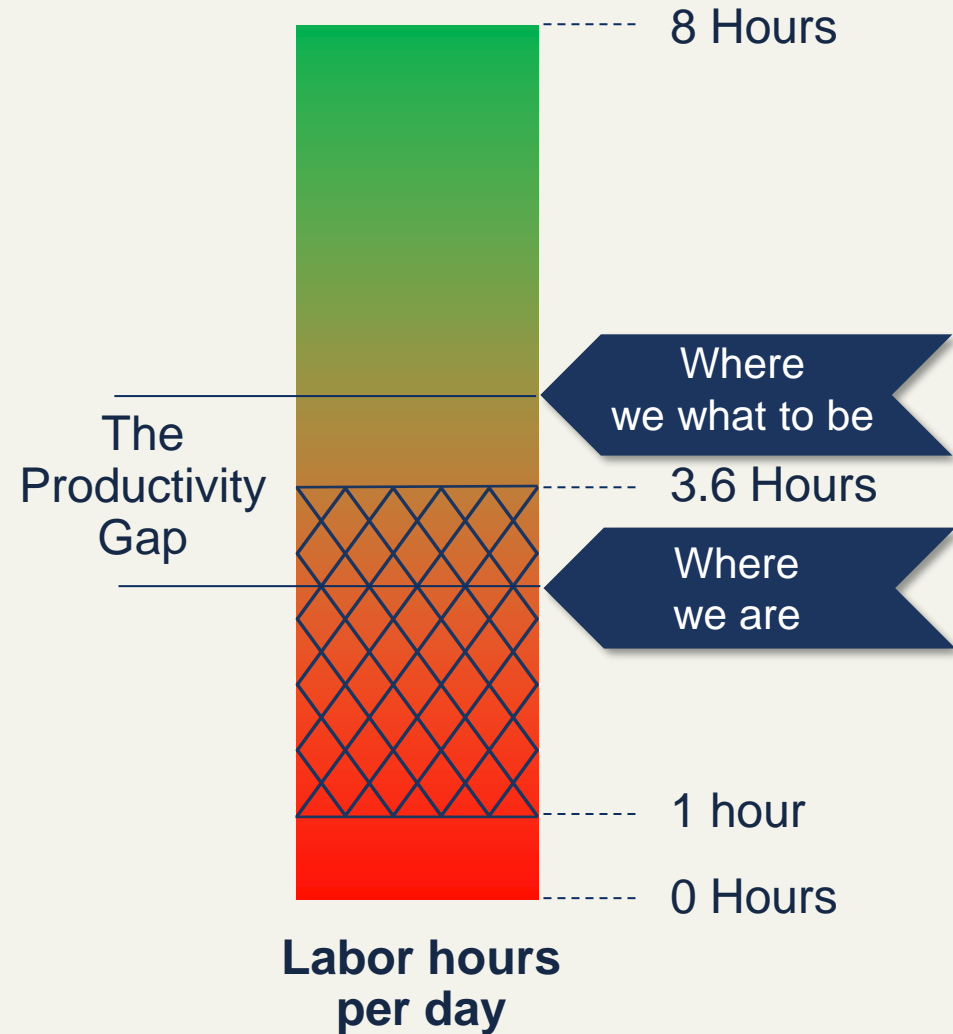


Process Improvement Opportunities

Productivity definition:

- ✓ How much was produced?
- ✓ How much time did it take?
- ✓ Measured in units per time

Strategies for a *Productive* Workforce



Process Improvement Opportunities

1. Job/ Work Order time expectation
2. Visually reported daily YES NO
3. Employees engaged daily in identifying non-productive activities



MOTION



DEFECTS

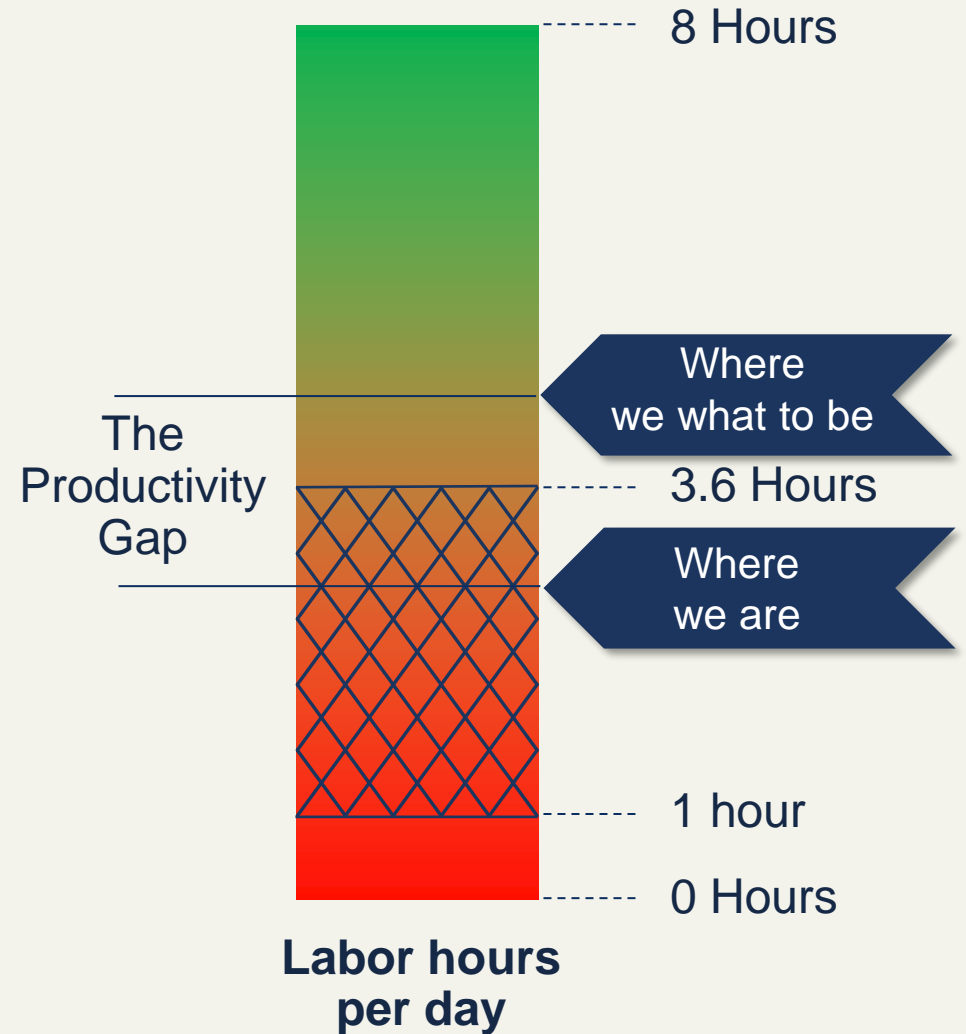


WAITING.



EXCESS
TRANSPORTATION

Strategies for a *Productive* Workforce



Activity



▶ Process Opportunities – Seeing Labor & Equipment Value Add

We are aware of the amount of value add per day of our employees and equipment.

Does not describe
our organization

Rarely describes
our organization

Somewhat describes
our organization

Mostly describes
our organization

Strongly describes
our organization

▶ Process Opportunities – The Productivity Gap

We have daily visibility of employee productivity with ongoing employee engagement to improve.

Does not describe
our organization

Rarely describes
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Somewhat describes
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Mostly describes
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Strongly describes
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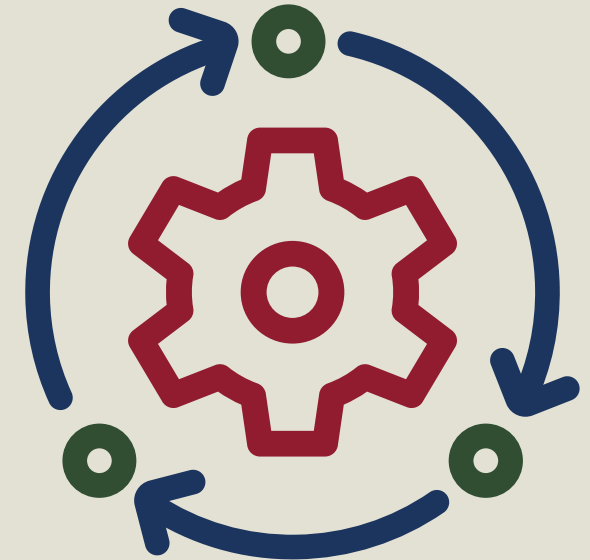
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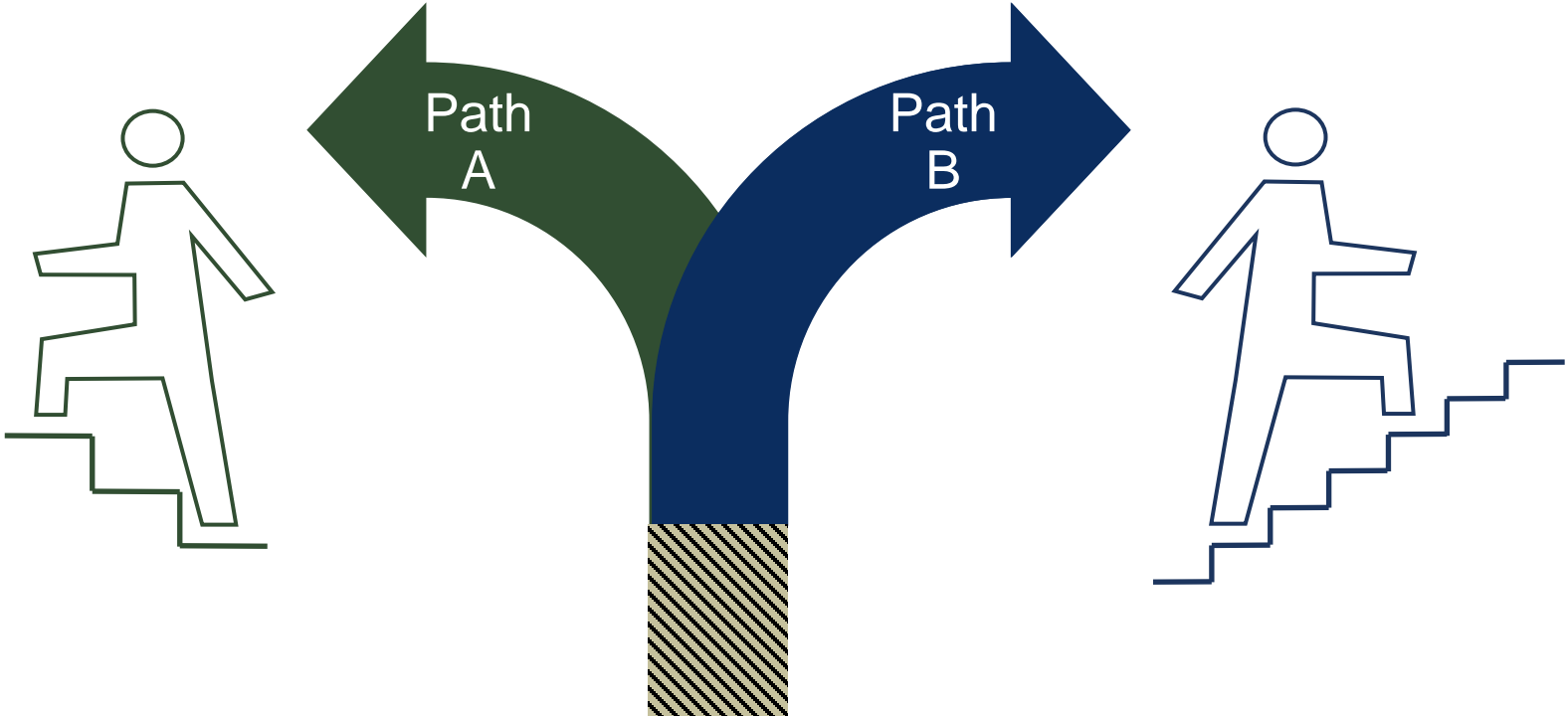
Action Plan



Strategies for a productive workforce

Full Automation

Full Automation

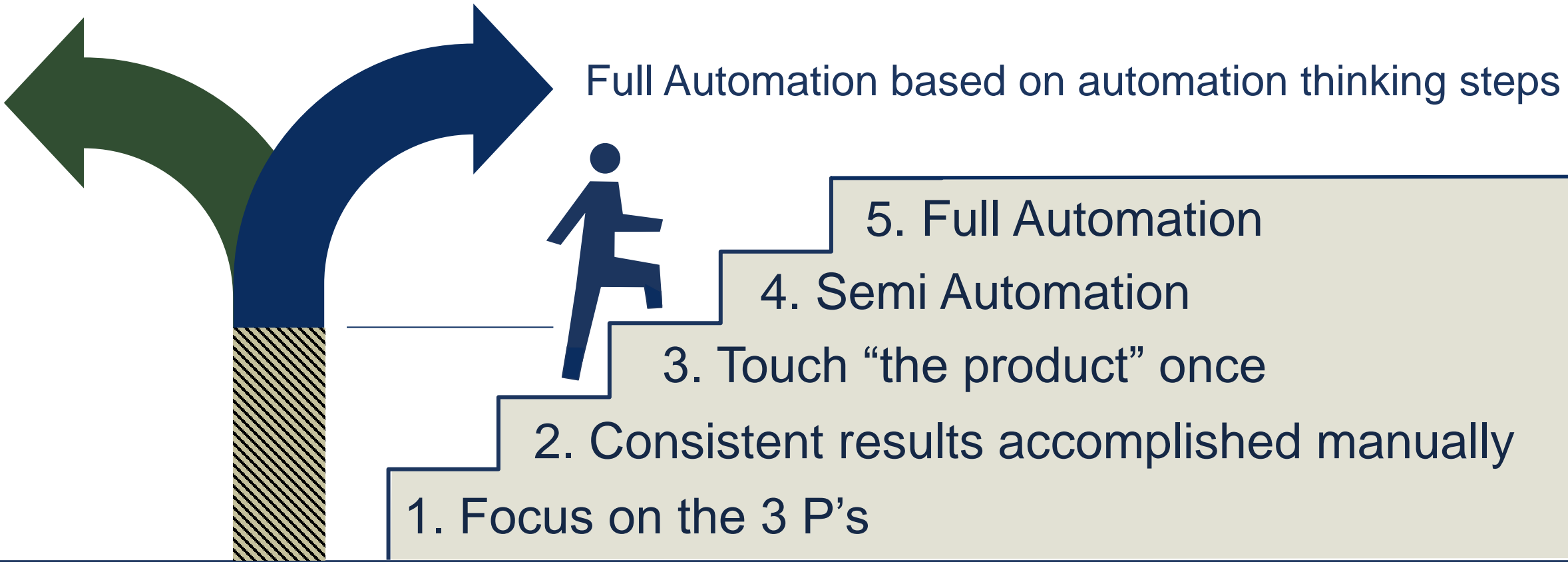


Common Foundation

Based on Automation Thinking & Continuous Improvement Thinking

Strategies for a productive workforce

Steps toward Full Automation



Building the foundation: **Step #1**

Approach:

- **Automation Thinking:** Focus on the 3 P's Process, Process, Process
- **Continuous Improvement Thinking:** Process Focus

Method:

- Understanding value-add tasks from call to cash

Tool:

- Value Stream Map

Building the foundation: **Step #2**

Approach:

- **Automation Thinking:** Consistent results accomplished manually
- **Continuous Improvement Thinking:** Process Stability

Method:

- Reduce and eliminate non-value add steps
- Simplify remaining steps

Tool:

- Workplace organization (5S)
- Visual Management – normal vs abnormal identification

Building the foundation: **Step #3**

Approach:

- **Automation Thinking:** Touch the product once
- **Continuous Improvement Thinking:** Process Optimization

Method:

- Identify and document best practices

Tool:

- Standard work

Continued Process Optimization: Step #4

Semi Automation

Approach:

- ✓ Task focus with employee involvement
- ✓ Significant opportunities in most organizations
 - Low cost & low risk
- ✓ Provides gateway to continued process optimization
- ✓ Consider application versus industry specific



Continued Process Optimization: Step #5

Full Automation

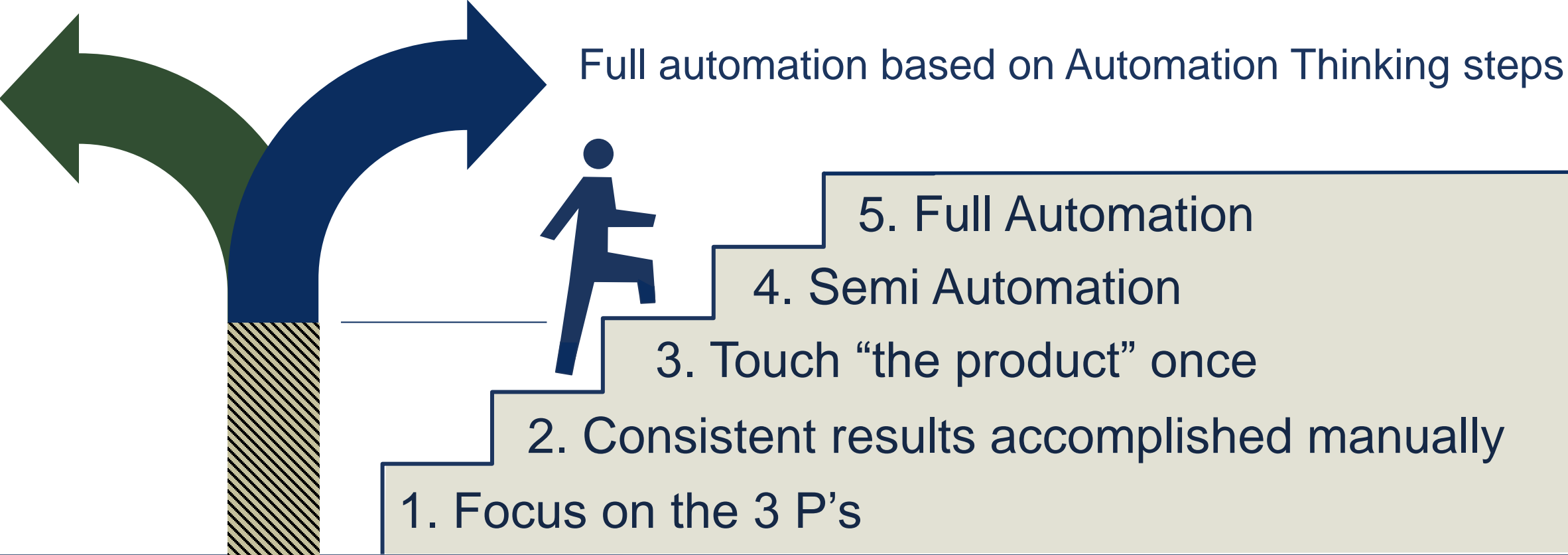
Approach:

- ✓ Operations costs vs pricing
- ✓ Compromise between speed, flexibility and accuracy/precision
- ✓ Integrator/Supplier/OEM Relationship
 - Specification driven
 - Performance driven
- ✓ Risk Analysis (Magic box identification)



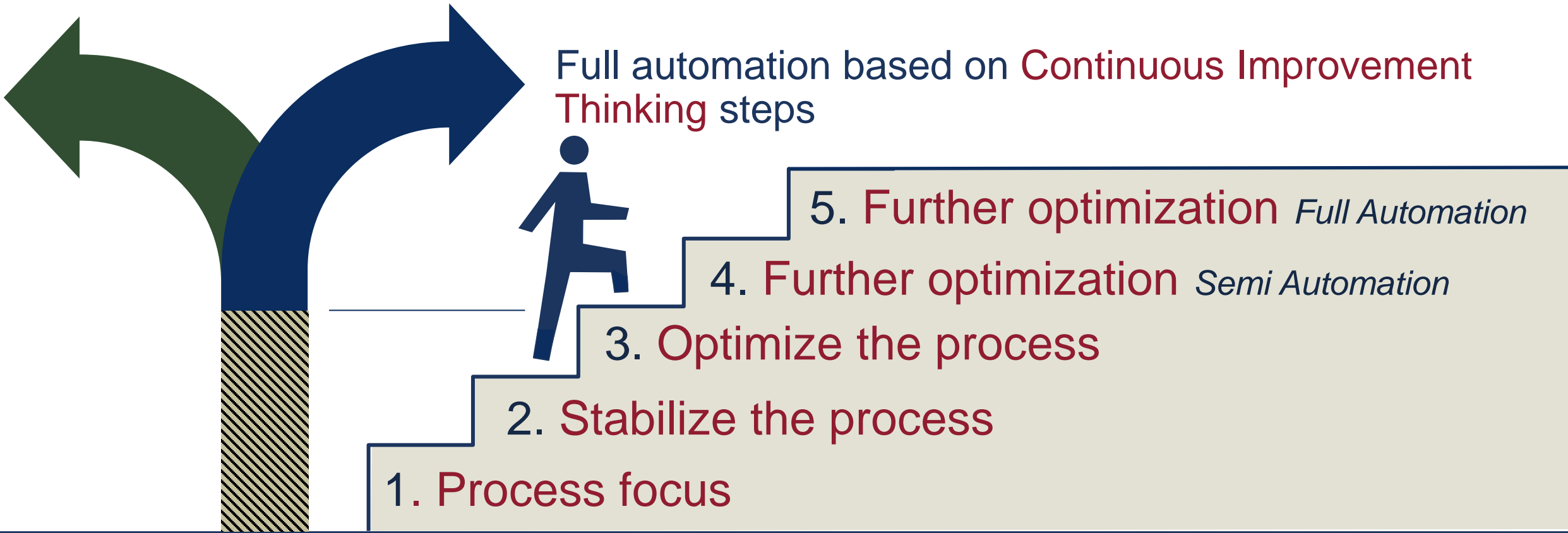
Strategies for a productive workforce

Steps toward Full Automation



Strategies for a productive workforce

Steps toward Full Automation



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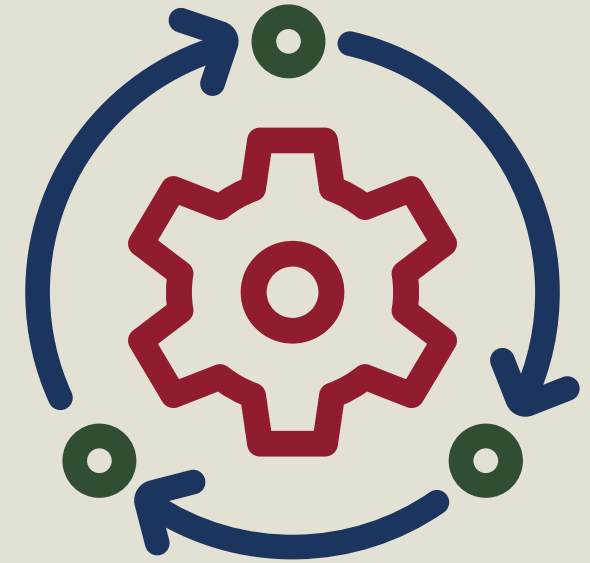
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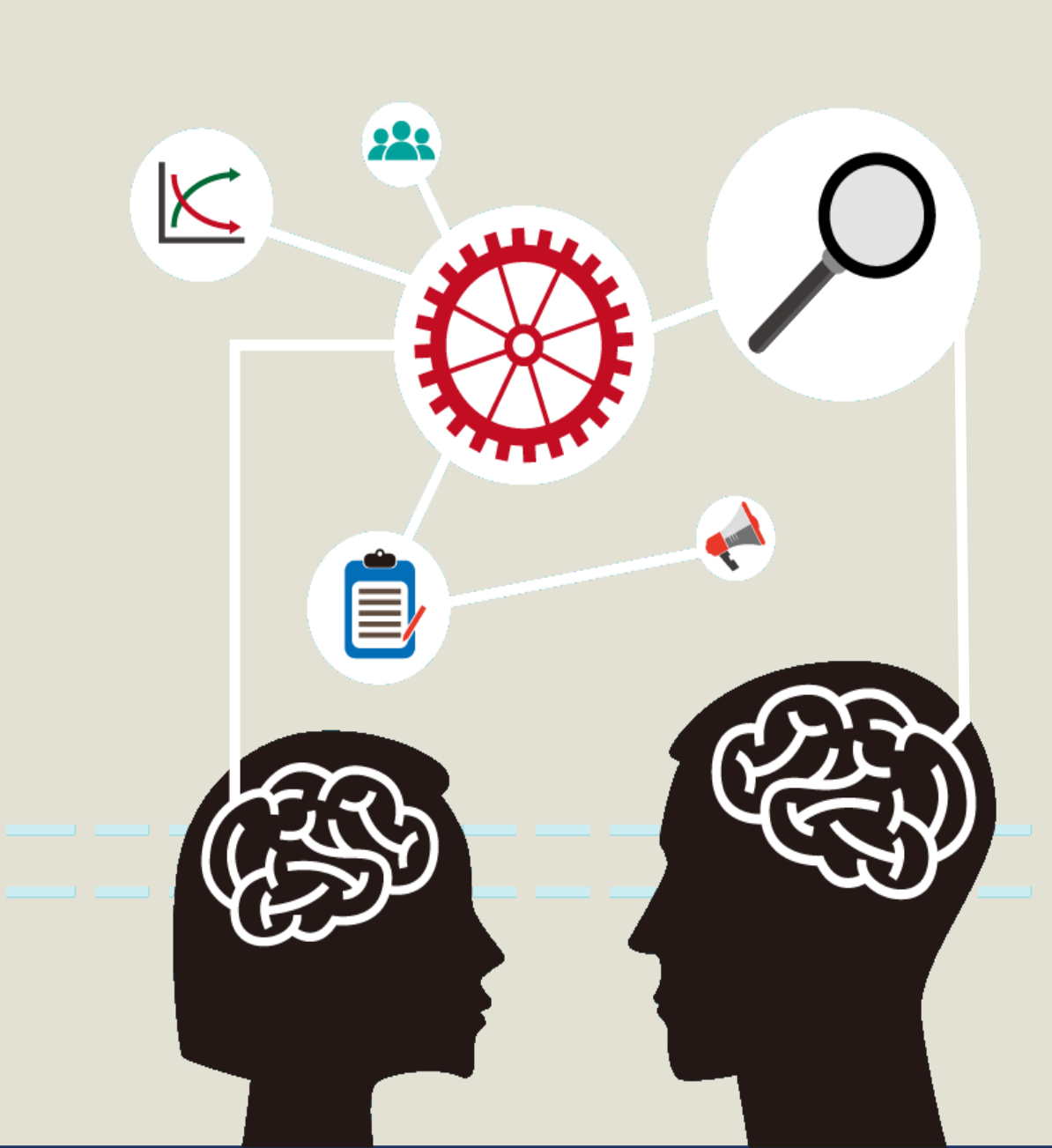
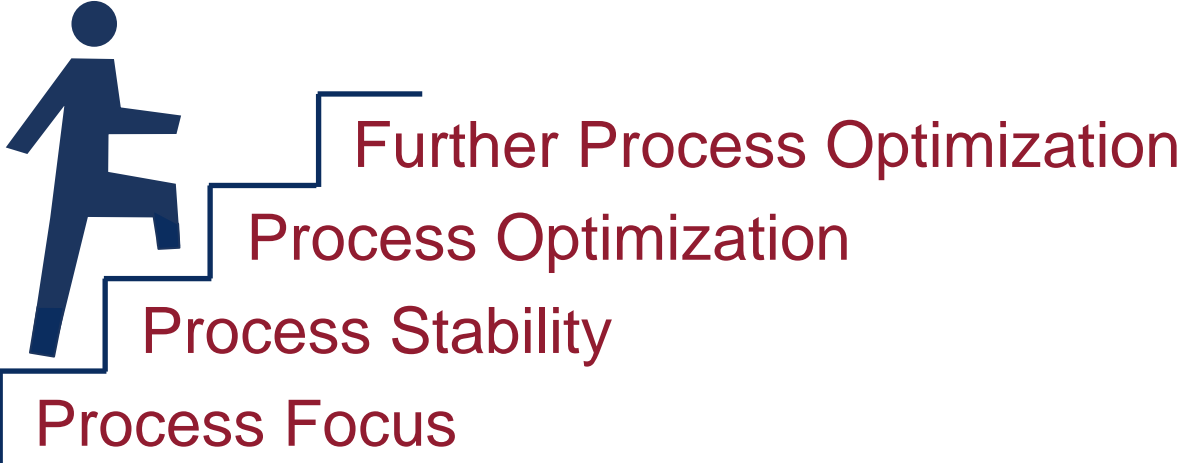
Action Plan



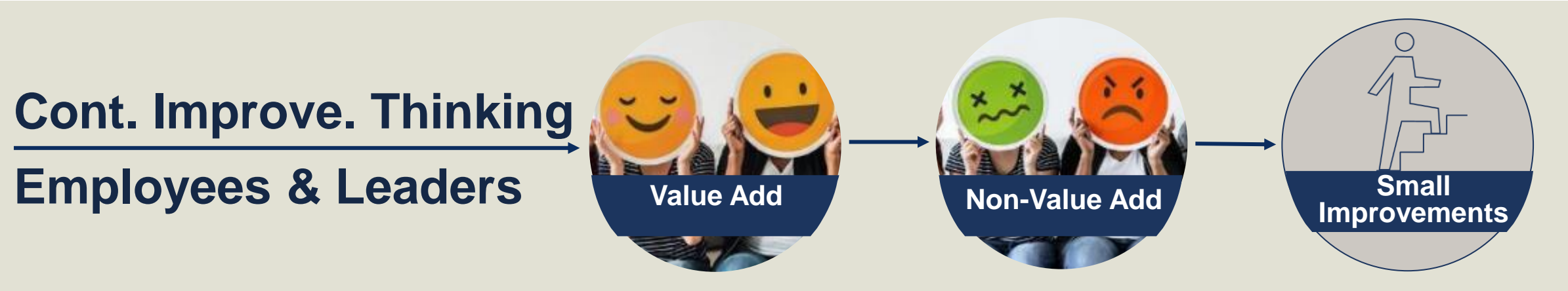
Skills Toward Automation

Continuous Improvement Thinking

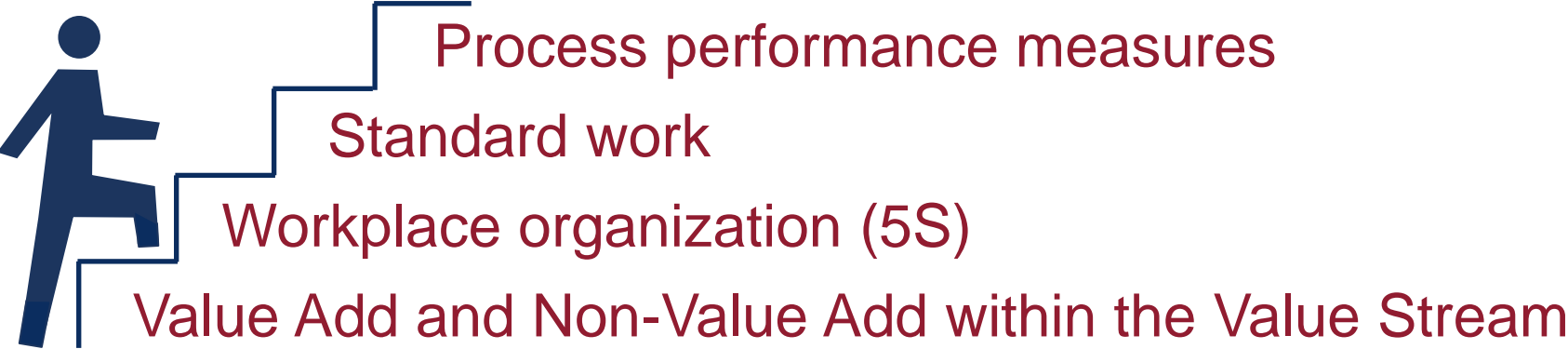
Technical Thinking



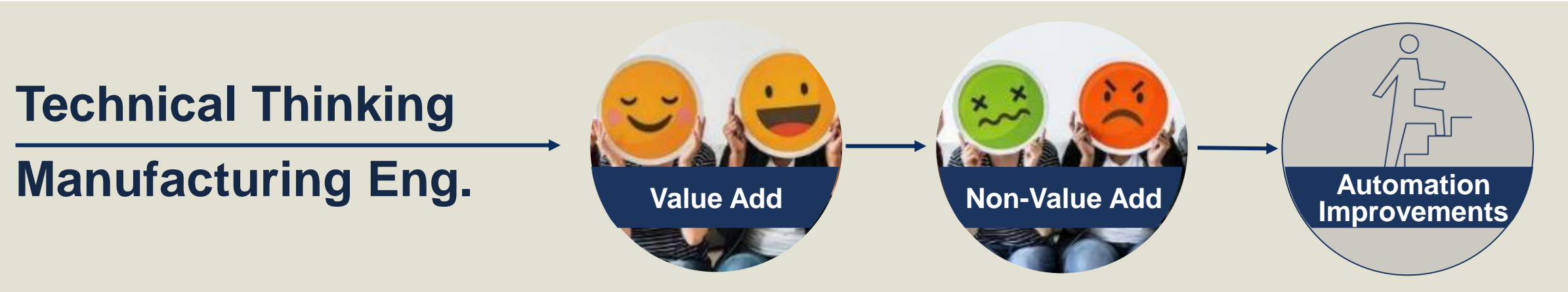
Skills Toward Automation



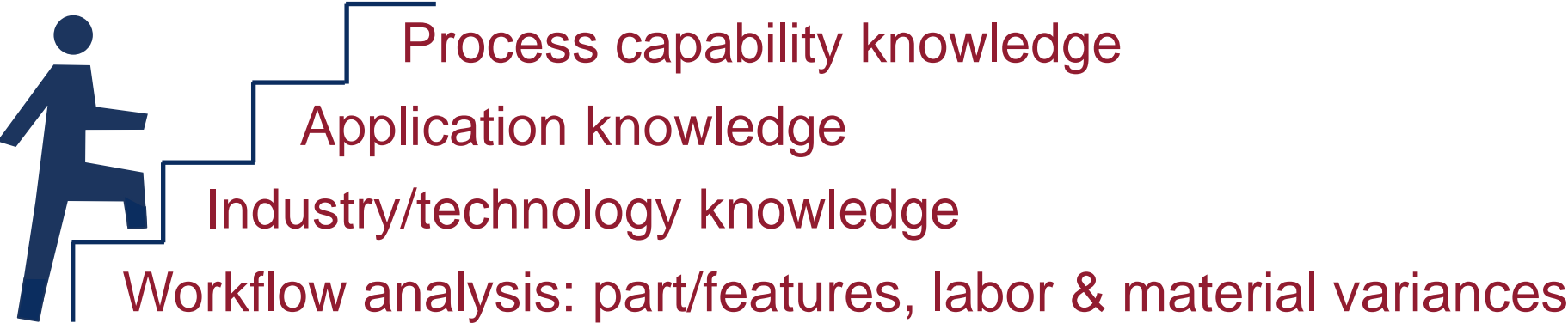
Continuous Improvement Thinking Steps



Skills Toward Automation



Technical Thinking Steps



Activity

- Split into breakout rooms
- Enterprise Minnesota will help facilitate and report out
- **Duration:** 7 minutes

Groups will be given 1-minute warning to return



From the strategies presented for a productive workforce and the skills requirements to support these strategies:

- ▶ What is your first step?
- ▶ What obstacles may get in the way?

Activity

GROUP FEEDBACK

Spokespeople share example of first steps and potential obstacles



Agenda

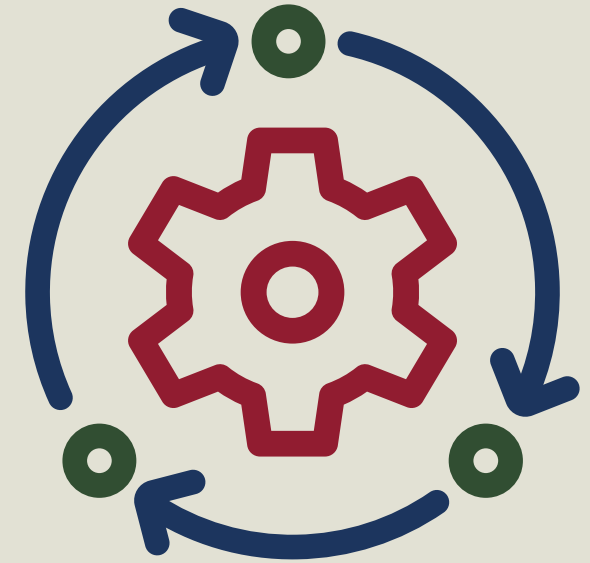
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Automate with Purpose

“The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency.

The second is that automation applied to an inefficient operation will magnify the inefficiency.”

Bill Gates

Strategies for a *Productive Workforce*



Investment Expectations

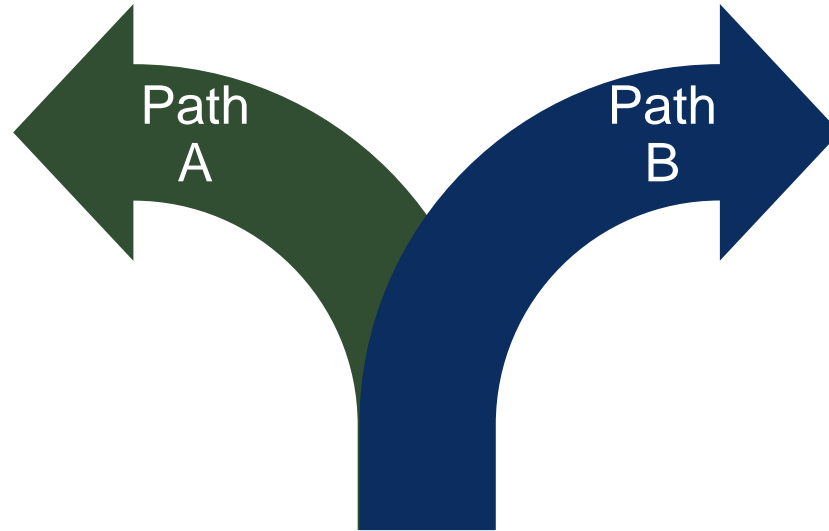
Automate with Purpose

Full Automation



Characteristics

- ✓ Higher volume
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- ✓ Common applications



Processes

- ✓ Focus
- ✓ Stability
- ✓ Optimization

Full Automation



Characteristics

- ✓ Volume challenges
- ✓ Flexibility required
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Automate with Purpose

- Equipment (automated) intelligence needs to be programmed with ongoing maintenance.
- Employees come with intelligence and need ongoing training & development.
- **Maximizing both to their fullest potential is critical!**

A process focus links them together.

This can be accomplished through an effective automation strategy built on process improvement opportunities.

There is much work to do!

Automate with Purpose

Strategies for a productive workforce

The key is to take the first step, and then keep progressing.



1. Process focus

2. Stabilize the process

3. Optimize the process

4. Further optimization *Semi Automation*

5. Further optimization *Full Automation*



Thank you!

Greg Langfield

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Check your email for workshop evaluation



Upcoming Events

Date	Featured Expert	Topic
Sept. 14-30, 2021	The State of Manufacturing®	2021 Focus Groups
Oct. 7, 2021	Keith Gadacz	ISO Business Management System
Oct. 21, 2021	Abbey Hellickson	Talent & Leadership
Nov. 10, 2021	The State of Manufacturing®	2021 Survey Release Event
Nov. 18, 2021	Ally Johnston	Continuous Improvement
Dec. 14, 2021	Steve Haarstad	Business Strategy

Upcoming Events



A Model for Manufacturing Excellence Using ISO 9001

Thursday, Oct. 7, 9:30-10:45 a.m.

Via Zoom

Presenter:

- Keith Gadacz, *Business Growth Consultant* – Enterprise Minnesota

Workshop takeaways include:

- How to use ISO certification in pursuit of operational excellence
- How the components of ISO 9001 work together as a tool to manage your business
- The role management plays in coordinating your critical business process flows

Upcoming Events



Focus Groups

- September 14-30

Statewide Survey Release Event

- Wednesday, November 10 from 3-7 p.m.
- Minneapolis Marriott Northwest, Brooklyn Park

Register online at enterpriseminnesota.org

Executive Focus Groups

Register online at enterpriseminnesota.org

Focus group sessions:

Focus group sponsors:

1	Tuesday, Sept. 14 10-11 a.m. Virtual	
2	Tuesday, Sept. 14 3-4 p.m. Virtual	
3	Wednesday, Sept. 15 9-10 a.m. Virtual	
4	Wednesday, Sept. 15 1-2 p.m. Virtual	
5	Thursday, Sept. 16 2-3 p.m. Virtual	
6	Monday, Sept. 20 2-3 p.m. Virtual	
7	Tuesday, Sept. 21 2-3 p.m. Virtual	
8	Wednesday, Sept. 22 9-10 a.m. Virtual	
9	Thursday, Sept. 23 8:30-9:30 a.m. Roseville	
10	Friday, Sept. 24 10-11 a.m. Mankato	
11	Tuesday, Sept. 28 1-2 p.m. Duluth	
12	Wednesday, Sept. 29 9:30-11 a.m. Brainerd	  
13	Wednesday, Sept. 29 2-3 p.m. Virtual	
14	Thursday, Sept. 30 9-10 a.m. Virtual	  
15	Thursday, Sept. 30 1-2 p.m. Virtual	