

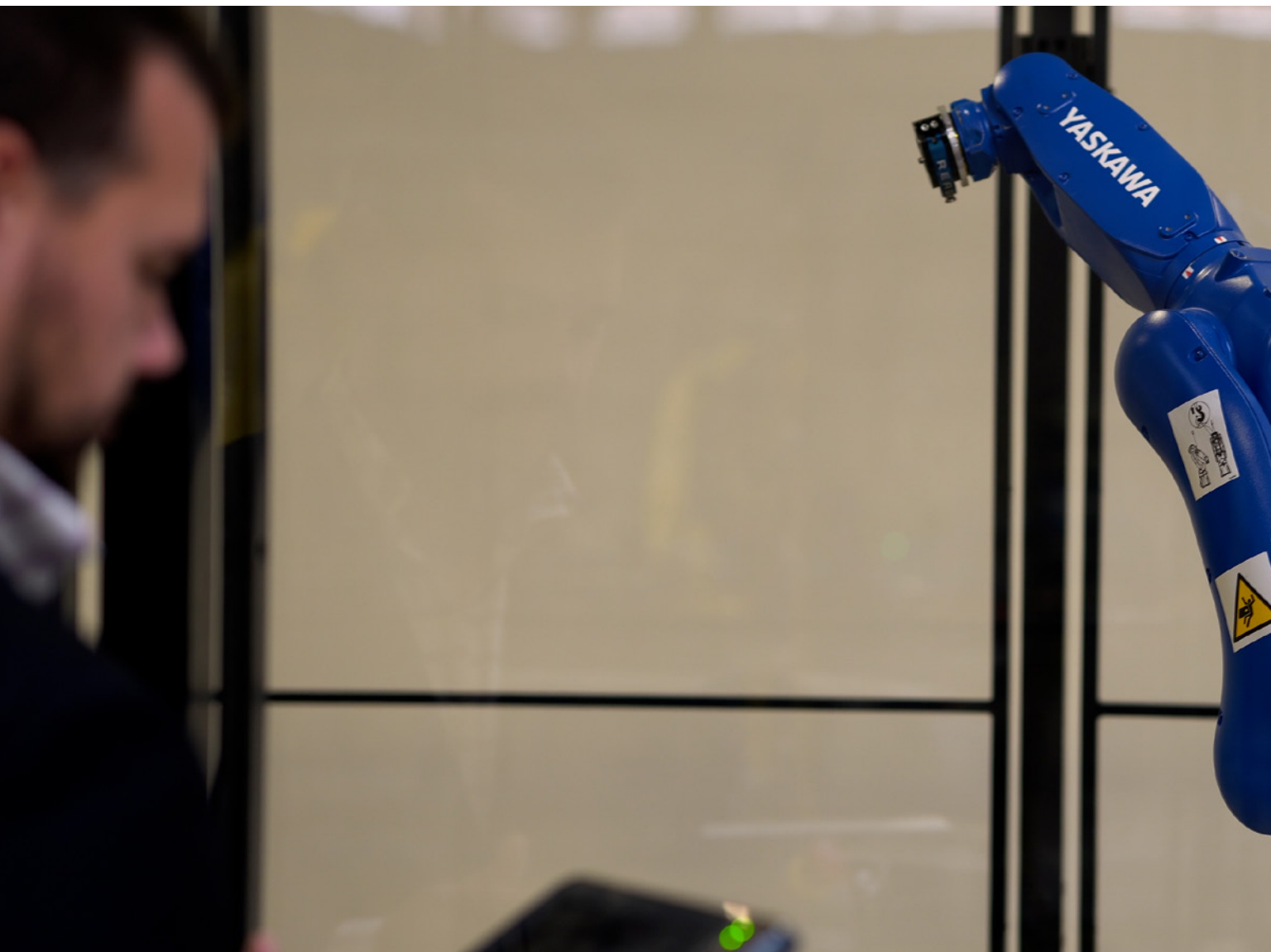
Master Power Transmission's Automation Transformation with Ready Robotics

A leadership perspective on advanced automation integration

David Regan, Director of Enterprise Sales, Ready Robotics

In the highly competitive gear manufacturing industry, Master Power Transmission (MPT) recognized the need for innovation. To achieve this, MPT partnered with Ready Robotics, undertaking a transformative journey into advanced automation through their Automation Readiness Assessment (ARA).

Ready Robotics and ForgeOS make it possible to automate high mix/low volume processes.



Objective

MPT's objective was clear: to effectively integrate advanced automation into their manufacturing processes, thereby enhancing efficiency, optimizing labor, and promoting sustainable practices.

Solution: Automation Readiness Assessment (ARA)

The ARA, developed by Ready's VP of Manufacturing Technology & Automation Allan Gibson, provides a systematic approach to identifying and scoring potential automation opportunities within a production facility.

The ARA evaluates both traditional and untraditional automation opportunities including how to deploy automation for high-mix operations that previously seemed

unattainable. The end goal of the ARA process is to deliver a report and executive team summary that lays out a blueprint for successfully deploying automation that can scale across a facility or multiple facilities.

"We value experts and their capabilities," said Ryan Roberson, President/COO of MPT. "We were confident that Ready Robotics would layout a game plan after witnessing our processes."

Implementation Strategy

The ARA involved a detailed data collection phase, focusing on MPT's technical, financial, and operational aspects.

"Our biggest challenges were setup reduction, automation, and process compression," Roberson noted. "The ARA confirmed some of our ideas and put real numbers to a plan, something we could only roughly speculate before."

A Q&A with, CEO of Master Power Transmission Michael Cinquemani



Michael Cinquemani, CEO of MPT

Can you elaborate on the specific challenges Master Power Transmission faced prior to implementing the Automation Readiness Assessment (ARA), and how did the ARA help in addressing these challenges?

The key challenge MPT was up against was a genuine lack of awareness regarding where industrial automation could apply. Specifically, in a high-mix/low-volume environment with the majority of our components much larger than we see in typical high-volume/low mix, we don't have the experience to know where existing technology can and has worked well. RR brings a ton of valuable experience to the table, and as industrial automation is their core competency, if

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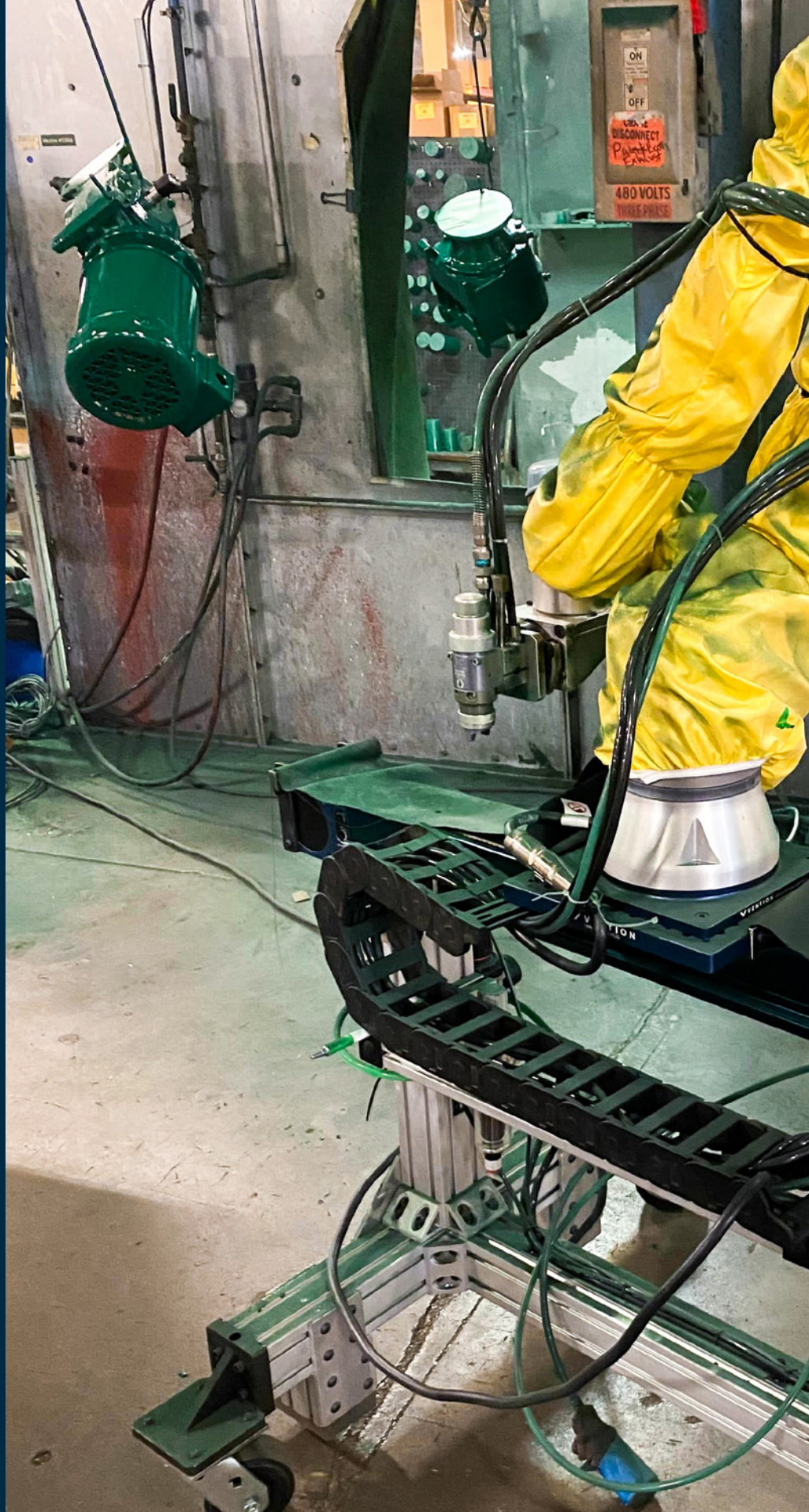
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they haven't "seen it all", they certainly have seen more than MPT has seen, and they were able to view the operation through a lens of "been there/done that". During the assessment visit, they weren't only able to identify opportunities, but they were able to quickly cull the projects that would waste time and money based on real experience, allowing them (and us) to focus on the projects that not only were "doable", but also justifiable from a financial perspective.

What were the key factors that led Master Power Transmission to partner with Ready Robotics for their automation transformation, and how did the partnership contribute to achieving MPT's objectives?

Immediately evident, RR is a professional group of automation guys. With that, they are also manufacturing guys who have a better-than-basic understanding of what we do, allowing them to quickly speak in terms with which we were familiar and comfortable. It didn't take long to understand that they are very good at what they do and have done it enough to be a quick and capable resource for MPT. Everything about RR was consistent with MPT's Faster@Master philosophy, from scheduling the initial ARA through the implementation of our first project. For lack of a better term, MPT has experimented with or "dipped its toes" into industrial automation, and the results have been less than stellar, so far. RR stepped in and we are close to wrapping up a project that's been three years in process, and we wouldn't be where we're at today without RR's expertise. Further, MPT will be in a much better position to be successful in our next automation project.



Robot resurrection: The 'Bob Ross' paint cell universal robot.



Discovery of Automation Opportunities

Through the ARA, Ready Robotics identified several key automation projects. This included reviving an underutilized painting robot, named 'Bob Ross', and five new automation projects focusing on machine tending.

"Our experience in deploying automation prior to the ARA was very limited," admitted Roberson. "Small obstacles were huge roadblocks due to our lack of engineering expertise

in automation." These initiatives were designed to elevate productivity, reduce lead times, and incorporate digital traceability, essential for gear manufacturers in highly regulated industries such as aerospace.

Results: Enhancing Productivity and Efficiency

The integration of 'Bob Ross' was a highlight, showcasing Ready Robotics' expertise in maximizing underused assets.

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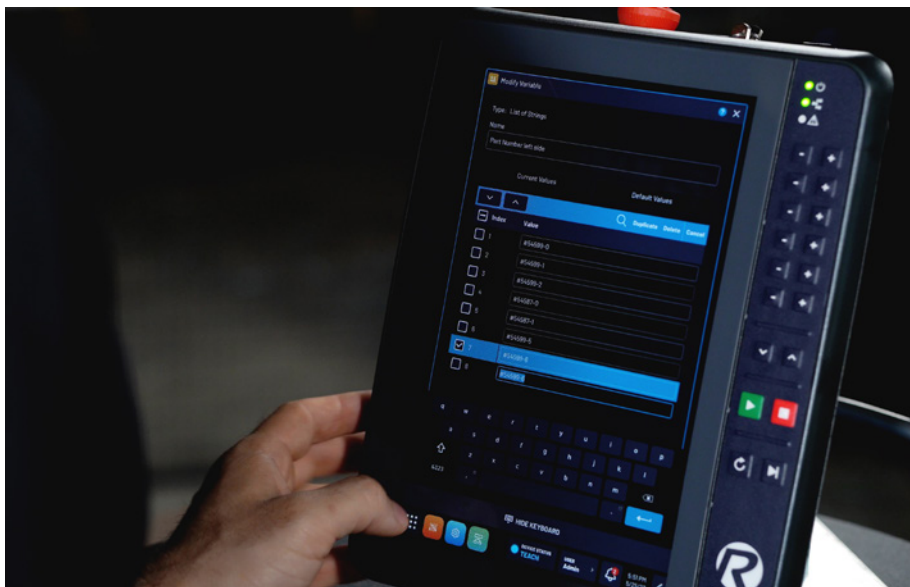
Could you discuss the criteria used to identify and prioritize automation opportunities within Master Power Transmission's manufacturing processes, as outlined in the ARA?

Regarding the ARA, the two key points were "Can it be done?" and if so, can we financially justify doing it? The detailed report associated with the assessment identified key metrics such as cost, operations effort, engineering effort, scalability, and value generation, all of which MPT is familiar with. They were able to break complex projects into terms that made it very easy to compare across several alternatives, focusing our go-forward efforts on the projects that would return the best bang for the buck.

In what ways has the integration of advanced automation, including the utilization of "Bob Ross" and other automation projects, impacted Master Power Transmission's productivity, efficiency, and overall operational performance?

While MPT is very early on in our automation roadmap, the ARA and RR have been instrumental in ensuring that we are going to achieve the benefits we expect while providing MPT with the expertise necessary to do more, with automation, in the future. Regarding industrial automation, I believe the measure of success will/can be different for each business, and MPT is positioned to get much more than originally believed by taking advantage of the broad capabilities of RR.

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Ready Robotics' ForgeOS reduces programming time down to minutes.

"We were impressed with the overall ARA process," said Roberson. "What makes Ready's approach unique is the focus on the entire value stream rather than just the automation opportunity. This approach ensures that the automation efforts are going to be focused on the best overall business impact."

The other automation projects, focused on machine tending, showed promising financial justifications. "The implementation team's capability and professionalism have been impressive," Roberson commented.

Strategic Impact and Industry Benchmark

MPT's collaboration with Ready Robotics has established new benchmarks in gear manufacturing automation.

"There is a path to industrial automation for MPT," Roberson reflected. "With Ready Robotics' support, our speed of identification and implementation will continue to improve."

Industry-Wide Implications and Key Takeaways

This case study serves as a valuable example for gear manufacturers contemplating automation. "If other AGMA members are unsure where to begin or don't have the contacts

to develop real costs or designs, the ARA is a fantastic first step," advised Roberson.

Resources and Guidance for Gear Manufacturers

Ready Robotics provides extensive resources for companies exploring automation. Their website, LinkedIn, and YouTube channel offer training materials and insights into managing high-mix manufacturing environments.

Conclusion

Master Power Transmission's journey with Ready Robotics demonstrates the transformative power of strategic automation.

"Undergoing this process showed us that there is a path to industrial automation for MPT," concluded Roberson.

For gear manufacturers seeking to remain competitive, this case study offers valuable insights and lessons, showcasing that embracing advanced automation is a strategic necessity in today's evolving market. MPT's experience serves as an inspiring model, illustrating that with the right approach and expert support, transitioning to advanced automation can significantly elevate manufacturing capabilities.

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