SMITSAIR
SCHAKO Group

COMPANY
Smitsair B.V
LOCATION
The Netherlands
SOFTWARE
Autodesk Inventor
Autodesk Vault

Managing change effectively

How Autodesk and Cadline helped Smitsair to automate its design process, free up time and support its business growth initiatives.

Customer Challenge

Cadline was originally introduced to Smitsair to conduct a review of their design, configurator and data management systems and processes. It was established that there was a product configurator in place in Smitsair's ISAH system, but it provided 2D drawings which were generated with scripts that could no longer be maintained.

In addition, to process non-standard orders meant an engineer had to manually edit the flat patterns in 2D which is much more difficult than if these could be edited using a 3D model.

Drawings and project files were linked in the ERP system by using shortcuts within specified tabs, but the files itself were stored in Windows folders with no version or revision control.

"The team at Cadline has done a great job, helped us overcome some real challenges and delivered automated order to product capability that is now helping us deliver the efficiencies we needed and is supporting our business growth initiatives."

Lars van der Greft
Cad Engineer
Smitsair

For one-off projects the team used 3D modelling software, but this was no longer supported so the Smitsair team needed to switch to a 3D tool that was capable of both driving design automation and producing one off projects on the same platform. This would also automate the existing process and drive enquiry to production efficiencies.

Project Goals

Three main opportunities were presented to Smitsair, focussing on Design, Data Management and System Integration capabilities. In combination, these would enable the business to automate, and semi automate the configuration to order process for Standard and one-off projects respectively.

The first goal was to provide the design team with the software and skills to produce their own 3D intelligent product models that could be configured and driven by rules-based design tools.

The second opportunity was to centrally manage design and product data in an environment better suited to manage data, control revisions and control the release of information to the wider business.

The third focus area was automated design generation and system integration to reduce man hours spent on repetitive tasks and data entry.

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Solutions

To transition the design team from 2D drawings to 3D modelling, Cadline created a training programme for the designers, giving them the skills to generate 3D product models using Autodesk Inventor. Cadline took the lead on the first three product range models. Logic and requirements were defined, and configurable models developed using Autodesk Inventors iLogic Module. Further training was provided so that the design team could create their own new Inventor iLogic models in the future.

Using Autodesk Vault Professional to manage all 3D and 2D design data, as well as other project files, would provide a secure environment for data, revision control of files and manage the release of data to the rest of the business.
The project team then developed an automated workflow around the Autodesk tools to deliver product configuration, system integration, file exports and notifications.

Business Outcomes

Smitsair has now developed in house 3D design capabilities and can build new product models that include rule-based design tools to drive automated product configurations for their customers.

The integration and automation provided from the configuration in ISAH through the design process is enabling designers to focus on new product design, innovation and one-off project design development.
Standard Product Configurations created in ISAH are now automatically fed through the developed workflow to produce 3D models using master iLogic models, which are uploaded into Vault and released.

Vault has been integrated with ISAH to automatically update Bills of Materials in the ERP system when files are released from Vault. Consumable files such as DXFs are generated and email notifications sent.

Conclusion

The foundations are now in place for automated design and the controlled release and management of data. System integration has provided further opportunities to automate outputs and produce a wider range of files for both Smitsair customers and productions teams.