New York, NY - June 1, 2017: Of course, reducing costs and increasing profit is always the goal. And lowering part count is a proven Design for Manufacturing (DFM) tool to drive down component procurement and handling costs. But simply reducing part count may not provide the full cost reduction needed. A better approach is a fully comprehensive DFM that considers reducing process steps as well.

That’s exactly what this company did, with Kerelaw’s help.

For most small businesses, operation costs are critically important. This is especially true in a market with highly elastic price sensitivity such as consumer goods sold primarily through on-line distribution. The company’s inflation adapter product, with its over-molded Schrader valve, worked quite well and received good feedback from their customers. Manufacturing, though, was a challenge. The over-molded valve was often plagued by quality defects related to the process. And, because of the high component cost of the valve, scrap costs were extremely high. The product badly needed a cost reduction, and the company’s founder had an innovative idea for how to do it.

Rather than a over-molded (and expensive) Schrader valve, the owner proposed a spring driven internal mechanism using off-the-shelf (OTS) components. But the redesign required a novel snap fit design which was beyond the founder’s skill. He needed advanced design support, and that’s where Kerelaw came in.

Kerelaw worked directly with the company’s vendors to optimize the design for injection molding and minimize tooling costs, for example ensuring the design would work with the already established parting lines and draft. The snap-fit features were analyzed using FEA to ensure they would meet the functional requirements for deflection and strength. CAD models were used for rapid prototyping, and these physical models successfully proved out the design.

This second generation launched with a significant cost reduction, providing the company with additional revenues to be invested in even more new products.

Kerelaw can reduce costs for your products as well. Which product shall we work on first?