

EPSON

**THE ASSEMBLY
SHOW SOUTH**

Why Automate?

Manufacturing Considerations in Today's "New Normal"

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Prior Automation Webinar Series

AUTOMATION 101

The Starting Point for Automation

- 1 What is driving decision to automate?
- 2 Define & document your current process
- 3 Identify your requirements
- 4 Identify needed automation components
- 5 Who will do the work?

AUTOMATION 201

Clarifying Your Requirements

- 1 Speed
- 2 Precision
- 3 Payload



Download Whitepaper @ www.epson.com/automation101

EPSON

Today's Webinar

WHY AUTOMATE?

Manufacturing Considerations in Today's "New Normal"

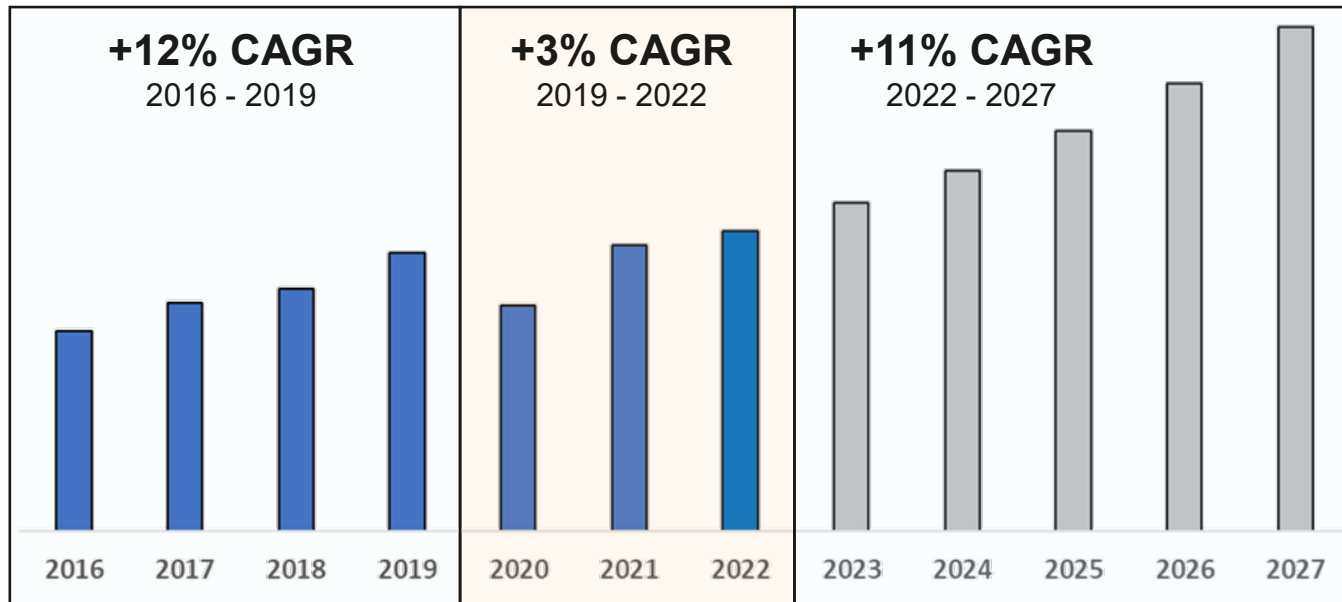
- 1 Accelerating of today's manufacturing paradigm
- 2 The evolution of "WHY" and "HOW" to automate
- 3 Top considerations for project success
- 4 Takeaways for your business

1

Today's Accelerating Manufacturing Paradigm

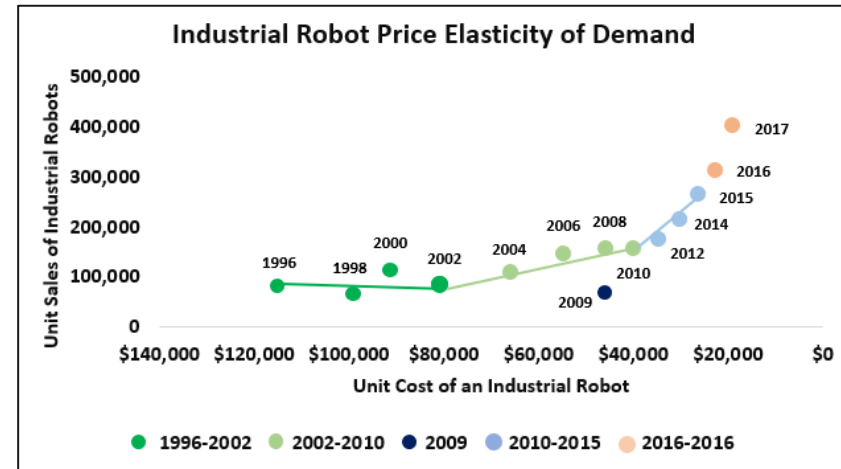
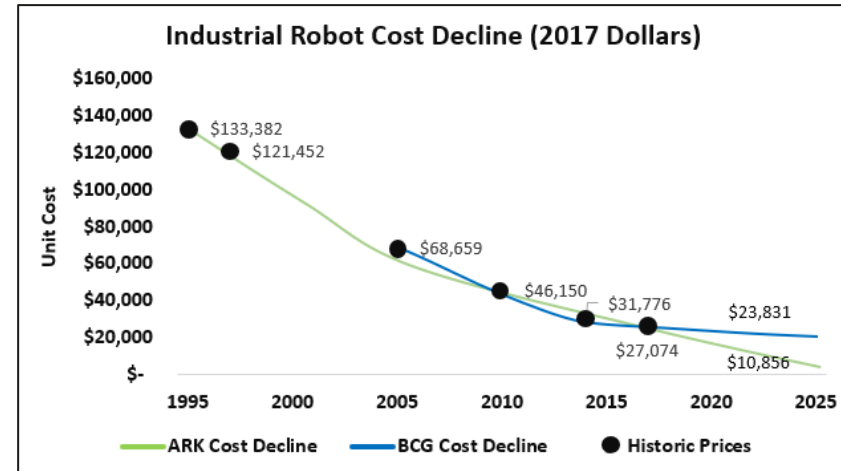
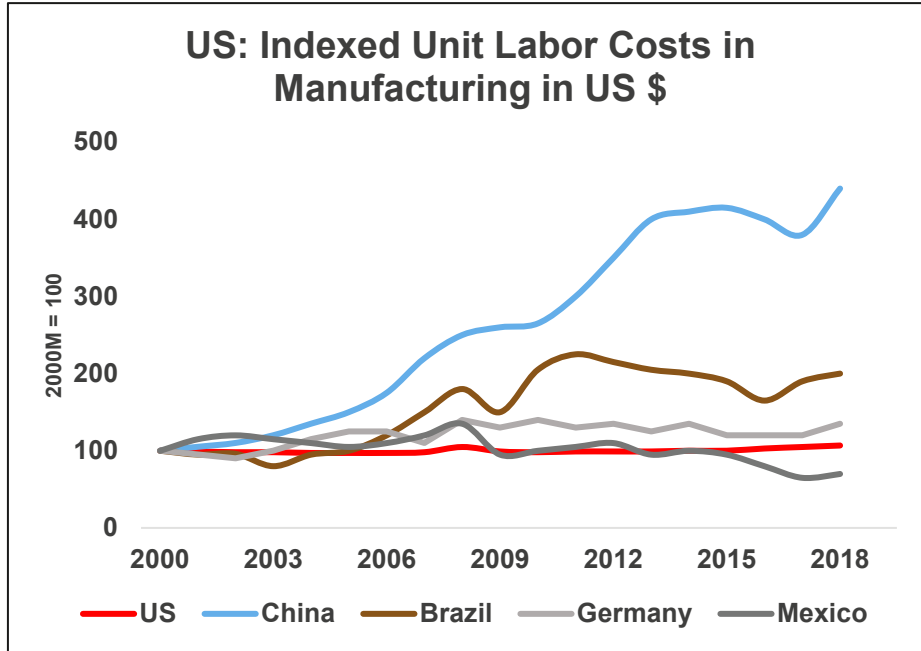
A Return to Automation Growth

North America Industrial Robotic Sales SCARA & Small 6-Axis (sub 20 Kg)



Source: Fuji Keizai 2023

Driven by Increased Labor Costs + Decreased Automation Costs



Sources:
 Reshorennow.org / Oxford Economics / Haver Analytics
 ARK Investment Management / UN Economic Commission for Europe

A New Generation of Automation Companies & Professionals



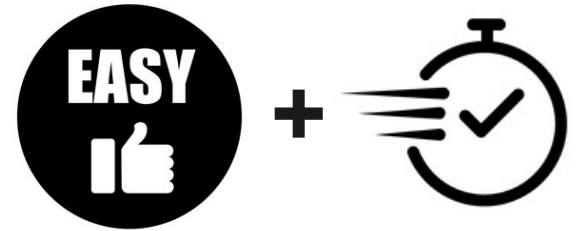
New Users Are Leading a Drive Toward “Simplicity”



Limited
Automation
Background



Simple
Applications



Ease-of-Use
+
Speed

New Companies Are Automating



Ease-of-Use

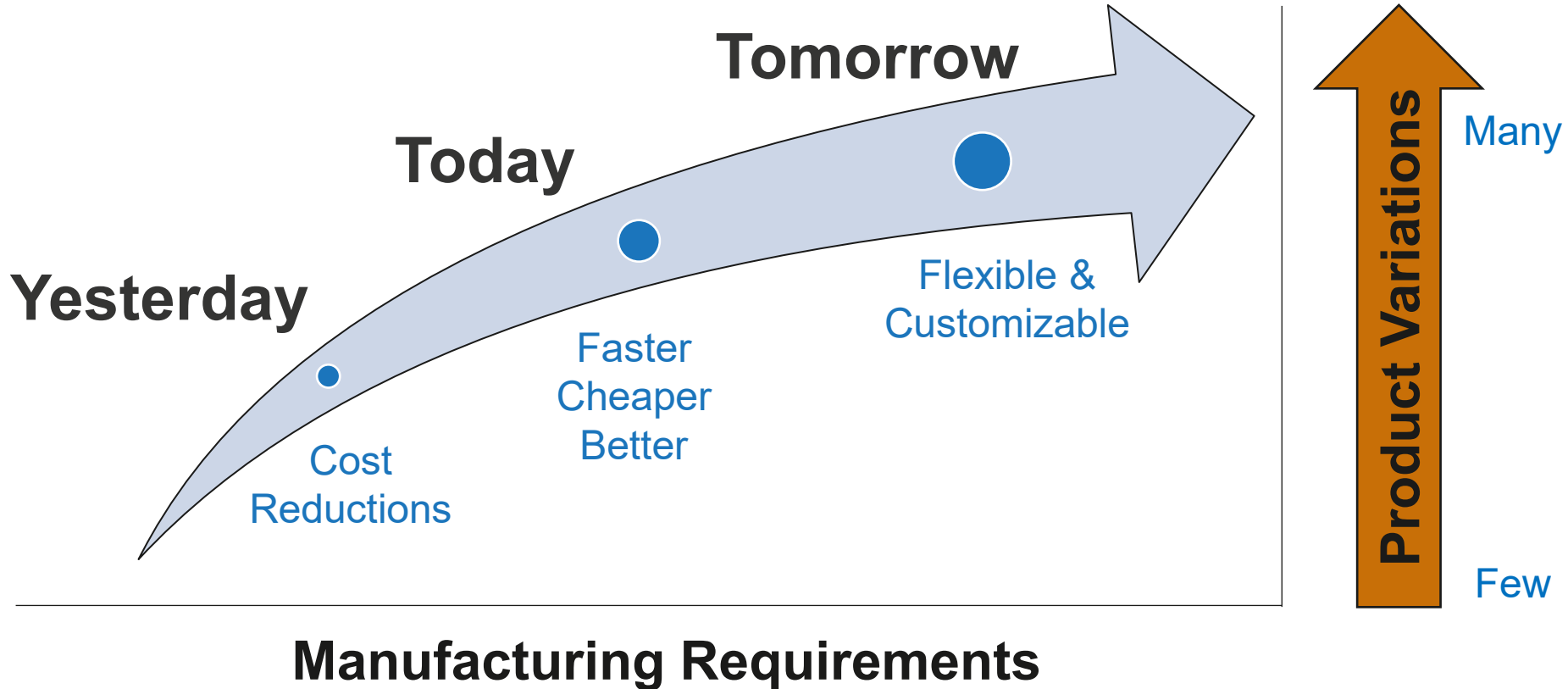


Affordability

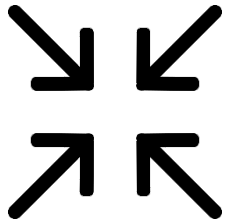


**Small & Medium
Companies Now
Participating**

Product Variations Are Driving a Need for “Flexibility”



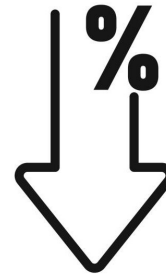
Competitiveness Is Being Put To The Test



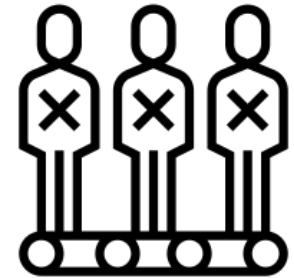
**Smaller Tasks
Higher Precision
Higher Speed**



**Build More
For Less**

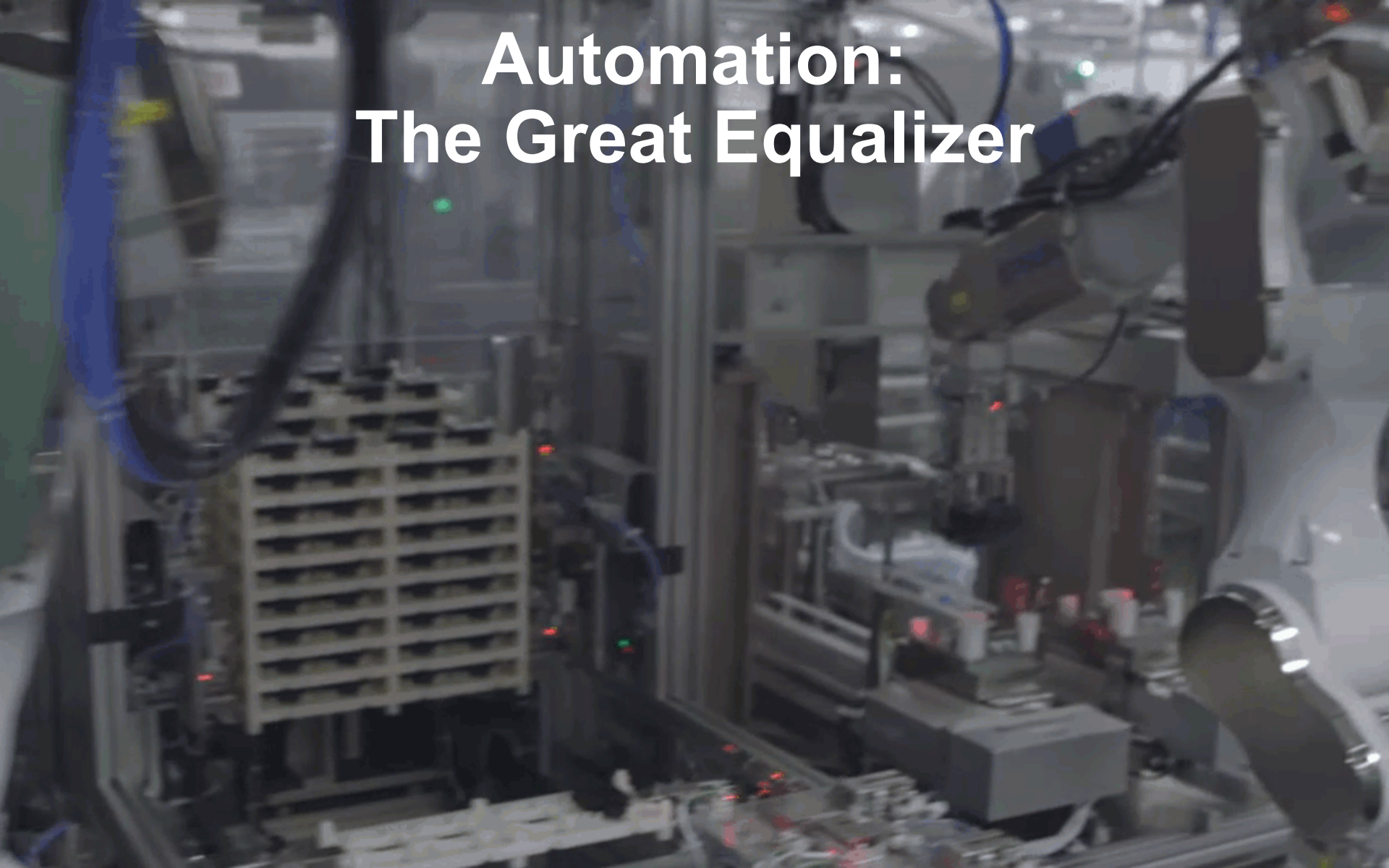


**Razor Thin
Margins**



**Global
Labor
Challenges**

Automation: The Great Equalizer



2

The Evolution of “WHY” and “HOW” to Automate

The WHY of Automation

YESTERDAY - Core Reasons For Automation



Cost



Volume



Technology



Quality

TODAY - Additional Reasons for Automation



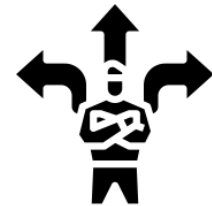
Availability



Supply Chain

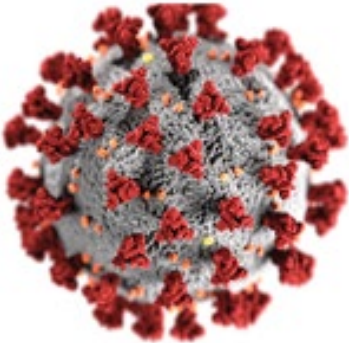


Time-to-Market

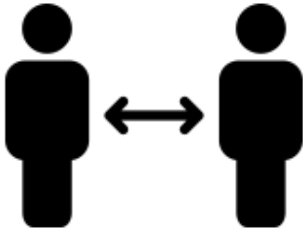


Flexibility

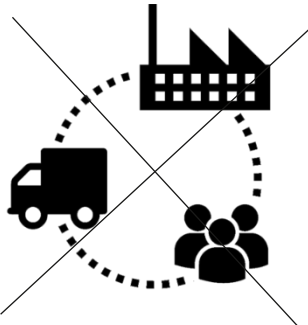
COVID: Exasperating Prior Trends



COVID-19



Space Considerations



Supply Chain Constraints



Re-shoring / Near-shoring

The HOW of Automation

Experienced User



- Reduce cost further?
- Improve throughput?
- New technologies
- Reduced product size?

“How do I get to the next level?”

New User



- Can / should I automate?
- What will this cost?
- How do I build this?
- Where do I get training?

“Where do I begin?”

The HOW of Automation

More companies today are re-thinking HOW to automate

Unfortunately, it's more than just re-shoring a process back to the USA



**Who Will
Do The Work?**



**What To
Automate?**



**Quality
Considerations?**



**Safety
Considerations?**

Evolving Offshoring Considerations

YESTERDAY

Drivers



Ability to find workers



Labor costs



Material sourcing & costs

TODAY

Considerations



Overseas labor costs



National security



Supply chain disruptions



Patent security



Delivery delays



Time-to-market



Tariffs



Flexibility

Reshoring Trends & Impacts

+1,000%

Earning & corporate presentation references to on/re/near shoring (*vs pre-pandemic levels*)

90%

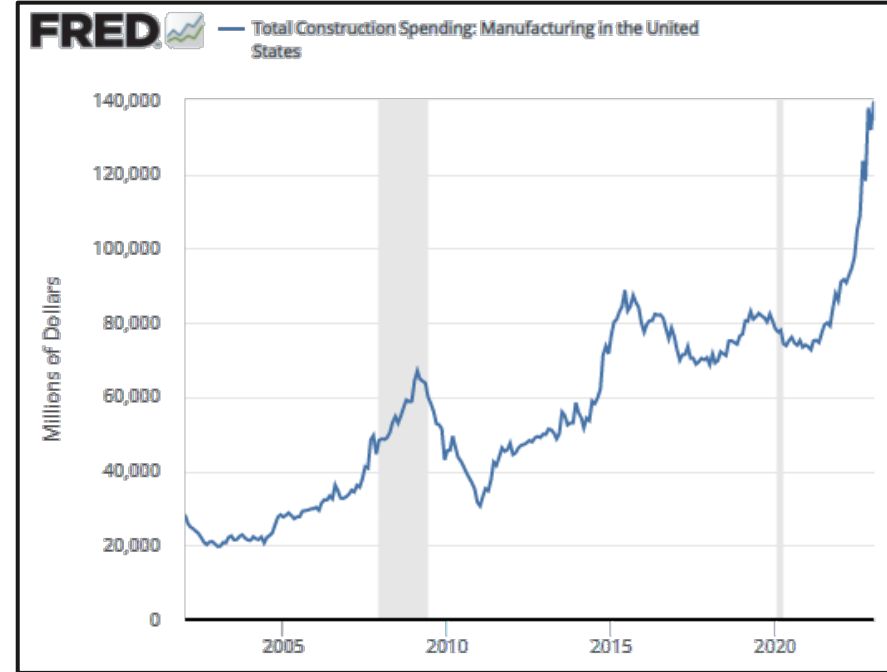
Companies in process / have plans to move out of China

80%

Companies considering bringing some manufacturing back to US (or MX)

+53%

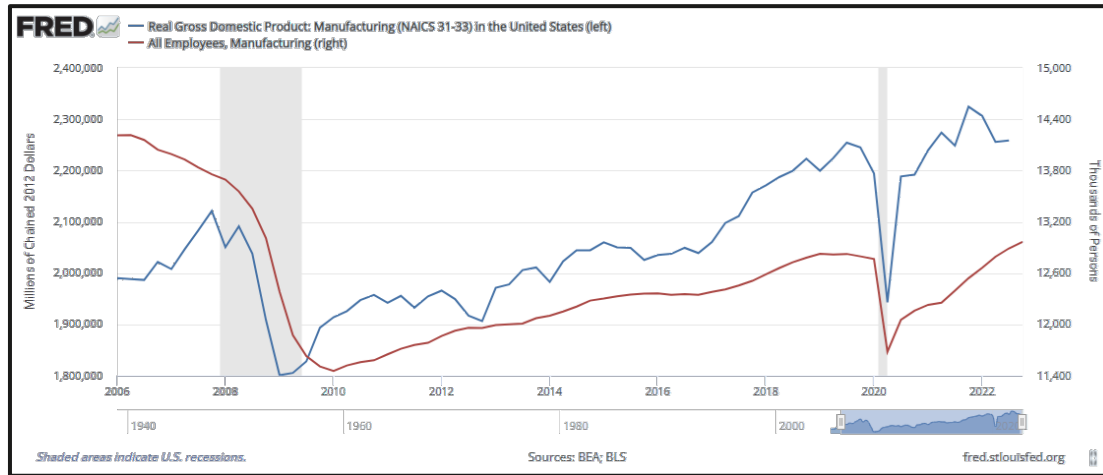
YoY increase in US construction spending (manufacturing) (*vs. +6% YoY for all US construction spending*)



Reshoring Trends & Impacts

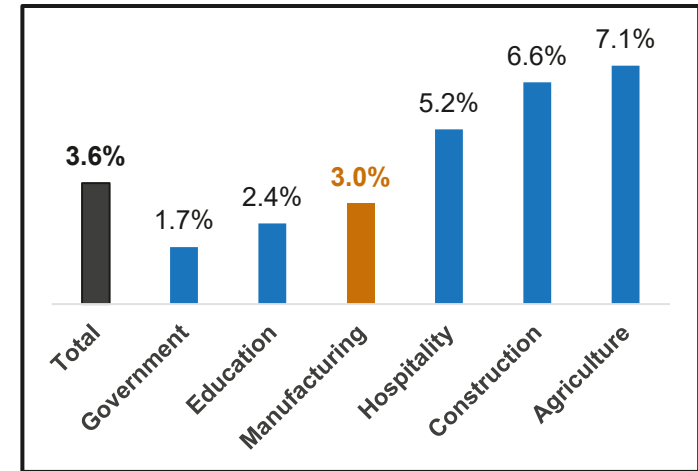
U.S. Manufacturing Trends

— GDP — All employees
(manufacturing industry)



U.S. Unemployment

February 2023



- US manufacturing activity is at generational highs
- Unfortunately, our manufacturing labor gap continues to increase; forecast to exceed 2M+ jobs by 2030
- Unemployment continues to be historically low, particularly in manufacturing



**Yesterday, there were
more manufacturing options**

Today it's a risk to NOT automate

3

Top Considerations for Automation Success

What is Driving You to Automate?



A top reason for not automating is an **inability** to gain internal support and funding

- Align on your priorities
- Do the legwork up-front to justify your project
- Decisions downstream will depend on this

Build consensus on a focused project objective

Take a 360° View of Risk

If it isn't broken, don't fix it. **True?**

If so, you might be **falling behind**
your competitors

- Evaluate short and long-term risks & benefits
- What is the cost of change in 3 yrs? 5 yrs?
- What are you risking by not automating?



Be positioned for future growth & to stay ahead of the game

Automate the “Right Way”



Going “**thin**” on manufacturing resources can **slow down** your operation

- Automation is a big investment
- Don’t skimp on things that matter
- Make sure you are “future proof”

Don’t be short-sighted on how you automate

Be Cognizant of Product Changes

Today's products **will likely not**
be the products you build in
5 years

- Do you know what those products will be?
- Most do not.



Keep automation adaptable to accommodate future demand

Don't Make Things Too Complicated



It's **easy to lose track** of your initial reason for automating

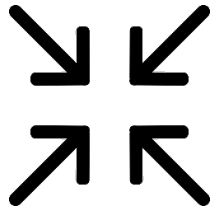
- Keep your development simple
- Easy to add more technology & features
- Be clear on tradeoffs and limits
- Listen to experienced automation professionals

Stay focused on your defined project goals

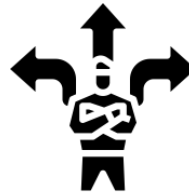
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Takeaways For Your Business

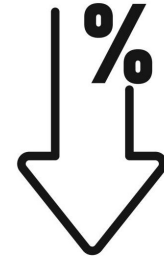
Stay Competitive: Automation is the Great Equalizer



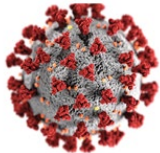
**Smaller Parts
Higher Precision
Greater Production**



**High Mix /
Low Volume**



**Razor Thin
Margins**



New Normal Impacts

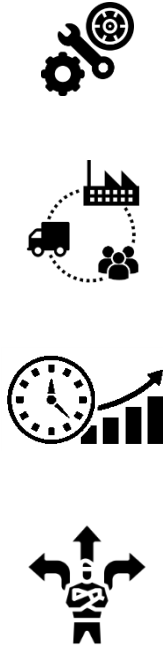
- **Social Distancing**
- **Supply Chain**
- **Re-Shoring**
- **Labor Challenges**

Evaluate Today's WHY and HOW

WHY AUTOMATE?

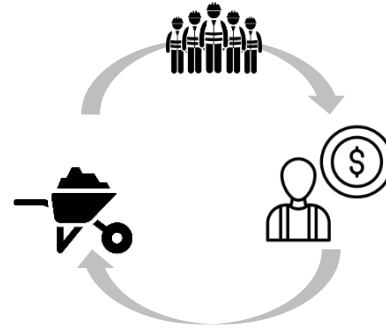


Yesterday

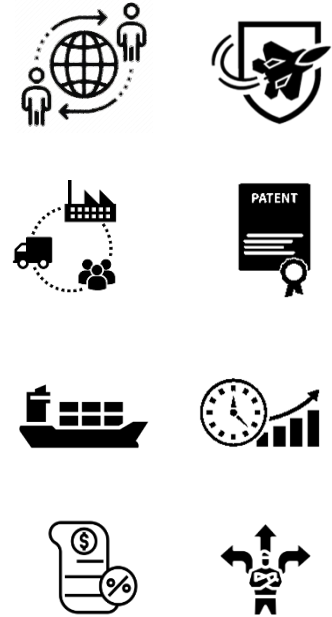


Today

HOW TO AUTOMATE?



Yesterday

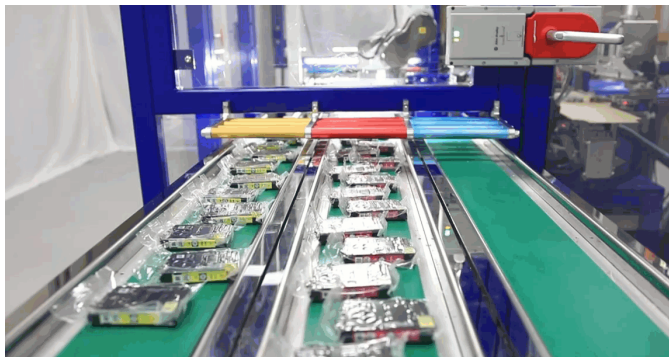


Today

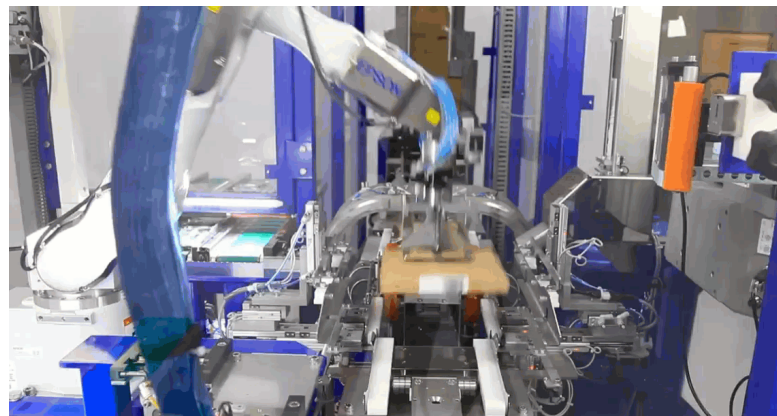
Considerations For Your Next Project

- 1 Align on your reasons for automating
- 2 Take a 360° view of “risk”
- 3 Make sure to invest in the right places
- 4 Be cognizant of future changes in your product
- 5 Start simple to improve your potential for success

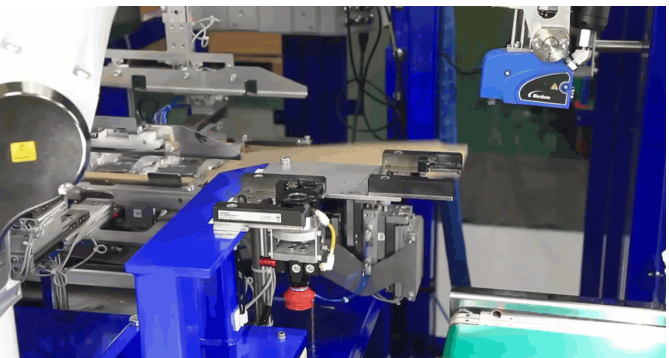
Simple Ink Packaging Example



Product Placement



Labeling



Packaging



Simple Applications Are Everywhere!

EPSON

EPSON
TOUR

ROAD TO THE LPGA



Thank you!

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