Doosan Infracore

Achieving threefold business growth while boosting data accuracy by 40 percent

Overview

The need

Doosan Infracore needed an enterprise resource planning (ERP) system that would automate work processes and accommodate growth while keeping costs down.

The solution

The company implemented highly customized ERP software powered in part by Fitrix ERP from Fourth Generation Software and running on IBM Informix. Informix Genero is used to modify the look and feel of applications to support evolving business needs.

The benefit

Up to 40 percent increase in order accuracy and threefold business growth, supporting a million daily transactions without adding administrative staff; ability to access productivity tools such as Excel spreadsheets.

From its humble beginnings in 1896 as a family owned shop in Seoul, Korea to the global, multi-industry business it is today, Doosan Corporation has a track record of expansion and expertise that ranges from forklifts to fashion. With more than 39,000 employees worldwide, Doosan values the advancement of its own workers as much as its market growth.

The North American Machinery division of the company is Doosan Infracore America Corporation (Doosan Infracore), responsible for construction equipment, machine tools, engines and materials. Headquartered in Suwanee, Georgia, the division distributes 90 models of forklifts, 120 models of machine tools, and is a local manufacturer of natural gas engines. Doosan Infracore does from US$250 to US$300 million in annual revenues.

One of the mainstays that the company has relied on for the past 16 years is the IBM Informix® database that underlies the company's highly customized enterprise resource planning (ERP) system, powered in part by Fitrix™ from Fourth Generation Software Solutions.

"Since integrating our ERP with our website, each dealer saves about five or six hours per week by being able to order online, and we've seen a 10 - 15 percent lift in business while reducing our call center staff from seven down to one."

—Brian Grellinger, Director of IT, Doosan Infracore

Lowering total cost of ownership

Brian Grellinger, director of IT, Doosan Infracore, is able to manage the IBM Informix database, which supports about one million transactions per day, with just one full-time and one part-time database administrator. In contrast, one of the company's recent acquisitions uses a competing solution from Oracle. "Doosan just acquired another company, and they need about 18 or 20 people to manage an Oracle database with similar usage characteristics," Grellinger says. "We're doing the same thing with our Informix database with about one-tenth the staff."

Ensuring its business-critical data remains available even in the event of unplanned outages or downtime, Doosan Infracore can access its ERP system at a remote site through the use of IBM Informix High Availability Data Replication (HDR). "Thankfully, it's a feature we have never had cause to use, but it's a valuable asset for our business continuity should we ever need to," Grellinger says.

Solution components

Software

- IBM Informix® 11.5
- IBM Informix Genero 3.53
- IBM Tivoli® Storage Manager software

Hardware

- IBM Power Systems™ servers

IBM Business Partner

- Fourth Generation Software Solutions (Fitrix™)

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Doosan backs up its data using IBM Tivoli® Storage Manager software. The company uses IBM Power Systems™ as its server platform, including a pair of IBM Power Systems servers at its primary data center.

Achieving threefold business growth

Fitrix ERP software from IBM Business Partner Fourth Generation Software Solutions has provided a tool set that has allowed Doosan Infracore to create and maintain a highly customized ERP system. This ERP system has allowed it to efficiently manage its sales, production and accounting operations as its business has expanded over the past decade.

Powered by IBM Informix database software, the solution is as scalable and flexible as Doosan Infracore's business model. "Since implementing our ERP software, we've grown our business volume by about threefold, while actually improving efficiency and accuracy," relates Grellinger.

"Our market conditions change constantly, and we need to be able to change directions quickly to accommodate that change," Grellinger says. "We have four different product lines—construction equipment, machine tools, forklifts and natural gas engines—and our part sales used to serve all those product lines. Recently, the company decided they want these to be separate divisions reporting individually with their own inventories of parts, which wouldn't have been possible in our previous spreadsheet-based environment."

Doosan made the necessary changes in a timely fashion and in-house, thanks to the fact that the Fitrix tool set in conjunction with Genero gives Doosan unrestricted abilities to customize any area of their source code for an exact fit and does so in a highly organized and automated manner. "The flexibility that Fitrix gives us to make our own application changes in-house is invaluable," says Grellinger. "Wide open access to the ERP source code has allowed us to outmaneuver our competition and acquire and maintain a competitive advantage. Since we do a lot of our own developments and enhancements, we've gotten to the point where we can't really apply too many standard patches. So if we do come across an issue we can't fix ourselves, then Fourth Generation develops a solution for us. It's a great working relationship."

Retaining existing investments while boosting productivity

Grellinger and team are also improving productivity in-house by modifying the look and feel of legacy applications.

To develop graphical user interfaces (GUIs), Doosan Infracore used Informix Genero—an application development and deployment environment that enables users to keep their technology continually up-to-date without breaking the underlying software or creating huge support issues. This is an important feature that enables companies to fashion GUIs that are company-specific while retaining the value of legacy applications.

With Genero and Fitrix, Grellinger and team are now able to respond faster to changing market needs.

"With Genero, we're boosting productivity tremendously because now we can interact with Microsoft Excel spreadsheets, which we couldn't do before," explains Grellinger. "We can upload Excel data directly from our parent company into the system to set up part numbers very quickly. Before Genero, somebody would have had to spend weeks setting that up."

Boosting sales 10 - 15 percent with e-commerce

In order to create improved workflows to keep pace with growth and serve its dealers more efficiently, Doosan Infracore wanted to eliminate manual and paper-based processes. "Our ordering process was not very user friendly," explains Grellinger. "Most of our business came in through phone calls, faxes and emails. It meant a lot of waiting for information, and a lot of opportunities for errors to creep into the process, because much of that data needed to be rekeyed after it was received."

Using Fitrix and Informix to drive a new e-commerce web portal, Grellinger and team are delivering new efficiencies to customers while increasing visibility. "Using our new website, customers now have full visibility into their orders—everything from tracking numbers to what's on backorder, and where the order is in transit," Grellinger explains. "We've

also made available an electronic parts book, so customers can go to the website and look at the diagrams. And if they need a part they just click on it and order it right out of the parts book on the website."

The e-commerce solution benefits buyer and seller alike. "Since integrating our ERP system with our website, each dealer saves about five or six hours per week by being able to order online," reports Grellinger. "And we've seen a 10 - 15 percent lift in business while reducing our call center staff from seven down to one."

Accurate transactions a million times each day

Between the new web portal and traditional order channels, Doosan Infracore receives approximately 400 orders each business day. "Those 400 orders translate into about a million database transactions each day," Grellinger says. "With queries, warranties and updates, it's a lot of traffic."

With IBM Informix and Fourth Generation's Fitrix solution, Doosan Infracore can handle the increase in traffic while confirming the accuracy of its data. "Since transitioning to the Fitrix technology, I would estimate our error rate has dropped by between 30 and 40 percent," says Grellinger.

For more information

To learn more about IBM Informix database software, please contact your IBM sales representative or IBM Business Partner, or visit the following website: **ibm.com**/informix

You can get even more out of Information Management software by participating in independently run Information Management User Groups around the world. Learn about opportunities near you at: **ibm.com**/software/data/usergroup

For more information about Fourth Generation Software Solutions, visit: www.fourthgeneration.com

For more information about Doosan Infracore, visit: www.doosaninfracore.com/en