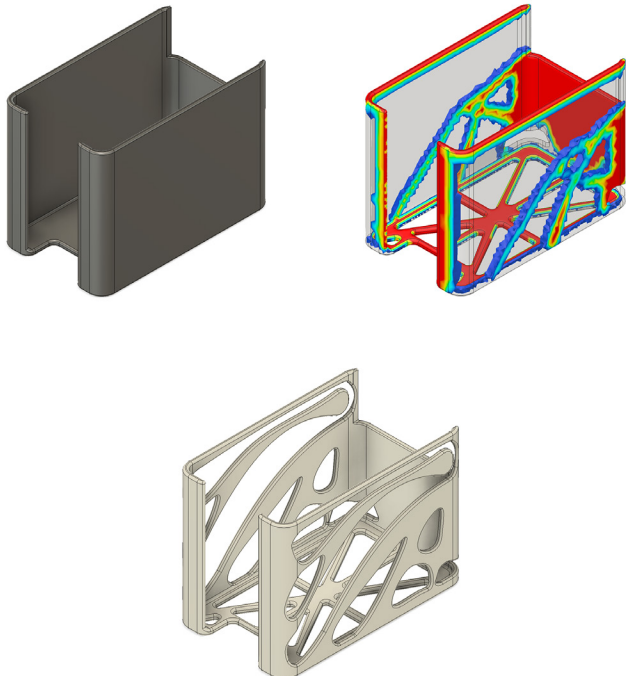
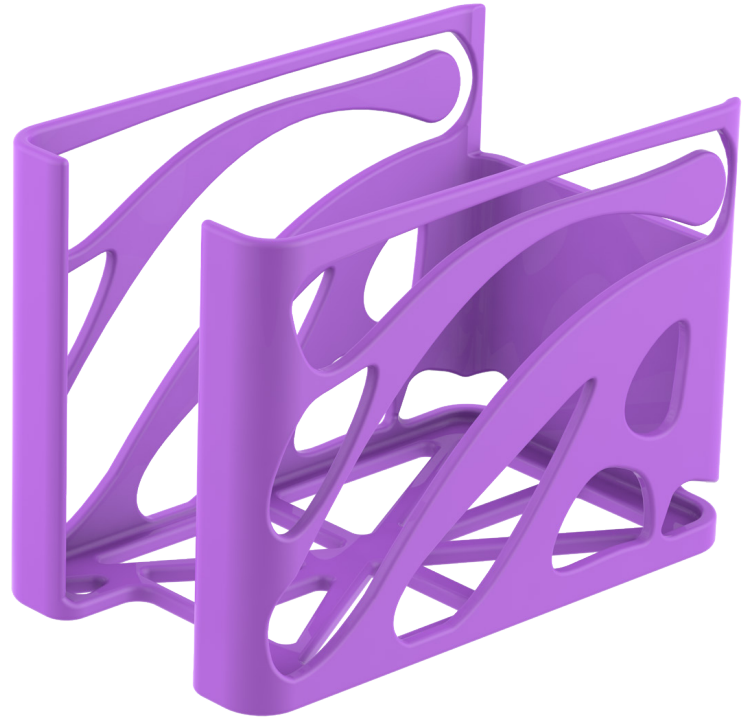


Fargo Hopper

A three day solution

We were approached by a client with a time-sensitive challenge: their supplier could not provide hoppers for their Fargo ID card printers. There was no time to tool up injection molds nor source CAD files of existing models; all we had was an original output hopper for the printer for reference. Simply recreating the product resulted in an unacceptable unit cost, which presented us with an opportunity to create something totally unique.

The EOS Formiga P110 SLS 3D printer we utilized allowed us to create complex nylon parts with injection-molded quality that wouldn't otherwise be possible using conventional methods. In order to reduce the cost of our product, we had to reduce the amount of material used; by running simulated load tests on the part with Autodesk Fusion 360, we determined which parts of the geometry endured the most stress - and where mass could be removed.



Using the results from our load tests, we were able to prototype and test load capacity on multiple versions of the product without having to first physically produce it. In the past, this process would include producing a prototype product, testing loads, recording the results and producing another version of the product for additional testing until the most-efficient product is reached.

Using generative design, our part's final price and mass was reduced by 44% with no loss in functionality. Furthermore, in 3 business days we were able to go from a client's need to a completed, custom product. We were able to achieve this blistering pace not just because of our access to cutting-edge technology, like enterprise grade 3D printing and generative design, but because we are able to effectively combine them when a client has urgent needs.