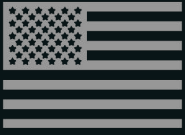




Robotics-as-a-Service: Overcoming Production, Labor, and Financial Challenges with Affordable Automation





State of U.S. Manufacturing 2024



Increasing Production

#1 goal: 80% of manufacturers, 68% expect growth



Rising Costs & Labor

Top challenges to overcome in 2024



Early vs Late Adopters

43% have robots; 50% plan to automate in 2024



Resources Required

Expertise overtakes budget as #1 barrier to automation adoption

Throughput is the Key To Successful Scale and Growth

- Labor availability continues to decrease
- Cost of materials and labor continue to rise
- Doing more with less is the key to success
- #1 goal for manufacturers in 2024 is increased productivity
- We need to outrun the impacts of the labor shortage and increasing costs by increasing efficient throughput
- Leaders have 3 options:
 - Optimize “The Way We’ve Always Done It”
 - Buy Automation Equipment
 - Robotics-as-a-Service (RaaS)





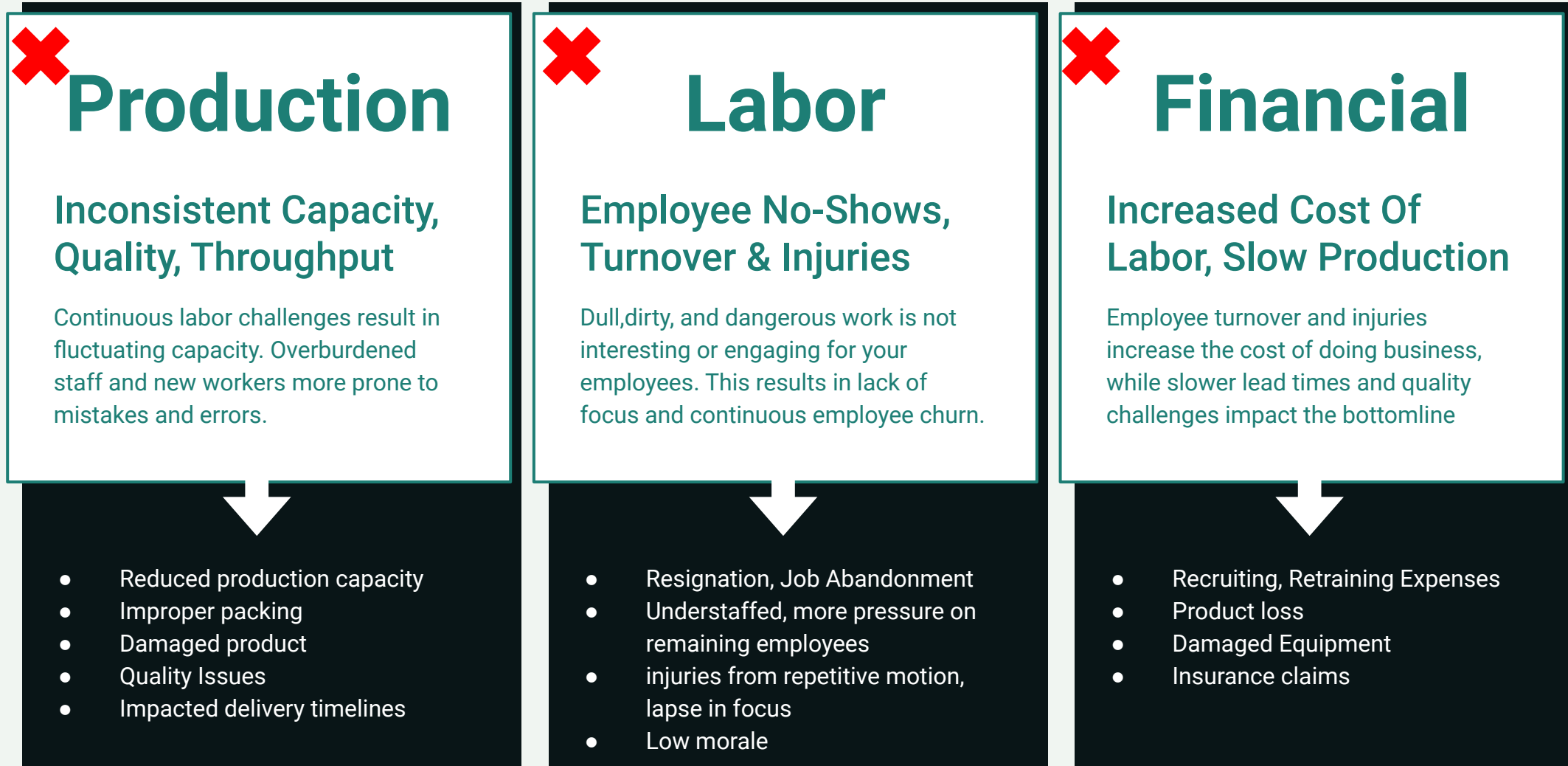
Optimize Existing Production Process

Stuck In “The Way We’ve Always Done It”

- Automation seems impossible because
 - Large upfront CapEx investment with uncertain ROI
 - No internal programming/operational capabilities
 - No service/maintenance expertise
 - Lack of equipment flexibility for changing needs
- These barriers hold many businesses back from bringing automation into their production processes because it is just too much to overcome
- This work is largely dull, dirty, and dangerous, so what happens when you stay the course and try to optimize without automation....



“The Way We’ve Always Done It” Will Just Get Harder



2024 Strategic Planning: 50% Included Automation

- “The Way We’ve Always Done It” is not a viable path to increased productivity
- Labor challenges create a continuous cycle of churn and negative business impact
- Need to automate to
 - Stabilize and reliably increase production capabilities
 - Maximize and retain existing employee base
 - Create scalable business growth
- Two options to automate
 - Traditional CapEx Purchase
 - Robotics-as-a-Service (RaaS)





Buy Automation Equipment

CapEx Purchase: Traditional Automation Adoption

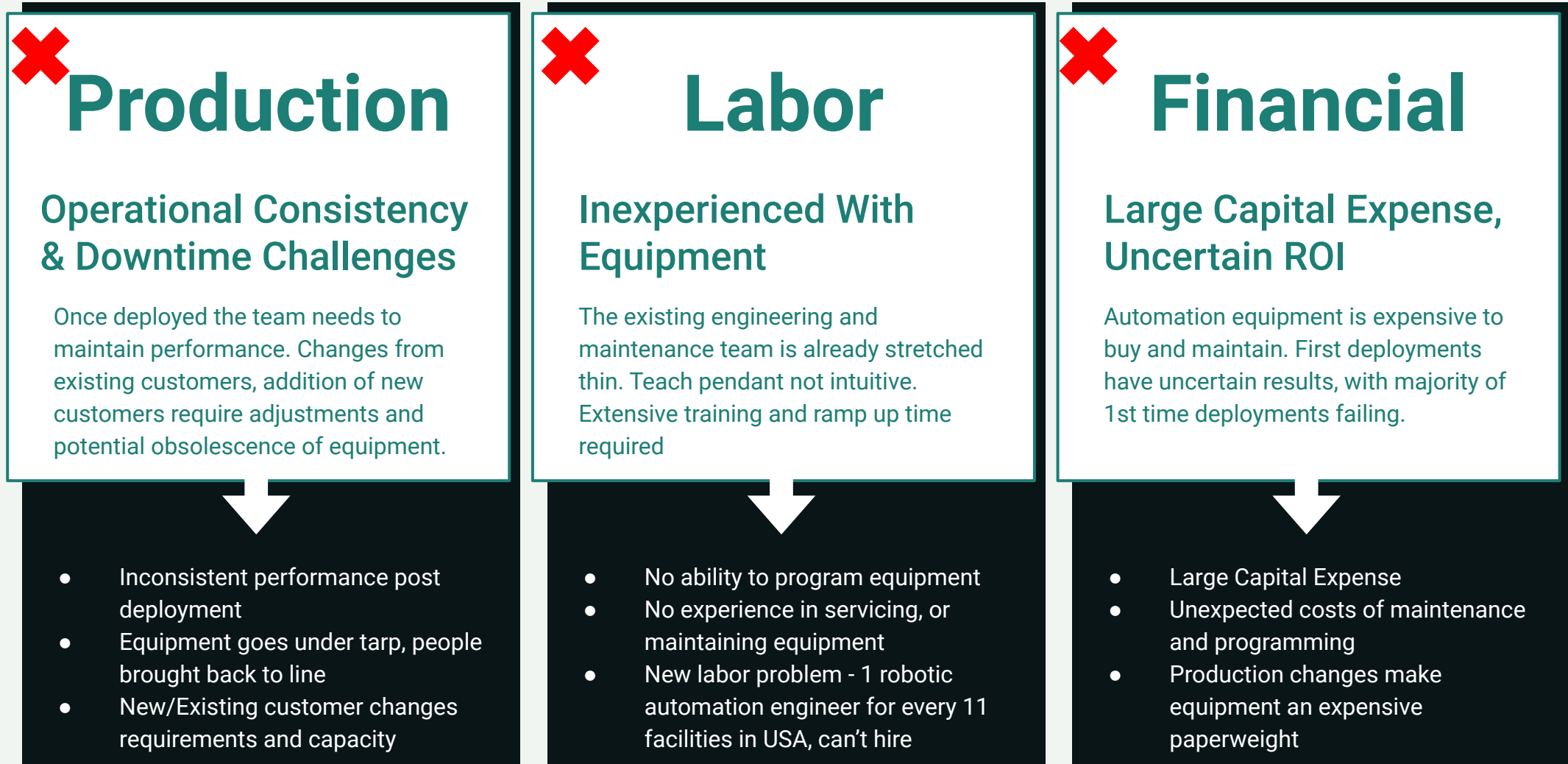
- Leader makes the decision to implement automation for the first time. Follows the existing playbook:
 - Identify areas prime for automation
 - Source Systems Integrators for project
 - Specify and purchasing the equipment and systems
 - Deploy, program, and test equipment to perform at required rate
 - Put equipment into production operation
 - Monitor, service, and maintain equipment
- Stacking 6 very complex decisions/actions being made for the first time
- Getting all of these things right on your first try is hard, if not impossible
- High cost of failure: Large investment of time and money results in a very expensive paperweight under a tarp in the corner

Selecting High Complexity For First Automation Project

- Family owned businesses typically have dynamic tension around decision making on new, untested ideas
 - Group 1: Drive continuous improvement.
 - Group 2: Why change it?
- Leadership selects highest impact area to start automation adoption because it has the most manual work, potential impact
 - Team is divided and not fully bought in
 - Project requires significant additional work on top of regular responsibilities
 - Project stalls because can't devote enough time to supporting the implementation
 - Timeline to deployment stretches
 - Frustration escalates within your team
- You should not select the most complex automation to tackle first



Automation Was Supposed To Make This Easier...



These Obstacles Combine To Create New Challenges

- Traditional Automation Adoption creates new challenges while trying to solve existing problems
- These challenges combine to create an insurmountable obstacle
- The equipment gets pushed to the side with a tarp thrown over it and turns the business off to trying automation again in the future
- Drives leaders back to doing things “the way we’ve always done it”
- This pushes back future attempts indefinitely





Robotics-as-a-Service (RaaS)

Robotics-as-a-Service (RaaS) Makes Automation Easy

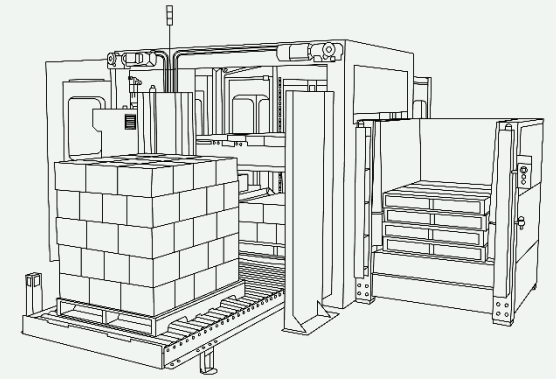
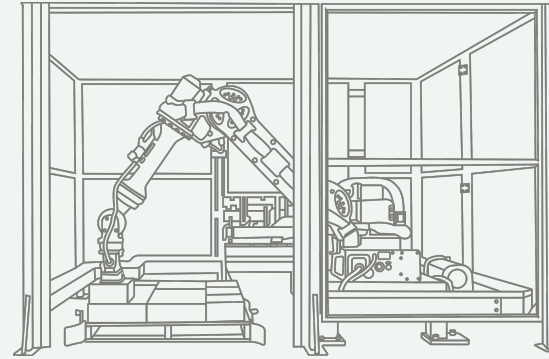
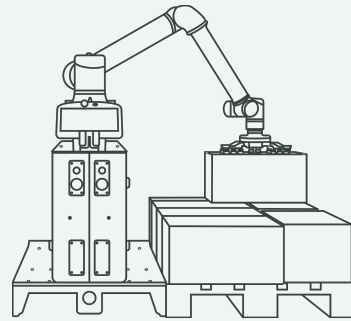


RaaS - Playbook for Automation Success

- Your team is divided on automation - build a win with your first project
- Palletizing eliminates injuries and improves quality and throughput
- Simple to spec, deploy, program, test, and operate - it is Formic's responsibility, and the software is simple/multi-language
- 3-day deployment
- Team understands how people will be redeployed to more valuable tasks and experiences benefits of automation - "Wow, my back feels better!"



Palletizing Equipment



	Collaborative	Industrial	Cartesian
Floor space	Smallest	Med / Large	Med
Max payload (lbs)	35 lbs	120 lbs	200 lbs
Max pallet height	80"	100"	72"
Throughput	6 cases / minute	12 cases / minute	7 cases / minute
Cost	\$	\$\$	\$

Smallest, lowest payload

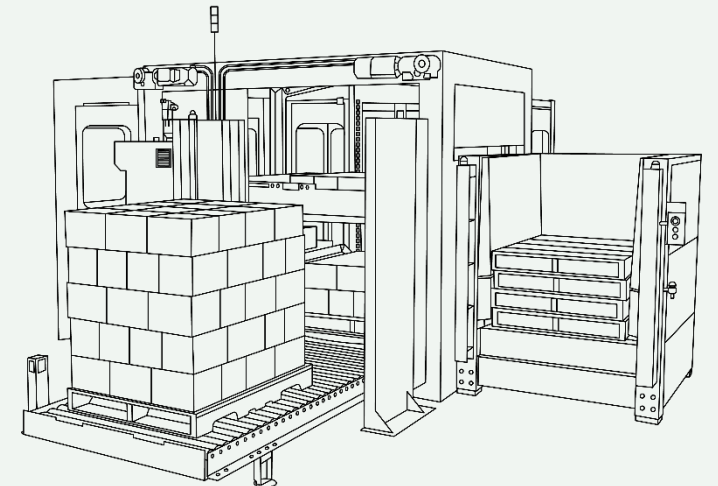
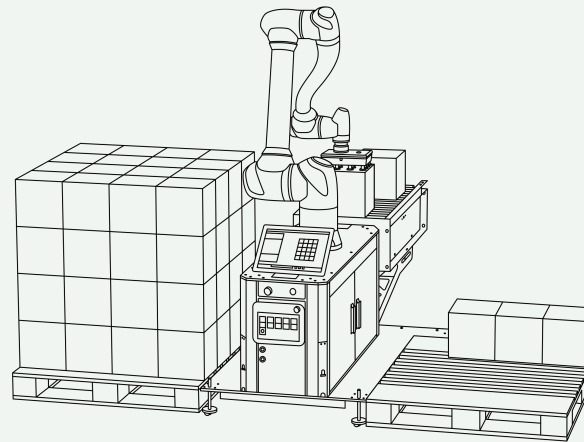
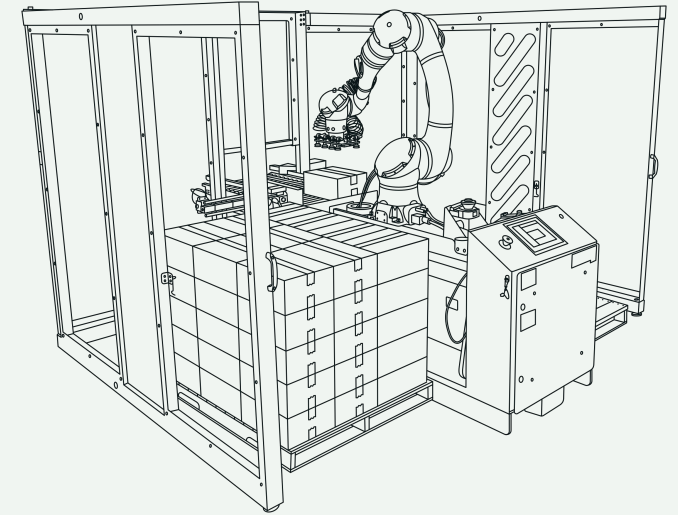
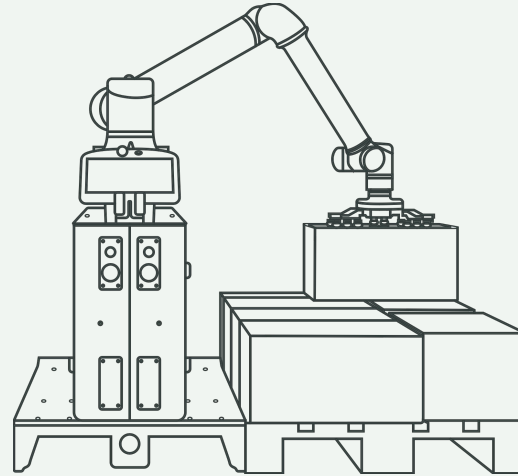
Highest payloads and speeds

High payload in a small footprint

What You Need To Know To Spec A Palletizer



- ❑ Number of SKUs
- ❑ Min/Max Case Dimensions
- ❑ Min/Max Case Weights
- ❑ Min/Max Cases/Min
- ❑ Stack Height
- ❑ Floor space and ceiling height (CAD File)
- ❑ Special Requirements - Washdown, Equipment Cleaning, Extreme Temperatures



No Obligation: 3 Month Cobot Palletizer Trial

Programmed, deployed, tested, and put into service in your facility

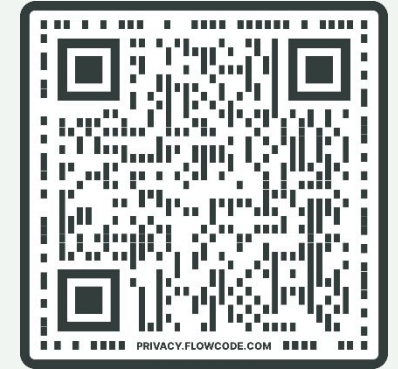
3 Months of unlimited use

100% Maintenance & 24/7 System Monitoring included

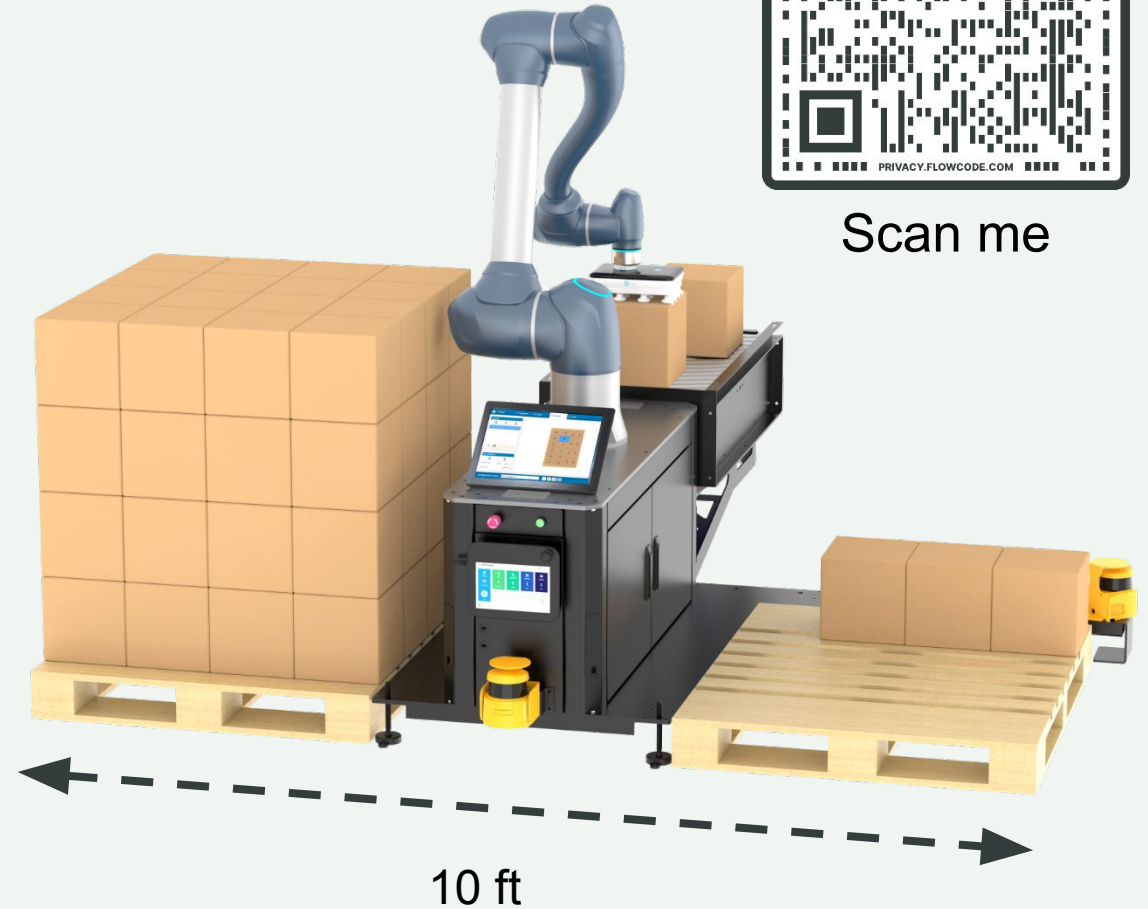
\$7,500 Deployment + Setup
\$5,250 per month

At end of the trial, you can

- Start a new RaaS contract (1-5 years)
- CapEx + Owner Maintenance Support
- Return the equipment



Scan me



What did we learn today?



Increasing productivity is the only way to drive scale and growth



Staying the course will continue to be more expensive and difficult



Adopting automation on your own without experience creates compounding challenges



RaaS offers affordable automation with production and maintenance support, enabling success on the first try



Learn how to get started
with automation.

formic.co

