

case study

DECKED

Developing an Innovative Storage Solution for Pickup Trucks

The huge capacity of a pickup comes at the expense of storage. The loading area is often a simple box with no ability to store smaller items safely or secure them from theft. After spotting an opportunity in the marketplace, entrepreneur, Lance Meller, started work on a well-built alternative. Lance founded DECKED with his business partner, Jake Peters, with a shared determination to create an innovative, robust and useful storage solution for both commercial users and private owners alike. The system had to be able to withstand a load of 2,000 lbs, fit into a wide range of pickup models including those from Ford, GM, Chrysler, Toyota and Nissan and be manufactured for a compelling retail target price.



solution

DECKED selected Altair ProductDesign as it needed a partner that was able to deliver conceptual design work along with advanced engineering and prototyping services. Altair ProductDesign's industrial design group, Thinklabs, was invited to participate in the process of developing design themes encapsulating product branding, form, function and aesthetics for of the storage solution. Following the success of this early work, DECKED gave the go ahead for a more detailed design study. This involved using Altair's virtual simulation suite, HyperWorks, to investigate the structural performance of the product to see how it would perform in real conditions. Using the results of these studies, Altair ProductDesign was able to suggest design changes to improve the performance of the product such as its load capacity.

During the project, Altair ProductDesign used any opportunity to remove complexity from the design or simplify the tooling itself. As a result, it became possible for DECKED to manufacture several variants of the product with the same tooling. Innovations such as this allowed the team to keep manufacturing costs as low as possible. Prior to finalizing the design, DECKED wanted to ensure that the product resonated with the intended end customer. Altair ProductDesign worked with a rapid prototype fabricator to create a full size replication of the product to tour around OEM pickup truck dealerships and truck accessory dealers. The team were extremely pleased with the response that DECKED received and it gave them the confidence needed to take the prototype design into production. Altair ProductDesign was able to prepare and hand off final designs and tooling specifications to DECKED's manufacturing partner.

result

DECKED met its performance and manufacturing cost targets while remaining a simple to fit and use product. The storage solution is now on sale throughout the US and is proving to be popular with both the trade and consumer markets. DECKED continues to use Altair ProductDesign on product improvements, future design iterations and product extensions. Since launch, DECKED has received a prestigious SEMA Award for 'Best New Van/Pickup/SUV Product' for 2015 during the SEMA show in Las Vegas.