



CASE STUDY

On Time and On Budget: How a Global Product Development Firm Tapped 3Diligent to Keep a Complicated Prototype on Track

July 2018

On Time and On Budget: How a Global Product Development Firm Tapped 3Diligent to Keep a Complicated Prototype on Track

A 3Diligent Case Study

For some design projects, the entire time to execute – from design to a prototype – can be as short as a week. [LUNAR](#), a global product design consulting firm— now a part of [McKinsey Design](#)— has the talented designers and complete staff to handle rapid product development. This way of working assumes that cost-effective 3D printing resources and vendors are available to produce prototypes within extremely tight deadlines. For a particularly complicated project, the firm turned to 3Diligent to meet these demands.

About LUNAR

LUNAR, which has offices in San Francisco, Chicago and Singapore, has been creating charismatic designs for more than 30 years. In 2015, LUNAR was acquired by McKinsey & Company—creating a groundbreaking proposition for the integration of business strategy and design. Now a part of McKinsey Design, they help clients drive growth by delivering breakthrough products, customer experiences and design-led innovation. This combination of analytical rigor and breakthrough creativity helps clients across private, public, and social sectors innovate at scale and speed.



Working with 3Diligent

Since LUNAR is involved with many different types of product design, from consumer packaging to consumer electronics to medtech, the team must have access to a wide range of 3D Printing technologies to make each project's vision into reality. For example, a medical client might have a prototype that needs a very specific material and other times a client might want a design for a giant water jug where the most cost-effective material possible is needed. LUNAR

can take a client's vision and work extremely efficiently to iterate at unprecedented speeds. With these factors to consider, LUNAR works with a large number of rapid prototyping companies.

Each project comes with its own set of constraints including cost, time or specific material needs. This can sometimes make it a challenge to find the right rapid prototyping partner for the job.

The team was working with a client on an industrial power tool that was very heavy and hard to work with. To improve ergonomics and reduce cost, LUNAR ran a generative design FEA on a large steel forging, thus reducing the mass by 40%. The team needed prototypes made to simulate a steel part, so the client could feel a difference between their current part and the newly designed part. Its usual network of rapid prototyping vendors didn't have the ability to sinter metals quickly and cost effectively, so the team turned to 3Diligent to meet the time and specific material requirements of the project.

Chris Wlezien, Technical Lead, liked working with 3Diligent for the quick response to his request for a quote and the fact that everything is managed in a dashboard while also maintaining a human touch.

“Working with 3Diligent, I appreciated the human element throughout the process, such as getting an email confirming the details or that a supplier was found,” he said. “Some suppliers have a totally automated process and at times a project might come in with an anomaly or issue. 3Diligent provided a good hybrid approach and it was nice to know that there were eyes on the entire process.”

3Diligent's Range of Capabilities

3Diligent offers a complete range of additive manufacturing processes including sheet lamination, binder jetting, material jetting, vat photopolymerization, extrusion, powder bed fusion and directed energy deposition. 3Diligent also offers services for machining and castings. These processes are offered across the range of resins, plastics, metals, and composites, and allows 3Diligent to address virtually any project need, from prototype to production.

A Successful Relationship

“We've used a lot of rapid prototyping companies in the past, but I really liked the flexibility, diversity and reach that 3Diligent offers,” Chris said. “We have a broad range of rapid prototyping companies in our network that can usually turn around jobs quickly, but where

3Diligent really shines in its depth of offerings that fit our more exotic material needs. I look forward to seeing what projects we can complete with 3Diligent in the future.”

3Diligent is “The Digital Manufacturing Partner for Every Business” offering CAD/CAM-based fabrication services such as 3D Printing, CNC machining, and casting. 3Diligent uses data science to analyze customer requests for quote (RFQs) and identify optimal rapid manufacturing solutions across its network of qualified partners to fabricate better parts faster. 3Diligent’s next-generation approach to rapid manufacturing allows customers to simplify their procurement and rationalize its service provider list. 3Diligent counts companies from Fortune 500 enterprises to startups among its customers. For more information, visit <http://www.3Diligent.com/>.