

JOHNSON CONTROLS–HITACHI AIR CONDITIONING: MAKING COMPLEX SELLING EASIER WITH A PRODUCT CONFIGURATOR

Johnson Controls-Hitachi Air Conditioning, a joint venture between Hitachi products and Johnson Controls, is in the heating, ventilation, and air conditioning (HVAC) business. The company has a group that produces scroll compressors that power air conditioning and refrigeration systems. Scroll compressors work in a circular motion instead of an up-and-down piston action and have a reputation for reliability and efficiency. Scroll compressors are deployed in several different ways to meet the needs for efficiency, comfort, and affordability – and therein lies the challenge. Finding a suitable scroll compressor for a specific application requires understanding variables such as refrigerant, rating conditions, and cooling capacity.



Source: Johnson Controls-Hitachi Air Conditioning

SPREADSHEETS HAVE LIMITATIONS

Spreadsheets effectively analyze data and running numbers and will cobble together a solution for a customer with a price quote. But a spreadsheet requires constant upkeep and maintenance, or else data will be inaccurate and will not integrate into other systems or processes. Johnson Controls–Hitachi Air Conditioning had outgrown the spreadsheet.

A customer inquiry on the website would result in back-and-forth questions for several days until fully understanding the customer requirements.

A CLOUD-BASED ONLINE SELECTION TOOL

Johnson Controls–Hitachi Air Conditioning needed an interactive product configurator to manage an ever-changing product catalog. The solution was a cloud-based selection tool, accessible from anywhere. The configurator presents multiple selection criteria for application, refrigerant, rating conditions, and cooling capacity. The configurator also generates technical documentation based on specific customer input to download.

An interactive product configurator is ideal for companies that produce or distribute highly configurable or customizable products, with multiple options and features available for the same product. The importance of product configuration is currently increasing dramatically for a wide range of industrial companies because of the growing demand for individually specified products.

Tom Parrish, Vice President, Compressor Business Unit at Johnson Controls-Hitachi Air Conditioning, says, “We provide our clients with superior and quality engineered product solutions that deliver outstanding performance. Our future growth strategy required a much stronger customer interaction fueled by flexible and scalable digital tools – those that are able to provide easy access, high responsiveness and improve the quality of our initial customer engagements, particularly of new customers seeking newer Product applications.” When choosing which solution would fit the needs of Johnson Controls-Hitachi Air Conditioning. He continues by saying, “The team at Infosys has made this a reality by delivering a cloud-based digital product selection tool that refreshes product data, introduces new models, updates drawings or specifications instantly, helping us reach out to a global customer base. We are very proud to provide this Transformational experience to our customers, and we believe that it is beginning to pay off as we are seeing higher win rates”.

SELECTING A STRATEGIC PARTNER

Custom software is complex and taking on product configurator development in-house is challenging and most likely tricky, and more time-consuming than it may be worth.

Johnson Controls–Hitachi Air Conditioning decided to outsource the work to Infosys based on trust and a long-standing relationship. Infosys understands the HVAC business and has extensive experience in sales and product configuration. Vijay

Narayan, Senior Vice President and Regional Head of Manufacturing—Americas, Infosys, remarks, “Manufacturing Organizations are adapting Digitization in a big way and in particular enhancing customer experience in every engagement. We at Infosys were thrilled to take our partnership with Johnson Controls-Hitachi Air Conditioning a step ahead and help simplify their complex selling processes with our advanced set of Cloud-based Engineering solutions and services.”

Infosys has created digital catalogs to help customers search for products based on features and attributes. Infosys has a product configuration solution that accelerates the sales cycle by enabling sales teams to accurately configure products and estimate product costs. The solution captures customer requirements, automatically maps requirements with the product portfolio, and optimizes pricing.

Infosys uses a program named Cobalt. [Infosys Cobalt](#) is a set of services, solutions, and platforms for enterprises to accelerate the cloud journey. I have seen this in action with several customers, and Infosys has an excellent rinse and repeat process to reduce the risk of migration and the implementation time.

SYSTEM ARCHITECTURE

The hosting environment for the solution is [Microsoft Azure](#). [Azure Active Directory](#) provides multifactor authentication and conditional access for security. The data store for code and product artifacts is [Azure SQL Database](#), a relational database service built on Azure that automatically scales to meet requirements.

Infosys used [React](#), a JavaScript library, to create an interactive user interface using the [Material UI](#) library and the [Bootstrap](#) front-end open-source toolkit.

Web hosting utilizes the [WebApp service](#) in Azure.

Continuous integration and continuous delivery (CI/CD) automated builds, tests, and deployment, using Azure DevOps. CI/CD is a method to deliver applications by using automation and continuous monitoring throughout the stages of application development, from integration and testing phases to delivery and deployment.

THE RESULTS

The product configurator automated the complete engineering selection process and improved quote-to-order process and reduced the lead time taken by customers to create quotes. Information required to process an order is captured and will reduce the

risk of going back to the sales representatives to track down information. Design information needs minutes to generate instead of days.

The product configurator enabled customers to be more self-sufficient, allowing salespeople to focus on much more complex problems. Accurate quotations lead to fewer queries, which helps reduce the customer service department's workload. Manual processes were eliminated or reduced, enabling the sales team to focus on driving more sales by submitting more qualified and competitive quotes.

Complex products come with complex pricing and configurations, increasing the risk for human errors. A product configurator significantly [reduces the potential for these errors](#) by pre-defining rules that create accurate pricing and valid combinations. Redundancies and errors were reduced, with no more incorrect or missing products. There was a drastic reduction in the time to introduce new models.

WRAPPING UP

With Infosys' help, Johnson Controls–Hitachi Air Conditioning has a configurator on the website. Customers can select the correct compressor for the application and download the relevant product information.

Times have changed. Clearly, with more people and businesses purchasing products online, there has been a significant shift in behavior focused on convenience and personalization.

Organizations need to rethink the selling process by deploying product configurator applications to optimize quoting, designing, and selling complex configurable products.

Johnson Controls–Hitachi Air Conditioning has established the first step to develop a website that includes access to a product configurator. Future customer expectations will be to order configurable products through the website, and place an order online, to have it shipped to them or pick-up in person.

The customer experience must be made simple by automating as much as possible using default options, background calculations, and conditional logic.

Anything less can cause customers to give up and look elsewhere.

IMPORTANT INFORMATION ABOUT THIS PAPER

CONTRIBUTOR

[Patrick Moorhead](#), CEO, Founder and Chief Analyst

PUBLISHER

[Patrick Moorhead](#), CEO, Founder and Chief Analyst at [Moor Insights & Strategy](#)

INQUIRIES

[Contact us](#) if you would like to discuss this report, and Moor Insights & Strategy will respond promptly.

CITATIONS

This paper can be cited by accredited press and analysts but must be cited in-context, displaying author's name, author's title, and "Moor Insights & Strategy". Non-press and non-analysts must receive prior written permission by Moor Insights & Strategy for any citations.

LICENSING

This document, including any supporting materials, is owned by Moor Insights & Strategy. This publication may not be reproduced, distributed, or shared in any form without Moor Insights & Strategy's prior written permission.

DISCLOSURES

Infosys acquired license to use this paper. Moor Insights & Strategy provides research, analysis, advising, and consulting to many high-tech companies mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.

DISCLAIMER

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions, and typographical errors. Moor Insights & Strategy disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in such information. This document consists of the opinions of Moor Insights & Strategy and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice.

Moor Insights & Strategy provides forecasts and forward-looking statements as directional indicators and not as precise predictions of future events. While our forecasts and forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could cause actual results to differ materially. You are cautioned not to place undue reliance on these forecasts and forward-looking statements, which reflect our opinions only as of the date of publication for this document. Please keep in mind that we are not obligating ourselves to revise or publicly release the results of any revision to these forecasts and forward-looking statements in light of new information or future events.

©2022 Moor Insights & Strategy. Company and product names are used for informational purposes only and may be trademarks of their respective owners.