

RCD Except

Customer Success Story

Autodesk® AliasStudio™

Autodesk® Maya®

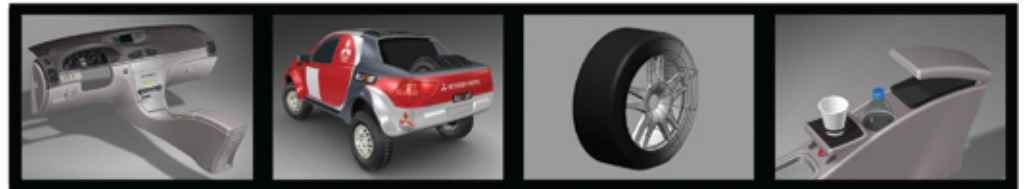
Autodesk® Showcase™

With the Alias design products, we never feel limited with our work, which is crucial.

—Jean-Paul Després  
Shape Plan Manager  
RCD Except

# Shifting Into Efficiency

RCD Except upgrades performance with Autodesk.



## Project Summary

Based in France, RCD Except (RCD) is an award-winning design and engineering firm that serves the automotive industry. RCD turned to Autodesk to help its team more quickly produce shape plans and the final 3D concept models its clients need before manufacturing. With Autodesk® AliasStudio™, Autodesk® Showcase™, and Autodesk® Maya® software, RCD saves design time and conducts reviews faster. In addition, the company extends its digital prototypes to clients, allowing RCD to keep designs digital—from the concept model through incorporation downstream by clients. With Autodesk, RCD has:

- Developed a 3D concept model in less than four months
- Reduced surprises in physical prototypes produced by milling
- Applied real-time modifications during design reviews
- Secured the loyalty of its clients by delivering better services

## The Challenge

Given the highly competitive nature of the automotive industry, RCD wanted efficient, versatile software to help it produce shape plans and design interior components—and reduce surprises during the model creation stage. Because customer requests are often technical—and can involve digital modeling and Quick Surface Reconstruction (QSR)—RCD needed a solution that could handle a wide range of requirements.

In particular, RCD wanted to produce 3D concept models efficiently. “We were looking for a tool that would enable us to transition from shape planning to digital modeling,” says Jean-Jacques Thamié, design manager and co-founder of RCD Except. “For a small company like ours, we needed multi-faceted software that was cost effective and easy to learn.”

The company used to produce virtual vehicles with somber, neutral grays—and that failed to show bodywork lines and product details clearly. RCD wanted tools for visualizing its designs in a more realistic, 3D environment to facilitate internal communication and external design reviews.

Autodesk®

# With the photorealistic quality of its 3D concept models, RCD is able to reduce the risk of surprises to customers.

## The Solution

Autodesk software delivered the tools RCD required to develop sophisticated 3D concept models that wow customers and facilitate design reviews. RCD works digitally from project outset to produce its 3D concept models.

## Streamlining Shape Modeling

RCD relies on Autodesk AliasStudio software to optimize its design workflow and turn ideas into reality using sketching, modeling, and visualization tools. The products in the AliasStudio product family provide RCD with the tools it needs to develop surface models, refine and control surfaces, and interactively evaluate aesthetic and technical surface quality. The software offers dynamic shape modeling capabilities that allow RCD to quickly modify and experiment with shapes at any stage of the design process. Designers can play with variations to existing 3D forms without rebuilding any geometry—letting them make real-time modifications during design reviews.

For one important project, RCD developed a 3D concept model of a race car for the Rally Raid World Championship and Paris-Dakar Rally, the world's premier cross-country endurance motor race. The company used AliasStudio to design a shape plan and 3D concept model for the entire functional carbon shell, applying true-to-life finishing touches to photorealistic images of the model in Autodesk Maya.

Autodesk software was key to the shape modeling process. Jean-Paul Després, shape plan manager at RCD, explains: "During color rendering, the diagnostic shader proves highly efficient, particularly when validating the quality of the surfaces with various modes, stripes, chrome, neon, or spot. With the Alias design products, we never feel limited with our work, which is crucial."

## Inspiring Confidence in Designs

Getting customer sign-off is critical to the development process. With Autodesk Showcase software, RCD can render digital prototypes for clients, internal team members, and project managers under the best possible conditions. The company imports 3D concept models and shape plans into Showcase directly from AliasStudio and projects the realistic, high-definition images onto a large presentation screen.

"Generally, the interior is produced from shape plans and consists of Bezier squares," explains Stéphane Richard, shape plan manager. "It can also be produced through digital modeling and consists of NURBs—with a few elements produced from shape plans. This mixture of geometric types is not a problem for Showcase."

Showcase lets RCD's designers and customers evaluate designs easily, streamlining the design approval process. With the software, RCD can show a variety of materials and design variations during presentations, switching between them with a single mouse-click and interacting with the 3D concept model in real time. Reviewers can get a realistic sense of the design because Showcase generates imagery from 3D concept models, accurately reflecting real-world materials, lighting, and environments.

In the future, RCD plans to make its designs even more life-like. "We'd like to be at almost full size in the complete digital model by adding a second video projector," says Thamié. "Then we'll be able to give the impression that the virtual vehicle is on the ground right in front of us."

## The Result

### Quantum Leap in Service

Using Autodesk software, RCD designers have reduced their design cycle times. The company is also saving time thanks to the interoperability between AliasStudio, Maya, and Showcase. It



takes just 30-60 minutes on average to prepare data for transfer from AliasStudio to Showcase for presentations.

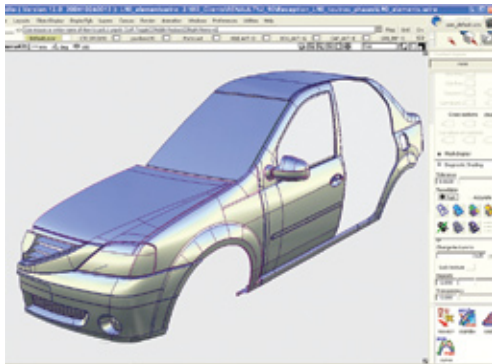
Now with Showcase, RCD has the communication tool it needs to validate designs with customers and internal team members. Over time, RCD plans to make its presentations more sophisticated by adding lighting and animations—such as opening a door—and preparing various alternatives with different colors and design options.

With the immersive aspect of its large screen and the photorealistic quality of its 3D concept models, RCD is able to reduce the risk of surprises to its clients. The company catches issues early, before producing a physical model.

"By investing in Autodesk software, we were able to improve the quality of our services and therefore secure the loyalty of our customers," concludes Thamié.

## Learn More

To learn how you can streamline automotive design, engineering, and visualization, visit [http://www.autodesk.com/conceptual\\_design-auto\\_supplier](http://www.autodesk.com/conceptual_design-auto_supplier).



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—Jean-Jacques Thamié  
Co-Founder and Design Manager  
RCD Except

Images courtesy of RCD Except.

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