Autodesk® Alias
Autodesk® Showcase
Autodesk® Maya®

If we didn't have Autodesk software, we'd be at a disadvantage.

—Rainer Müller
  Founder and Managing Director
  Genesis-design GmbH

Perfecting Industrial Design

Genesis-design relies on Autodesk software to speed ahead of the competition

Project Summary

The German design firm Genesis-design GmbH (Genesis) creates award-winning designs for the sporting, consumer products, and automotive industries. From its inception, Genesis has sharpened its distinctive advantage: a knack for creating innovative, high-quality designs and surfaces faster than many of its competitors. Behind the company's success is a small pool of highly talented designers—and Autodesk software. Genesis uses Autodesk® Alias, Autodesk® Showcase, and Autodesk® Maya® software to conceptualize, develop, review, and visualize digital designs. With its current Autodesk software, Genesis has:

• Completed key surfacing tasks as much as four times faster

• Developed catalog-ready visualizations for clients

• Won numerous awards for its innovative designs

• Developed surfaces so high in quality that clients use them to develop tooling

The Challenge

After studying industrial design in Munich, Rainer Müller and Dirk Jürgens founded Genesis-design GmbH , a company focused on high-quality digital product development. From the beginning, the partners had their sights set on a digital workflow.

"We decided to specialize in digital design and product development," says Müller. "Drawings aren't always compelling and physical models are not only slow but expensive. We wanted to be able to show our clients a digital product early in the design process."

"Some firms just make concept drawings, but don't incorporate the technical package," continues Müller. "Because the technical package inevitably impacts design, we felt it important that we be able to design around it from the very beginning."

Not only did Genesis need software that would facilitate digital product development, the company's software had to take into account the industries it planned to serve. "We wanted to do consumer goods and automotive work," says Müller. "With consumer goods, quality surfacing is important, and the automotive industry requires Class-A surfacing. We clearly needed high-quality software."

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Alias software is helping Genesis complete some tasks four times faster.

The Solution

The decision to invest in Autodesk Alias software wasn't difficult—it offered the high-performing capabilities Genesis needed, including Class-A surfacing. "We could have gotten a competitive solution for a tenth of the cost," says Müller. "But we loved the workflow in Alias, and it is industry standard for automotive companies."

While Alias software was the first Autodesk software Genesis purchased, it wasn't the last. The company also uses Autodesk Showcase and Autodesk Maya for design visualization. By combining these tools, Genesis has achieved its goal of comprehensive digital product development.

Digital Design

Typically, as with a recent ski binding project for the sporting goods maker Marker, Genesis gets a technical package from its customer. For Marker, the technical package was a .STEP file that indicated where the spring would go as well as the length and height of the binding. Genesis imported the file into Alias software and integrated it with the binding designs to develop 3D sketches. When Marker changed its technical package, Genesis was able to update its design with ease. "With Alias, it's easy to adjust designs based on customer changes," says Müller.

To visualize designs and facilitate design reviews, Genesis uses Autodesk Showcase. "We love it," enthuses Müller. "We put .wire files in Showcase software and use the shaders and environments to bring the 3D model to life. For example, you can see what a transparent surface will look like if it has graphic foil underneath it, or you can play around with colors for trim. Showcase helps us and our clients make decisions at an early stage, saving us both time and money."

After Genesis completes the concept model, the customer can take the digital file and incorporate it into the digital prototype needed for manufacturing. In some cases, customers have been able to move straight to tooling. "The surfaces we produce using Alias software are so precise that customers like Marker use them to make tooling," explains Müller. "And producing high-quality surfaces, including Class-A surfaces, is no problem in Alias."

At the final stage of its digital process, Genesis uses Autodesk Maya to transform concept models into beautiful renderings that its clients can use for marketing. "We pull the data into Maya from Alias," says Müller. "We can render beauty shots, detail shots, and animations easily. Our clients love them. Marker used the renderings we made for them on their website and in their bindings catalogue."

The Result

With Autodesk software, Genesis has carved out a profitable niche in the market. "Customers think we are expensive—until they see how fast we work and the high-quality designs we produce," says Müller. "One customer said that our process is the best he's ever seen. We are faster at modeling, we deliver higher-quality surfaces, and we visualize designs earlier in the process than our competition."

In fact, the new dynamic shape modeling tools in Alias software are enabling Genesis to do some tasks up to four times faster. "We had one project where we had to define a structure on a grid," explains Müller. "We tried to model it the normal way—it was very complex free-form surface work that took us a week. Then we used the dynamic shape modeling tools in Alias software and produced the same results in about a day."

Showcase and Maya software are also impacting the Genesis process in a positive way. "We're producing visualizations in 20% of the time," says Müller. "We're also making our customers very happy by presenting them multiple design options in Showcase and giving them beautiful Maya renderings for use downstream."

Not only is Genesis finishing projects faster, the company has proved its designs are top quality. It took home the IF Product Design Award 2007 for a robot hand it developed for the DLR, Germany's Aerospace Research Center and Space Agency. And the binding Genesis created for Marker also won the IF Product Design Award 2008 and the European Ski Award and European Outdoor Award at ISPO Munich.

Müller sums up the value of Autodesk software this way: "We need it to win business. If we didn't have Autodesk software, we'd be at a disadvantage. Thankfully, we made the right choice from the very beginning—and are confident that Autodesk software will take us into the future."

Learn More

To learn how you can streamline industrial design and visualization, visit **www.autodesk.com/conceptualdesign-cp**
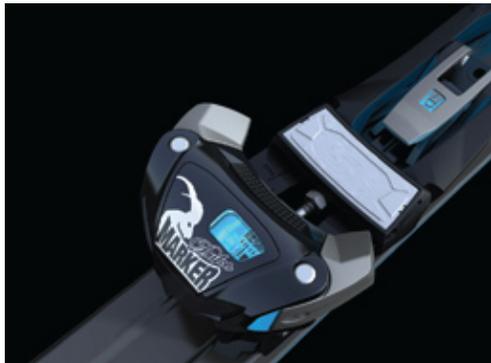
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