

# ***Injection molding excellence: How to transform your business***

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WHAT IS MOLDING EXCELLENCE, AND HOW CAN IT TRANSFORM YOUR BUSINESS? MATTHEW THERRIEN AND SCOTT MOLNAR, DIRECTORS, STRATEGIC BUSINESS SOLUTIONS, RJG ANSWERS THESE QUESTIONS.

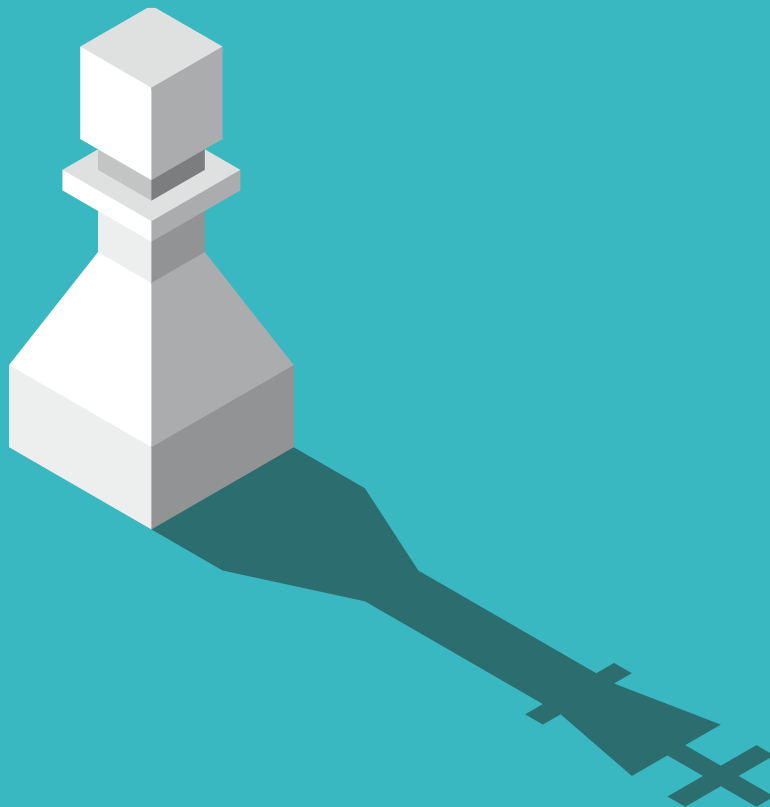
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*"There's no such thing as perfection. But, in striving for perfection, we can achieve excellence" – Vince Lombardi.* Whether it is in sports or business, there has to be a common goal and a drive to get there, - that keeps the momentum going. It is an infinite contest which never ends.

Standardizing injection molding processes on a global scale can be overwhelming and seem a near impossible feat, but it is vital to the growth and success of companies wanting to ensure that only quality parts get to their customers and their customers' customers. It is also important to reduce liability, comply with product specification requirements and be ISO compliant. This method of streamlining training, technology, and methodologies is referred to as molding excellence.

#### **WHAT IS MOLDING EXCELLENCE?**

Molding excellence is when an effective core team (champions) develops the fundamental competencies that encompass the high-level execution of foundational training, technology and best practices. The ultimate goal is to implement total best practices across the operation—assuring interoperability and flawless execution.



Success in business is a continuous measurable (quantifiable) process of improvement for long term sustainability based on an applied knowledge-based (data) management strategy. Sustainability is based on proper leadership and coaching to build the bench for succession planning. Filling one spot does not solve the problem, this only means you are starting from scratch again. The highest level of performance (quality) that you can expect from your process is determined by the minimum standards that you have established and maintained.

Collaboration between the Original Equipment Manufacturer (OEM) and Contract Manufacturer (CM) is essential to establish a continuous improvement partnership. During the process of planning, doing, checking and adjusting it is important to remember to be disciplined and stick to the science, data and physics of molding.

ISO 13485-2016 expands on the necessity for continuous improvement as opposed to achieving one-time compliance. It requires global collaboration around applications and projects from start to finish and 100% traceability of every part. Exercise effective documentation demonstrating the objective evidence that provides an auditable path back to the origin of the process development - that is replicable.

#### **PART PROCESS: A NEW APPROACH**

Putting foundational knowledge in place is a major step to instill a molding excellence culture. With a greater understanding of what it

takes to achieve standardization, OEMs and molders can take a collaborative approach using practical methods to develop a part process (as opposed to a machine process) for a given mold.

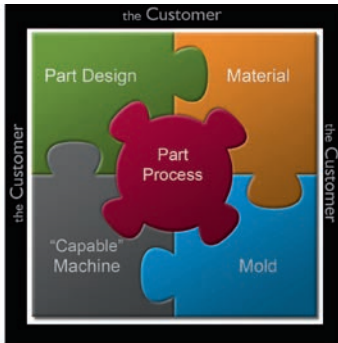
This alternative application uses Machine Independent Variables (MIV) that allow you to move a mold from machine to machine without needing to revalidate the part. As you can imagine, this saves an enormous amount of time and money. MIV provide a unique opportunity for seamless transfer into production and the flexibility to move between capable machines.

The benefits of utilizing the MIV methodology as an integrated part of the culture includes operational excellence, improved financial performance, improved part quality, faster tool launches, optimal part designs, global consistency, mold transferability, supplier flexibility, cost reduction, and market share growth.

**A FUNDAMENTAL WAY TO PROCURE INJECTION MOLDED PARTS**

As always, the due diligence for part quality assurance starts at the beginning. Take a practical approach, keep it simple, and measure what matters. To achieve this, it takes full commitment from the entire team - you're either all in or it's not going to happen. And it doesn't happen overnight. The part design, along with material considerations are key elements that directly impacts the design of the mold. This drives the required machine specifications that will satisfy the development of a robust and sustainable part process.

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Components of a Successful Customer Application

**MOLDING EXCELLENCE IMPLEMENTATION**

In any organization, the end goal of molding excellence requires the commitment and dedication from the top down. It is vital to assign the right people who have the wherewithal not to sidetrack the objectives and deliverables. The strength of a cross functional team is displayed when if one person goes down, another can step in.

There are different levels of execution and implementation. Internally, it may take 100% "re-thinking" of how a part is procured and goes through its product life cycle in a medical device assembly. Are all of the suppliers in your approved vendor list fluent in scientific injection molding principles and putting them to practice? Can they demonstrate and provide the evidence that it is woven into their manufacturing culture?

As an OEM, addressing the "knowledge gap" does not only pertain to your supply chain, but it is also about looking in the mirror and acknowledging the internal needs of the business as well. Anyone who touches the part at any point from concept to end of life e.g. marketing, design, product managers, program managers, supplier quality engineers will benefit from building a well-rounded understanding of the product life cycle.

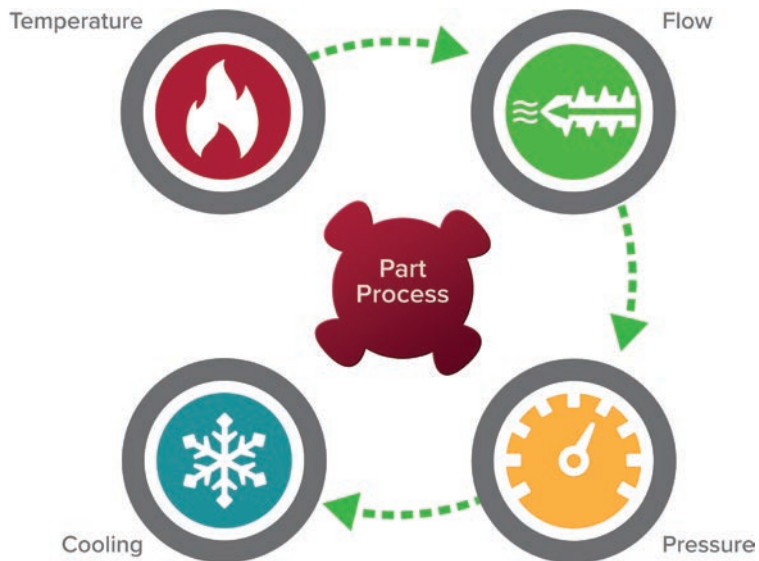
When the behavioral changes become a norm and are instilled in your culture, they can then be extended to the external supply chain. We find that what works best is a collaborative experiential learning experience between the OEM and the CM. This allows for shared ownership of the end results - the team owns it and is accountable to themselves to deliver. This interoperability between OEM and CM can even be executed globally.

**REALIZED VALUE**

OEMs and suppliers that practice these methods and use the available technology have a higher success rate because there is a vested partnership in sustainability. These values include:

- Common language: Across all departments
- Process development: More consistent method
- Stabilized Production: Repeatable and transferable
- Measurable: Increased confidence through verification
- Increased profitability: Better use of resources and time
- Global flexibility: Risk mitigation and contingency planning

There is a continued effort by the Medical OEM Consortium to facilitate the methods to achieve these objectives and deliverables.



From a plastics point of view, a strategy based on the four plastic variables makes molding simple RJG ©