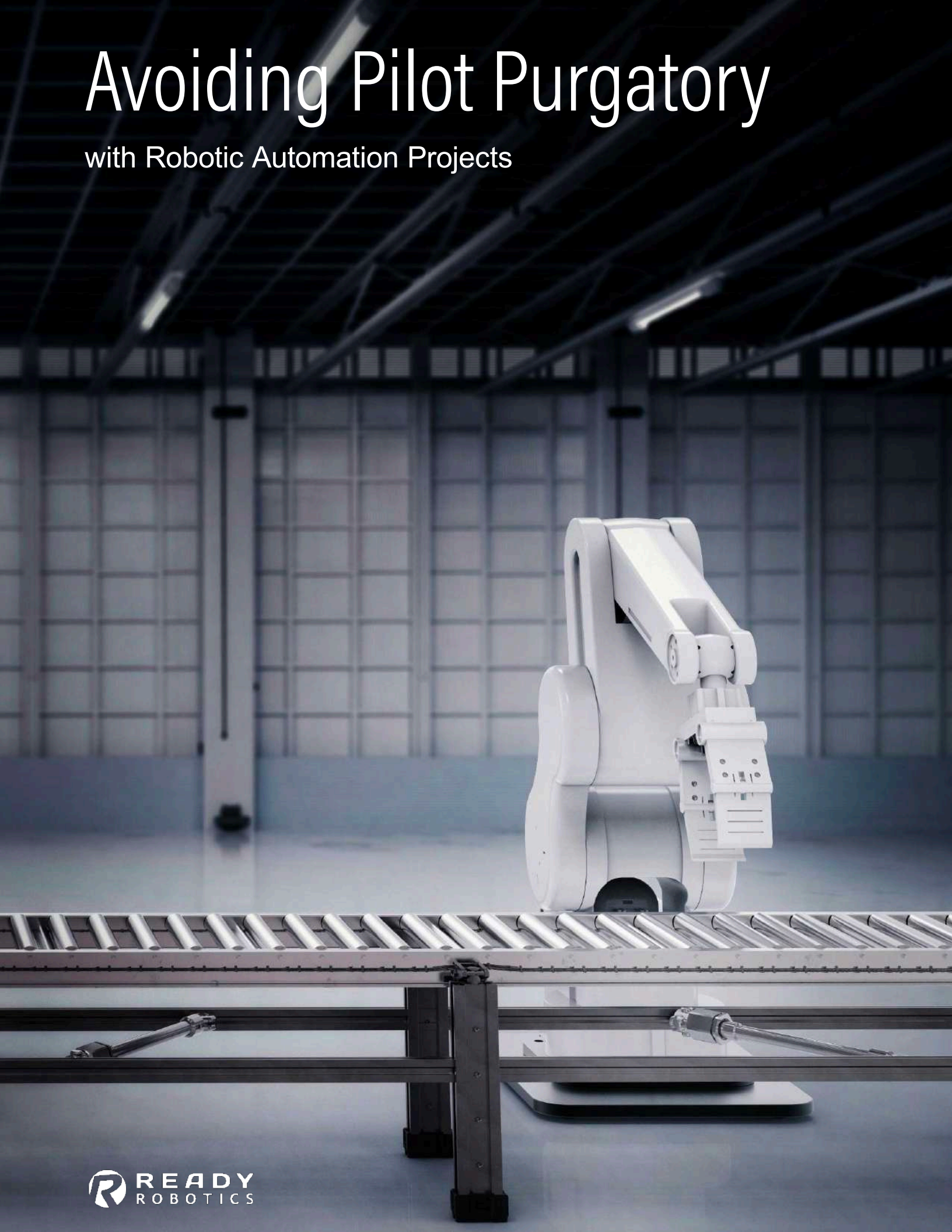
Avoiding Pilot Purgatory

with Robotic Automation Projects



READY ROBOTICS

FROM PILOTS THAT TAKE LESS THAN 90 DAY TO FULL SCALE FACTORY ROLLOUTS

We are contacted by many manufacturers who want our help to launch robotic automation pilots as part of their Industry 4.0 initiatives. However, they don't always have a clear idea on the best place to start for their pilot, nor how to plan for the transition from a single pilot to factory-wide automation rollout and avoid "Pilot Purgatory". We've identified five steps that manufacturers can follow to pick a target process to pilot, implement it, document the ROI and create a plan for scaling the solution to the entire factory.

1. FIRST FIND THE LOW-HANGING FRUIT

Identify a task that is relatively easy to automate with robots. Often we see companies gravitate to the most difficult tasks for their pilot. Their rationale for automating a complex task is this: Automation can be complex and time-consuming; therefore, we should look for the high-reward applications that are "worth the effort." However, we tell the manufacturer to look for pilot projects that automate tasks that:

- Are low in complexity
- Cause bottlenecks in production
- Involve dull, dirty or dangerous machinery that can result in a time-loss accident
- Has a repetitive operation with poor ergonomics

Even if it's not a pilot, when we perform factory walkthroughs we say the same thing: Show us a relatively simple process where a worker is spending too much time waiting for another process to finish, or where production is being bottlenecked by the availability of labor, or where the worker is constantly reaching into heavy machinery, and we can identify it as a great automation opportunity.

2. BUILD YOUR ROI MODEL UPFRONT

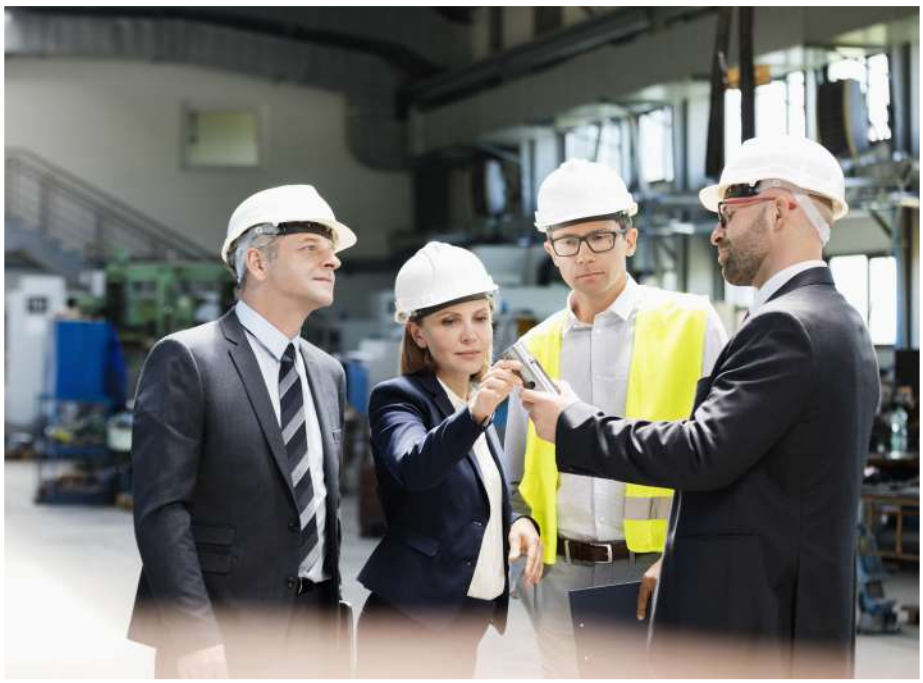
How do you define success for the pilot objectively? Just completing your first automation project, or your first project that demonstrates a new capability such as reducing changeover time by 90%, can be a successful measure. However, developing an ROI model, and validating that model during the pilot is critical for continued automation success since there is a clear plan for additional investments. By developing the model during the pilot, you already have the data to prove how to scale, and are ready to continue deploying projects. Almost all ROI modeling activities have input from many people across the company, so starting the ROI modeling at the beginning of the project is critical to prevent delays and get buy-in before the project completes.

Key factors to include in an ROI model are:

- Cost of Inventory on hand (e.g. high value WIP)
- Reductions in dwell time for work in progress inventory - order backlog
- Factory Shifts - multi-shift operations offer faster ROI
- Changeover frequency and time (often from a high Parts Mix)
- Wage costs for workers doing the tasks
- Number of identical stations for this task
- Frequency and types of injuries (e.g. repetitive stress injuries)
- Labor constraints - open job requisitions for the task bottleneck production

Start with a simple model and add complexity to meet the requirements from each stakeholder you include in the model's review. You'll have an ROI model that has total buy-in and not so complex that it's the source of frequent disputes.

3. FORM AN EXECUTIVE STEERING COMMITTEE TO ENSURE PRIORITIZATION



Whether it's an automation project or an enterprise software implementation, executive stakeholder involvement is a requirement for success. It's also not just having executive support, but having a cross-functional steering committee including, but not limited to, Finance, IT, HR, Manufacturing, and Labor Relations. Each impacted group should have a level of involvement in the project.

We've seen factory expansion after successful pilots become bogged down because of a lack of executive support. Even when there is compelling data supporting follow on projects, a lack of support can get the company into an endless decision loop where past decisions are ignored and the team ends up having to do pilot after pilot re-answering the same questions already asked and answered.

Distributed, cross-functional teams are a great way for an organization to be agile, innovate and source ideas from all over the company. But to scale, and get the massive benefits from deploying automation across not only the factory but the entire enterprise, centralized standards and executive direction is critical in ensuring teams don't waste time either trying to re-prove a solution or falling back onto other suboptimal ways of doing work. This direction also ensures that executive leadership drives the automation strategy with the agreed upon tool sets and innovative technology.

4. IMPLEMENT THE PILOT PROJECT RAPIDLY, AGILE, AND ELIMINATE AS MANY DEPENDENCIES AS POSSIBLE

We cannot overemphasize the value of delivering an automation solution on a short and highly predictable schedule. It's possible to do that with empowered teams who work in an agile manner using new technologies that allow for flexibility when implementing automation. Some robotic solutions can now be setup and start providing value in days. Challenge yourself and your team to use COTS solutions, especially those with new and innovative capabilities, to robotically automate a process. In addition, a dependency that derails many projects is either reliance on external partners or the need to train the team in the new technology. Solutions that eliminate altogether, or at least dramatically reduce training requirements, means you can leverage your in house team, freeing them to do the entire project eliminating the costs from contracting, coordinating and managing an external partner.

Being agile is not an excuse for delivering something that doesn't work. The solution has to provide value and an acceptable ROI, but it also doesn't have to be perfect. The mantra here needs to be "The automation solution must provide an acceptable amount of value over the nonautomated process, and then I can improve that over time." This allows your team to extract value out of your automation system immediately before it is perfect and then reap greater rewards as that project goes through continuous improvement.

5. ADVERTISE YOUR SUCCESS

Once you've been successful at automating your first process, it becomes easier to automate your next task. In our experience, most low-hanging-fruit tasks are not unique, and by automating one instance of that task, you've likely created a template for automating similar tasks throughout your factory or company. Advertising your success company-wide inspires others in your organization to identify similar opportunities to roll out automation. Once you create buy-in around a solution, with concrete evidence about its positive effects in the business, the rest of your organization will want to advertise their own success stories.

Some ways to communicate and involve teams are:

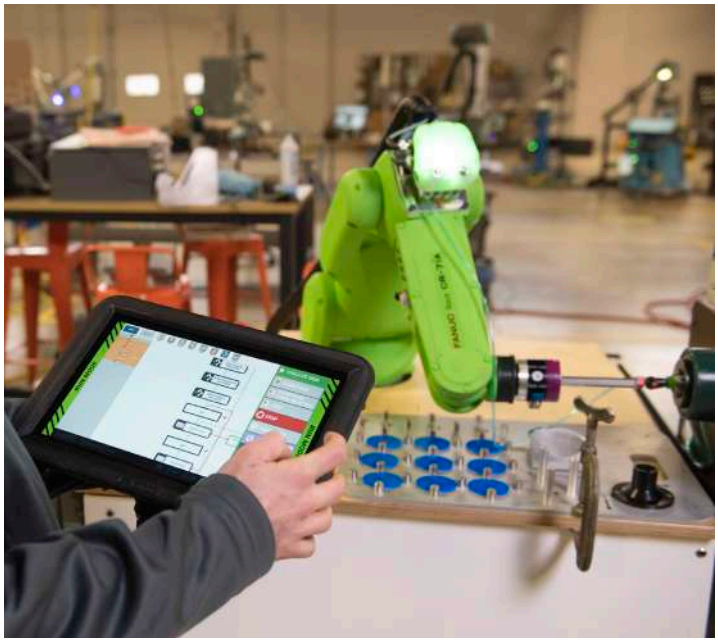
- Digital Days, inviting workers to see the solutions and answering their questions on automation
- Internal social media posts or newsletters
- Presentations at external conferences to advertise advanced technology

Working with internal or external innovation programs is also a great way to use their forums to communicate widely the value of the project.

READY APPROACH

At READY we enable manufacturers to automate tasks at a speed and cost they didn't previously think was possible. We empower anyone to program robots, whether industrial or collaborative, with little to no training. In addition, our hardware provides the connectivity necessary to control most work cells, lowering the design complexity and enabling standardized and repeatable automation solutions for tasks. And finally, since our Task Canvas visual programming application is robot agnostic, you can choose the right robot, at the right price, with the right capabilities for your project.

For more information, contact our automation experts at sales@ready-robotics.com



READY ROBOTICS

1080 STEELWOOD RD.
COLUMBUS, OH 43212

INFO@READY-ROBOTICS.COM
SALES: 833-READY-US