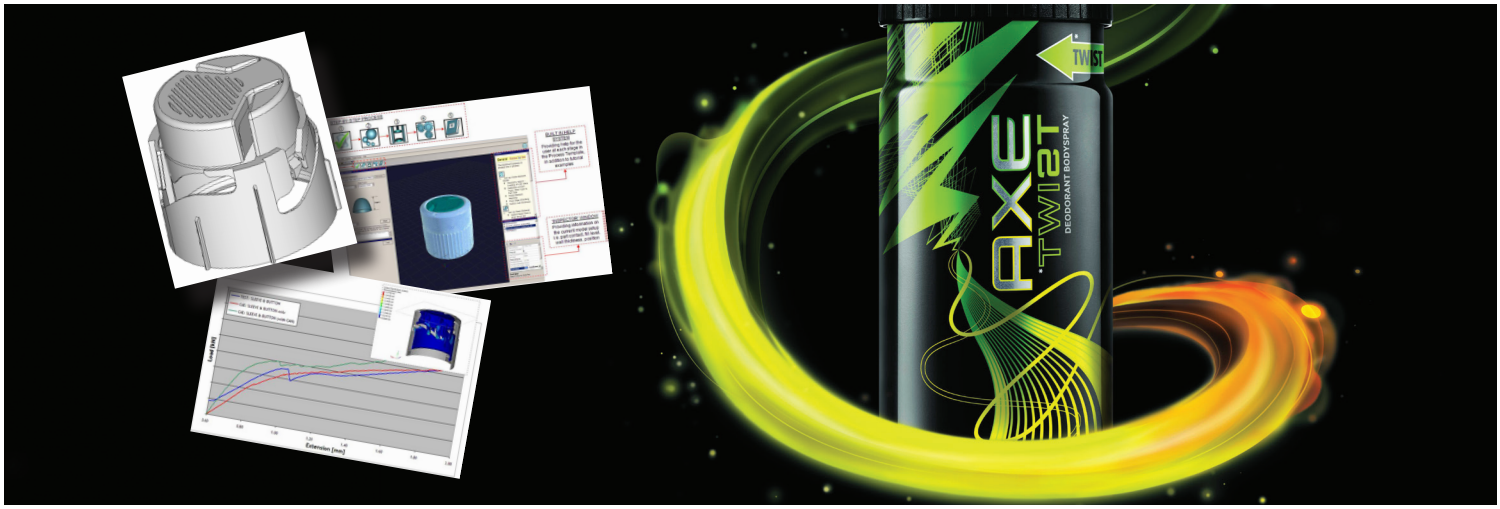
Altair | ProductDesign

case study

Unilever

Optimizing Packaging Designs & Reducing Prototype Costs

To remain at the forefront of innovation within the male grooming market, Unilever, constantly looks for ways to differentiate their products from competitor offerings. For the Lynx (Axe) brand, Unilever needed to adopt a simulation and analysis approach when designing a new deodorant packaging concept and required a development partner to assist with the design and testing of the new can.



solution

Altair ProductDesign was selected to assist with the project. The deodorant can design concept was created by Unilever with Altair ProductDesign conducting optimization to define material layouts for stiffening the cap's button and optimizing the load path through the can's side walls.

Once the general layout requirements had been derived, a more detailed model was developed to investigate a series of 'what if' scenarios such as loading values, geometry changes and material options. The different loading scenarios identified areas for reinforcement throughout the cap, while the effects of different material properties on stiffness and stress were measured and ranked against manufacturing cost, providing valuable metrics for material selection decisions.

As Unilever was without its own team of analysis engineers, Altair ProductDesign empowered Unilever with a set of new process tools developed specifically for packaging design. Created over a 4-5 year period in close collaboration with Unilever's Capability Development team, the 'Atlas' system allows Unilever's CAD and concept designers to perform analysis studies very early in the design process.

result

The design optimization and detailed analysis process allowed Unilever to explore a wide range of previously unknown design options while reducing the need for expensive prototypes. The new, automated design environment meant that Unilever could perform its own future design studies which took material use, performance and cost into account at every stage and in a highly efficient manner.