



Business challenge

Consumers love to try before they buy, as well as customize items to suit their individual needs. How could JORI fulfill this demand without overwhelming salespeople with customization options?

Transformation

Consumers love to view and customize products before they buy. Luxury furniture manufacturer JORI was struggling to meet this need without overwhelming in-store sellers with options. JORI created a web-based 3D configurator running on IBM i, giving consumers and sellers realistic virtual previews that help close sales and accelerate manufacturing.

Business benefits

50%
reduction in time from customer order to final delivery

95%
of retail partners now using the configurator

>80%
reduction in time-to-market for new products

JORI

Builds 3D configurator with IBM i, letting customers try before they buy

JORI is a luxury furniture manufacturer based in Belgium. Founded in 1963, it specializes in sofas, armchairs, chairs and reclining seating units in leather or fabric, offering the customer exclusive designs, optimum comfort, and high quality. With 170 employees, and a turnover of around €35.8 million, JORI exports to over 30 countries. As a company, it is committed to both comfort and innovation, with consumer choice and customization its highest priority.

“Thanks to the configurator on IBM i, dealers can offer our full range of furniture in a quick, easy, and accessible way.”

— Wim Vantomme, Executive Commercial Manager, JORI

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Keeping up with the consumer

When shopping online, particularly for big-ticket items, consumers increasingly want to see what they are buying before they part with their cash. There is also an increased desire for personalization and customization, so each consumer can order something unique to them.

Wim Vantomme, Executive Commercial Manager at JORI, a designer and manufacturer of luxury furniture, explains: “We’re seeing a new way of browsing, especially for high-end products. Before, we offered customers a catalogue; it was enough to describe the product using words and images. Now, consumers want to see our furniture in 3D. It’s like buying a car—they want to be able to walk around the product and view it from all angles.



“We’re also dealing with a new generation of consumers who have grown up with the internet. They are used to viewing products online before they go into a shop to buy, and customizing products to their individual tastes and needs.”

However, providing a host of customization options can risk overwhelming buyers and salespeople,

as Vantomme explains: “Our JORI furniture collection currently has 102 base models, and on top of that there are 151 types of leather and 160 types of fabric, as well various finishing options for the feet and arm-rests. Equally, customers can mix and match components – for example, to create a corner sofa to precisely fit their living room.

“IBM i on Power gives us the ideal foundation, providing a robust, secure, high-performance platform for both our core business systems and the new configurator.”

—Wim Vantomme, Executive Commercial Manager, JORI

“All of this made it difficult for consumers, and the in-store sales people helping them, to understand all the possible options for a piece of furniture, and what the final design would actually look like.”

Furnishing the solution

JORI decided to create an online 3D configurator, with the goal of enabling consumers and salespeople alike to build, visualize, and customize 3D models of furniture. Rather than simply building a stand-alone solution, JORI wanted to integrate the

configurator into its existing business processes. The company uses advanced manufacturing equipment that works from detailed 3D models created by JORI's furniture designers. The plan was to bring the existing models into the new configurator, and then have the resulting consumer-configured and customized designs flow directly into manufacturing.

"We are always looking to innovate and to eliminate delays and inefficiencies in our end-to-end processes," says Vantomme. "We saw an opportunity not only to let customers visualize and customize their furniture, but also to enable the user-configured models to go straight into production. We knew this would save time and effort, and also avoid human error in the ordering process."

To smooth the flow from design through configuration to manufacturing, JORI needed the 3D configurator to apply the same business rules as



those used in its design and manufacturing systems. These rules define which combinations of furniture components are actually possible, and also which combinations are likely to be unattractive or uncomfortable.

"When we decided to create the configurator, we wanted to run it alongside our core business systems on IBM i—both to ensure tight integration with existing business rules and to take advantage of the

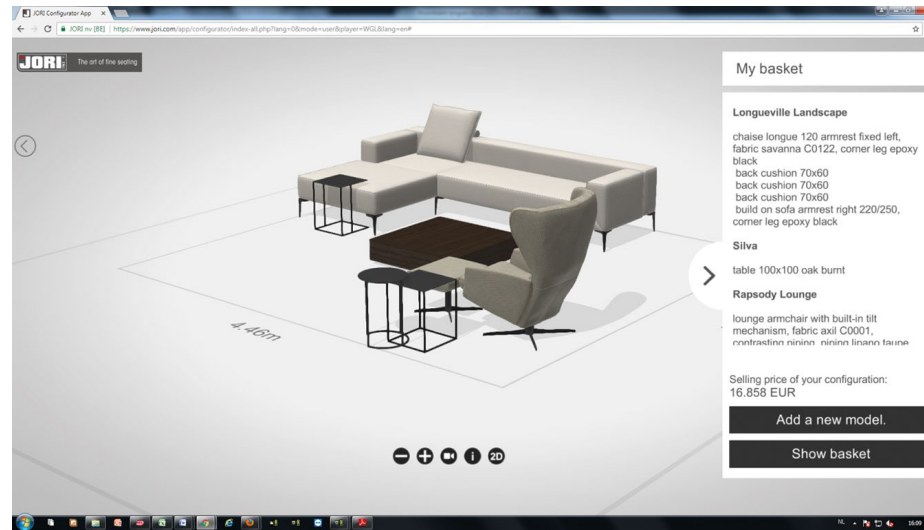
platform's natural stability and security," says Vantomme. "CD-Invest, our long-term partner for everything on IBM i, showed us how all the latest open source technologies that we needed are available on the platform."

Working with CD-Invest, JORI built the 3D object database in the integrated IBM Db2® database on IBM i, and used IBM i RPGLE web services to communicate via JSON with the front-end configurator program, which also runs on i. The front-end was developed using the Unity open-source 3D gaming platform, compiled for i using Chroot. Other open-source components include Ghostscript and ImageMagick for creating print-outs of models built in the configurator, Substance for creating realistic-looking fabrics for the 3D models, and Drupal to run the website.

“The entire stack runs on IBM i in a partition on JORI’s existing IBM Power System S814,” says Koen Decorte of CD-Invest. “What’s really cool is that this innovative, open-source solution is fully integrated with application code and business rules that our client has entrusted to i since the 1980s. For us, this is the real advantage of i on IBM Power: past investments are protected and there are no restrictions on what can be achieved with new technology.”

JORI’s 3D configurator won the 2016 COMMON Benelux Excellence Award in the application development category, and is embedded in the websites of more than 230 furniture dealers around Europe. It is also available as a mobile app, installed and used by more than 3,000 people, including both direct consumers and in-store sales advisors equipped with tablet computers.

Vantomme elaborates: “Using the solution, consumers can access the full range of customization options and visualize exactly how their



finished items will look. The configurator also makes it easy for in-store sales advisors to create the perfect item for a customer, without needing to have weeks of training in all of our options. And because the solution uses the business rules from our design and manufacturing systems, it will not permit incorrect combinations of options.”

He adds: “Around 95 percent of our retail partners now use the configurator, and they’re very happy with it. It gives them immediate access to all the latest designs, and it helps them to close sales by giving customers a realistic preview of their chosen furniture.”

Configuring the future

One of the key advantages of the new configurator running on IBM i is that it uses existing business rules to guarantee that the output will be comfortable, attractive, and technically possible to manufacture. By removing the possibility of human error and largely automating the ordering process, this eliminates the chance that JORI will need to query or reject an order. The solution also minimizes the need for dealers to provide specialized training to salespeople, and means that even temporary and part-time staff can quickly get up to speed.

“Thanks to the configurator on IBM i, dealers can offer our full range of furniture in a quick, easy, and accessible way,” comments Vantomme.

“In addition, they can instantly give customers accurate pricing no matter how complex the chosen options.”

As the output from the configurator is based on simplified versions of the same 3D models used by JORI’s designers, ordering is now fully integrated within manufacturing—slashing production and wait times.

“The process is totally integrated from start to finish,” says Vantomme. “The different materials—metals, plastics, foams, fabrics—for each piece of furniture are all defined in the layers of the configurator’s 3D models, and the manufacturing machines can read these models to get all the information they need.

“So a piece of furniture configured in the solution can pass directly into manufacturing without significant human input or delay. As a result, we are now able to produce in just five days some items that previously

required eight weeks. That means happy customers and less paperwork both for us and for the dealer network.”

An interesting side-benefit of the configurator is that it enables JORI to design new products and gauge their market appeal without the delay and cost of physical prototyping. “A number of items in the configurator are not yet on industrial release,” says Vantomme. “We know that we can manufacture them because they comply with our business rules, but we don’t need to create physical prototypes, and we don’t need to print updated catalogues for our dealers. If customers are interested in the new items, they can configure and order them, and we can build them.

“Thanks to this virtualization of our business processes, our time-to-market is now very short. It used to

take up to six months to bring a completely new model to market—now we can do it within a few weeks. This amounts to a more than 80 percent reduction in production time.”

By embracing the virtual world, JORI can reach out more easily to new markets, including both direct consumers and third-party home-design companies. “We received so many requests from architects and interior designers for access to the configurator that we added a new feature,” says Vantomme. “They can now import the 3D models into their own 3D visualization system, to show how our furniture will look in their customers’ homes.

“What’s more, we already have plans to branch out into using IBM Watson® cognitive technology to help consumers find their preferred

fabric. We’re creating a solution where the consumer can submit a photo of a fabric they like, and Watson will cross-reference it with our system to find something similar.”

Looking to the future, JORI plans to continue innovating and developing its solution.

Vantomme concludes: “The configurator will need to keep changing, because the market is always changing. We already have a few competitors starting to offer something similar. I think it will become normal to shop this way, so it’s important we stay ahead of the curve. IBM i on Power gives us the ideal foundation, providing a robust, secure, high-performance platform for both our core business systems and the new configurator.”

Solution components

- IBM® i
- IBM Power® System S814
- IBM Watson®

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Take the next step

To learn more about the IBM i System, contact your IBM representative or Business Partner, or visit:

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