CASE STUDY

SCALING AT SPEED: NOVEL RETOOLING & AUTOMATION BOOST PRODUCTION TO MEET 30% DEMAND GROWTH—IN JUST 13 MONTHS

INTRODUCTION

For millions of patients living with chronic diseases, automated injection systems represent a complete transformation in quality of life—replacing constant needle pricks and complex dose decisions with automated dose delivery. For one of the companies responsible for providing these devices, rapid growth in demand presented tremendous opportunity—but also exposed challenges with their legacy supply chain.

CUSTOMER NEEDS

With growth in demand exceeding 30% year-over-year, this drug delivery company's incumbent supplier struggled to keep up. As production scaled up, the highly technical manufacturing challenge—including complex product design and tight tolerances—led to frequent tooling crashes and recurring supply interruptions.

Facing these issues, the company began evaluating alternative suppliers that could provide the highly specialized technical capabilities, scalable production and reliable supply chain required to meet rapid increasing demand.

Speed of this supplier transition was paramount. The company was already not meeting market demand and could not afford to let significant downtime for product redesign, troubleshooting or other issues to push leave patients without critical therapy.

To minimize the disruption of the supplier transition, the company set out clear requirements:

- Must meet aggressive output, cost, and timeline targets
- No change to product design
- No change to tight specification tolerances
- No change to component supply chain
- Cell must be deployed in China

VIANT SOLUTION

The company partnered with Viant to develop an innovative solution that leveraged Viant's Engineering Center of Excellence, ViaLaunch™ NPI process and Viant's Global Tooling team to provide a reliable supply of this critical device.

- Network of technical experts: Viant assembled a global project team with specialized expertise to produce the componentry required for automated drug delivery devices. Cross-functional experts were drawn from Viant's Engineering Center of Excellence—including experts in product design and development, DFM, mold tooling design and automation. Despite ongoing travel restrictions due to COVID-19, subject matter experts worked seamlessly with Viant's Chinese production facility and engineers from the company to develop solutions and ramp up production.

- ViaLaunch process: The team leveraged the ViaLaunch™ New Product Introduction and Transfer Process – a proven, best practice-based playbook designed specifically to keep projects on-schedule and on-budget, while proactively mitigating relevant project risks. The Viant project manager coordinated critical engineer-to-engineer connections with the customer team, leading in-depth discussions to understand the pain points, constraints, and goals for the program. This proactive risk identification is a key component of ViaLaunch, which helped the Viant team recognize and address potential issues early on, enabling a smoother execution phase.

- Novel tooling design: Viant's Global Tooling organization used design-for-manufacturability (DFM) principles to develop a new and innovative tooling solution which included a retention mechanism and sensor technology to ensure proper placement and positioning of metal inserts during the molding process, thereby eliminating tooling crashes.

- Automated manufacturing cell: A fully automated manufacturing cell was built and installed at Viant's China facility to meet the customer's high-volume production needs (30 million parts per year). The system included an automated 100% incoming vision inspection system to screen against tight tolerances to ensure that defective components would be rejected. The manufacturing cell also included automated controls to maintain line continuity, automated in-line inspection, automated finished part inspection of 100% of critical part dimensions, and a manufacturing execution system (MES) that tracks production data.

"Viant took the lead and worked with [us] to provide extensive DFM options given the challenges we had with [component] manufacturing. With stringent requirements and the inability to make any drastic design changes, Viant and [our team] narrowed the DFM options to one that appeared most simplified yet robust, allowing the potential of improved efficiencies and less downtime for PM."

- Customer's Lead Engineer

CUSTOMER RESULTS:

By increasing both the speed and precision of the manufacturing process, the custom-built, automated manufacturing cell improved cycle time by 20% and reduced scrap rate by 50% compared with the incumbent supplier. Viant's robust tooling design resolved the crash issues, pushing uptime and output levels far above incumbents. Though the incumbent supplier had been working on the product and attempting to solve its multiple issues for years, the Viant team accomplished these results in an aggressive time frame of only 13 months—nearly halving the time typically required for a project of this scale and complexity. All of these outcomes were achieved with remarkable speed: five months ahead of schedule.

To date, Viant has shipped more than 30 million parts. More importantly, the Viant solution has enabled more than 180,000 additional people living with this chronic condition to benefit from the singular convenience of this unique device.

Launched
5 months
ahead of schedule

Reduced scrap rate
by **50%**

30M
parts manufactured
to date

VIANT™
WE'RE IN IT FOR LIFE.