



Duas Rodas achieves 80 percent manufacturing productivity gains

New markets are potent fuel for business growth – but how can fast-growing enterprises ensure that all of their assets are performing efficiently enough to satisfy demand?

Faced with exactly this challenge, Duas Rodas replaced fragmented workflows with a single, end-to-end business process supported by SAP® ERP software. The solution is designed to help maximize the value of the company's multi-million-dollar investments in people, machinery and technology. The results include accelerated production planning, increased production efficiency and greater capacity to meet international demand, and Duas Rodas is ideally positioned to reach its ambitious international goals.

Unlock growth potential of international markets

Founded in 1925 in Jaraguá do Sul, Brazil, Duas Rodas has grown

to become one of the largest manufacturers of food and beverage additives in Latin America. Employing more than 1,400 people, the company has operations in Brazil, Argentina, Chile, Colombia, Peru and Mexico.

Through more than 27 sales agents worldwide, Duas Rodas exports its products to thousands of clients in Latin America, North America, Europe, Africa, and Asia.

To help achieve its aggressive business target of USD 450 million in sales by 2015, Duas Rodas wanted to establish itself as a leading player in international markets. As a first step on its growth journey, the company invested in research and development facilities, manufacturing plants and dedicated sales centers across Latin America. Julio Cesar van Vossen, CIO at Duas Rodas Industrial Ltda., says: "In the past, our business units operated independently – which presented a significant challenge as the business

Overview

Challenge

To achieve its \$450 million sales target, Duas Rodas wanted to expand internationally, but existing manufacturing assets were at the limits of capacity and it would be impossible to satisfy demand.

Solution

Duas Rodas designed new enterprise-wide business processes and best practices, and deployed SAP ERP applications on an IBM Power Systems server platform to support the new way of working.

Key benefits

Accelerates production planning by 80 percent, optimizing and increasing production from existing assets, which in turn helps satisfy demand and reach for the 2015 sales objective.

Business Challenge

To achieve its goal of USD 450 million in sales by 2015, Brazil-based food additives manufacturer Duas Rodas wanted to unlock business opportunities in international markets.

As part of its growth strategy, the company made multi-million-dollar investments in people, machinery and technology – but a lack of standardized processes made it difficult to bring manufacturing throughput in line with demand.

grew. “For example, because we could not easily integrate data on client orders with information on inventory levels and production planning, it was almost impossible to achieve the manufacturing output we needed to satisfy demand. To avoid missing out on potential sales opportunities, we were keen to find a way to boost the throughput of our existing assets.”

He continues: “We also recognized that decentralized processes introduced an element of business risk. Without a complete and accurate overview of our operations, it was difficult for senior managers to ensure consistent governance across the business, confirm compliance with local regulations and assess potential risks.”

Integrate information to boost efficiency

To eliminate information silos, Duas Rodas mapped its multiple existing processes, which included product development, manufacturing and logistics.

Working closely with representatives from across the business, the company designed an end-to-end, fully integrated business process – and determined the required changes to move from the current to the target state.

“We have relied on IBM Power Systems servers for a number of years, and have always been highly satisfied by the platform’s high performance and stability.”

Julio Cesar van Vossen

CIO

Duas Rodas

“After our planning exercise was complete, it was clear that our legacy management software would be unable to meet the requirements of a single, enterprise-wide process,” says Julio Cesar van Vossen.

“The previous solution was intended to serve the needs of much smaller companies, and only designed with the accounting requirements of Brazil-based businesses in mind. To support our vision of a truly integrated, international Duas Rodas, we realized that we needed to implement a comprehensive ERP solution.”

“Today, we can complete our daily production planning tasks in just 20 minutes – an improvement of 80 percent.”

Julio Cesar van Vossen

CIO

Duas Rodas

To enable a single business process, Duas Rodas implemented SAP ERP with applications for Finance, Controlling, Materials Management, Sales and Distribution, Production Planning, Research and Development, Project System, Quality Management, Plant Maintenance and Warehouse Management, together with the SAP Treasury and Risk Management application and the SAP Incentive Administration application by Vistex.

For actionable insights into business performance, the company deployed the SAP NetWeaver® Business Warehouse application with SAP NetWeaver Process Integration technology and the SAP Business Planning and Consolidation application, version for SAP NetWeaver.

Next, Duas Rodas implemented the SAP Manufacturing Integration and Intelligence application to support its product lifecycle management process, and installed the SAP Customer Relationship Management application with SAP Business Communications Management software to enable consistent customer service. To facilitate enterprise-wide governance, Duas Rodas deployed SAP solutions for governance, risk, and compliance.



Solution

Duas Rodas defined enterprise-wide best practices to break down operational silos and control business processes from end to end.

To support the new way of working, the company deployed SAP ERP applications on an IBM Power Systems server platform, and implemented IBM DB2 for Linux, UNIX and Windows with HADR to ensure high levels of availability for the mission-critical SAP ERP applications.

Selecting a world-class solution from SAP

After reviewing solutions from a number of different vendors, Duas Rodas selected SAP ERP software.

“We see SAP ERP software as nothing less than a world-class solution,” says Julio Cesar van Vossen. “In addition to an outstanding track record in similar implementations within the manufacturing industry, the SAP solution contained all of the functionalities we needed to support our new end-to-end business process – which convinced us that the software was the right fit for our requirements.”

Key Solution Components

Industry

Industrial Products

Applications

SAP® ERP; SAP NetWeaver® BW; SAP NetWeaver PI; SAP TRM; SAP Incentive Administration by Vistex; SAP BPIC; SAP Manufacturing Integration and Intelligence; SAP CRM; SAP Business Communications Management

Hardware

IBM® Power® 770 servers, IBM Storwize® V7000 Disk Systems

Software

IBM AIX®, IBM PowerVM®, IBM PowerHA®, IBM DB2® 9.7 for Linux, UNIX and Windows with high availability disaster recovery (HADR), IBM Tivoli® System Automation

Services

IBM Advanced Business Partner Perallis

Rock-solid IBM Power Systems server platform

With the SAP ERP solution at the heart of its international business operations, ensuring high levels of availability was a key priority.

To meet this requirement, the company chose the rock-solid reliability of an IBM® Power Systems™ server platform. Julio Cesar van Vossen says: “We have relied on IBM Power Systems servers for a number of years, and have always been highly satisfied by the platform’s high performance and stability. To deliver even greater levels of reliability, scalability and raw performance for our SAP ERP solution, we decided to upgrade to the latest POWER7® processor-based technology.”

Duas Rodas deployed one IBM Power® 770 server running IBM AIX® and connected to an IBM Storwize® V7000 Disk System, with an identical hardware configuration at a geographically separate data center. To deliver high availability for the SAP ERP applications, the company virtualized its compute resources with IBM PowerVM®, and implemented IBM PowerHA® for the virtual servers. “With IBM PowerVM virtualization, we are no longer restricted to the one-

“Delivering zero downtime to the business is a key priority, and IBM DB2 with HADR has helped us to achieve just that.”

Julio Cesar van Vossen

CIO

Duas Rodas

application-per-server model, and can host many virtual servers on a single machine,” notes Julio Cesar van Vossen. “Because our physical footprint is smaller, there is no need to expand our data centers, helping us to avoid additional capital expenditure.

“IBM PowerVM on POWER7 processor-based servers also enables us to manage business growth in a much more controlled way. For example, when we began the SAP ERP project, we had 17 virtualized servers; as our requirements grew, we scaled up to 59 virtualized servers. Despite a 247 percent increase in our number of virtual servers, our POWER7 processor-based platform

“IBM PowerVM on POWER7 processor-based servers also enables us to manage business growth in a much more controlled way.”

Julio Cesar van Vossen

CIO
Duas Rodas

accommodates the larger workloads easily. Because we can quickly and easily scale up systems to meet new demand, we can deliver a much more responsive service to the business.”

Delivering zero downtime with IBM DB2 HADR

“If our SAP ERP applications went offline unexpectedly, the consequences for our business could be extremely serious,” says Julio Cesar van Vossen. “To complement the high performance, reliability and availability of the IBM Power Systems platform for our SAP ERP applications, we chose IBM DB2® 9.7 for Linux, UNIX and Windows with HADR.” Working together with consultants from

IBM Advanced Business Partner Perallis, Duas Rodas established a high-availability configuration for its systems using the IBM DB2 high availability disaster recovery (HADR) feature.

Configured as a private network between its two data centers, HADR enables synchronous replication of the company’s mission-critical SAP ERP transaction data. Using IBM Tivoli® System Automation software included in the IBM DB2 license, Duas Rodas can almost instantly fail over production services to its secondary site, ensuring business continuity in the unlikely event of an unplanned outage.

“Delivering zero downtime to the business is a key priority, and IBM DB2 with HADR has helped us to achieve just that,” says Julio Cesar van Vossen.

“The HADR solution even enables us to perform essential maintenance tasks while the system is live, with no interruption to our SAP ERP applications. Furthermore, with IBM Tivoli System Automation controlling the failover of our production environment, we have the assurance of seamless business continuity in the event of an unexpected outage.”

Business Benefits

- **Accelerates production planning by 80 percent, enabling the company to boost the throughput of its existing manufacturing plants.**
 - **Boosts throughput significantly, helping to satisfy demand in key international markets and facilitating the USD 450 million sales objective by 2015.**
 - **Enterprise-wide operational overview enables senior management to ensure consistent governance, confirm local regulatory compliance and assess potential risks.**
-

Exceptional support

Before deploying the SAP ERP solution with IBM DB2 HADR, IBM and Perallis invited Duas Rodas to participate in a number of 'boot-camp' training sessions. "Throughout the solution implementation process, the support we received from IBM and Perallis has been faultless," says Julio Cesar van Vossen.

"The training sessions we attended were extremely valuable, and helped our team to get up to speed with management tools, such as SAP DBA Cockpit for IBM DB2, ahead of time. Armed with this knowledge, we were able to hit the ground running when the solution went live – greatly shortening our time-to-value."

Boosting production planning efficiency by 80 percent

With the SAP ERP solution in place, Duas Rodas has achieved its goal of implementing a unified business process across the business – breaking down information silos and delivering full visibility of company-wide performance to senior decision-makers.

"In the past, our multiple business processes made production planning a complex task that took up to two hours

"Higher efficiency, enabled by the SAP solutions running on our IBM Power Systems platform, is now helping us to drive up our manufacturing throughout significantly."

Julio Cesar van Vossen

CIO

Duas Rodas

per factory per day," says Julio Cesar van Vossen. "Thanks to our SAP ERP solution, we can automatically integrate accurate, real-time data on client orders, inventory levels and production planning in a single system – reducing the complexity of the manufacturing process, and increasing our efficiency dramatically. Today, we can complete our daily production planning tasks in just 20 minutes – an improvement of 80 percent. Higher efficiency, enabled by the SAP solutions running on our IBM Power Systems platform, is now helping us to drive up our manufacturing throughout significantly,

which will improve our ability to satisfy demand in key international markets.

“Additionally, our SAP ERP solution delivers a consistent, trusted source of information about each part of our business. This makes it significantly easier for our decision-makers to understand our exposure to governance, regulatory or operational risks – and helps them to take rapid action to address any inconsistencies.”

Enabling deeper insights into business performance

Based on the new enterprise-wide view of operations, Duas Rodas is using analytics technologies to deepen its understanding of business performance and uncover new ways to boost efficiency.

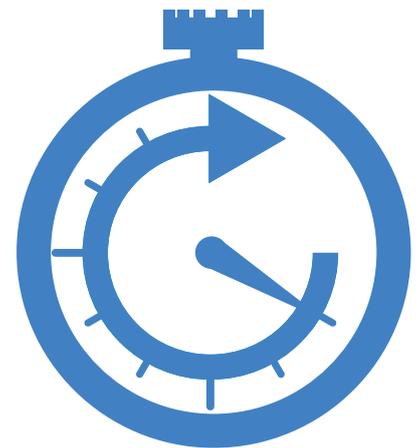
Combined with the IBM DB2 database, the company can deliver lightning-fast analytics query response times to decision-makers in the business.

“Analytics from the SAP NetWeaver Business Warehouse application is one of the features of the SAP solution that we are most excited about,” says Julio Cesar van Vossen.

“Using the SAP NetWeaver Business Warehouse application, we are already gaining insights into: how long each

manufacturing asset is running; how much time is required to fulfill each customer order; the quantity of raw materials used; and any deviations from the amounts of time and raw materials allocated to each customer order. The rich analytics data that the SAP solution will build can help us to better understand the real cost involved in producing our products, and fine-tune our business process to optimize efficiency.”

Julio Cesar van Vossen concludes: “The SAP ERP solution helps us achieve the integrated business process that we need to bring throughput up to the level of market demand. The supporting IBM Power Systems servers, IBM DB2 and high availability technologies ensure that we are able to operate 24/7 for a global marketplace, and the close partnership with IBM and Perallis means that we are well placed to achieve our USD 450 million sales target by 2015.”



Daily production planning tasks now complete in just 20 minutes – an 80 per cent improvement



IBM Deutschland GmbH
D-71137 Ehningen
ibm.com/solutions/sap

IBM, the IBM logo, and ibm.com are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. A current list of other IBM trademarks is available on the Web at "Copyright and trademark information" at <http://www.ibm.com/legal/copytrade.shtml>

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product or service names may be trademarks, or service marks of others.

This case study illustrates how one IBM customer uses IBM and/or IBM Business Partner technologies/services. Many factors have contributed to the results and benefits described. IBM does not guarantee comparable results. All information contained herein was provided by the featured customer and/or IBM Business Partner. IBM does not attest to its accuracy. All customer examples cited represent how some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

This publication is for general guidance only. Photographs may show design models.

© Copyright IBM Corp. 2014.



© 2014 SAP SE. All rights reserved.

SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP BusinessObjects Explorer, StreamWork, SAP HANA, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE in Germany and other countries.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials.

This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice.