

Introducing 3D printing in Greenstar's workflow.

Greenstar R & D suffered delay in product development cycle due to unavailability of prototyping process. With ProtoCentre printers they could get the prototypes very easily, which also helped them in getting marketing approvals, design validation and die making of final product.



Greenstar R&D India Pvt. Ltd.

Founded in 2009, GreenStar is an innovative USA-based company, now acquired by Toshiba Lightning, into the designing and manufacturing of highly advanced, eco-friendly, and cost-saving LED based lighting systems. GreenStar is dedicated to deliver outstanding quality, an innovative product line and excellent customer service.

Business situation

Greenstar R&D has deep interest in product development. Mechanical component development for their innovative lighting solutions formed a significant part of this process. Being world leaders in their domain Greenstar team is well equipped with the resources yet for the prototyping and validation part, they had to rely on the conventional prototyping practices which was very costly as well as time consuming. The high expense and lead time of rapid prototyping services triggered the GREENSTAR team to look for alternatives.

To circumvent the cost of prototyping, the team has been using improvisations to minimize iterations in prototyping. Sometimes it comes to a matter of sheer experience in the specific line of product design. In any case, they don't use prototyping as much as they'll like to. GREENSTAR team affirms that the right prototyping solution should offer the benefits at a fraction of the cost and time.

The Aha! moment

Upon discussing the situation with Aha3D team, it was realized that 3D printing will bring immense value to Greenstar's workflow. For trial purpose, Aha3D printed some of their desired designs and Greenstar was totally satisfied with the quality of the print. They could easily validate and get marketing approval on design and look of the products. This even helped them to verify the assembly and catching fundamental design issues.

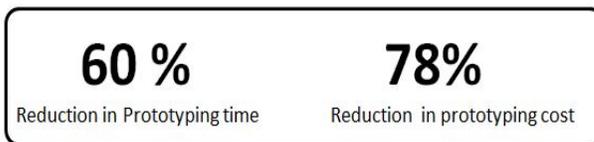
In addition, these benefits were recognized by the GREENSTAR team:

- Indigenous nature of Aha3D facilitating support in all aspects
- Availability of Aha3D's design team to receive and act on field inputs, and future experimentation
- Potential to tune to system to use multi-materials in future
- Potential to use the technique to directly make casting patterns, and eliminate/minimize machining required in the final product.

Gains and Future Plans

Subsequent to tests and trials by Greenstar team, they ordered AHA3D to provide custom make a ProtoCentre 3D printer for their requirements.

With the help of Aha3D's 3D printer Greenstar could speed up its rapid prototyping practices. They could now easily make prototypes of any and each object they want to verify. Greenstar team said that more than it helped us reduced the prototyping cost by 78%. Beyond this, it helped them to validate each design before going for production.



Also the availability of in-house rapid prototyping machine helped them reduce the prototype making time by 60% which eventually reduced the product development cycle.

Glimpses





Prototype of Greenstar's design printed by ProtoCentre 3D printer.

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