CENIBRA aims for super-sustainable paper growth

Increasing its share of a 200-billion-dollar market with end-to-end processes integration from IBM, SAP, and SUSE

Triggered by the COVID-19 pandemic, demand for paper-based products has soared. Under pressure to meet challenging schedules and volumes, Celulose Nipo-Brasileira SA (CENIBRA), worked with IBM® Consulting™ to transform its manufacturing and logistics processes. CENIBRA selected next-generation SAP S/4HANA® solutions deployed on SUSE Linux Enterprise Server for SAP Applications, running on rock-solid IBM Power® E950 servers, with IBM FlashSystem® 5030 storage, empowering CENIBRA to sprint ahead of global competitors.

According to sector analysts, booming global demand for paper-based products is set to continue, with the market expected to swell by $1.32 billion between 2021 and 2025 (link resides outside of ibm.com). CENIBRA serves this surging industry with essential wood pulp and cellulose raw materials, sourced from eucalyptus trees grown on more than 254,000 hectares across 54 municipalities in the Brazilian state of Minas Gerais.

Each year, CENIBRA exports around 1.2 million tons of cellulose, generating more than US$500 million in revenue. With worldwide customers requesting rigorous delivery schedules, a key

challenge is to determine the optimal transportation mix, based on complex interactions between harvesting, manufacturing, logistics, fuel costs, and timings.

Additionally, CENIBRA is strongly committed to combating climate change, with a vigorous sustainability program supported by executive leadership. Reducing environmental impact is central to the company's drive for operational efficiency, and CENIBRA regularly publishes energy, water, carbon, sulfur, and re-use data.

In the past, CENIBRA relied on SAP ERP to support its manufacturing business, while its subsidiary CENIBRA Logistics used a third-party tool to manage transportation. Anamaria Oliveira, IT Information Systems and SAP Coordinator at CENIBRA, explains: "Because we could not easily share data between our two systems, it was

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extremely difficult to calculate logistics costs and delivery lead times accurately. We looked for a way to improve our processes to make it easier to quote competitively, optimize logistics, and deliver on time."

Based on its long history of success with SAP ERP, CENIBRA decided to move both companies to SAP S/4HANA, to enable near-real-time data that would support faster, better-informed decision-making.

Miguel Antunes, IT and Infrastructure Coordinator at CENIBRA, remarks, "Our existing on-premises IT infrastructure was approaching end-of-life, and the operating system was no longer supported by SAP. To build integrated processes on SAP S/4HANA, first we looked for a robust, high-performance server platform that would give us the capacity and flexibility to grow with our rapidly expanding business."

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Miguel Antunes, IT and Infrastructure Coordinator, CENIBRA

Shaping integrated workflows

After an in-depth technical analysis of potential IT platforms, CENIBRA determined that the combination of IBM Power E950 servers and IBM FlashSystem storage offered the optimal solution for its next-generation SAP S/4HANA applications.

"We found that IBM Power E950 servers deliver up to 30 percent higher performance than equivalent x86 solutions," recalls Antunes. "Using IBM Logical Partition [LPAR] technology, we can divide up the resources of our IBM Power servers and make them function as if they were multiple independent systems, tuned to maximize efficiency.

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To help it to deploy the new IT infrastructure, build integrated

business processes, and configure SAP S/4HANA to support the new way of working, CENIBRA engaged an expert team from IBM Consulting.

Oliveira comments: "We ran a competitive public tender based on the top SAP S/4HANA implementation partners as evaluated by Gartner. Of all the companies we considered, IBM Consulting performed the best by far against our core criteria."

Antunes adds: "IBM Consulting bought a proven methodology for greenfield SAP solution implementations, and the experience of many successful deployments in our industry. It was clear from the outset that IBM had the capabilities to steer our digital transformation effectively."

Working side-by-side with the CENIBRA IT team, IBM Consulting reviewed

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Miguel Antunes, IT and Infrastructure Coordinator, CENIBRA

existing processes at CENIBRA and CENIBRA Logistics, and mapped out digital workflows to bring operations at both companies into closer alignment.

Together with local IBM Business Partner PC Place, IBM Consulting also deployed the IBM Power E950 servers. Each server hosts six IBM PowerVM® virtual machines (VMs) running the SUSE Linux Enterprise Server (SLES) for SAP Applications operating system—a fully supported hardware and software stack that offers extreme performance and dependable reliability for SAP workloads. Two VMs are dedicated to the company's main SAP S/4HANA database, while the remaining four

VMs support the company's SAP S/4HANA applications.

To ensure round-the-clock availability for its mission-critical systems, the company uses the SUSE Linux Enterprise (SLE) High Availability Extension to replicate data between its primary and secondary data center sites.

Flávio Gandra, SAP specialist at CENIBRA, says: "SLES for SAP Applications stood out because of its strong interoperability with IBM and SAP solutions, in particular given the optimization of the operating system for IBM Power hardware. In addition, SAP

and SUSE provide integrated technical support for their software. As a result, the time to resolve any issues with SAP S/4HANA on SLES is reduced compared to other operating systems, in our experience."

Oliveira comments: "Our deployment and migration coincided with the COVID-19 pandemic, which added an additional layer of complexity to the project. IBM Consulting rose to the challenge, ensuring that we had all the resources we needed to keep the work on track. Thanks in large part to the efforts of IBM Consulting, we went live with SAP S/4HANA on time and within budget."

Ready to scale

By deploying SAP S/4HANA on IBM Power solutions, CENIBRA gains a scalable, fully supported platform to help manage its operations efficiently from end-to-end. Today, SAP S/4HANA solutions enhance the company's ability to manage high-volume warehouse operations, logistics, and financial risk—enabling the company to maintain a sharp competitive edge as business volumes grow.

"One of the biggest advantages we've seen since moving to SAP S/4HANA is fine-grained data on transport costs," says Antunes. "It is now far easier to model logistics costs and lead times, which allows us to quote competitively while protecting our margins. We are also gaining deeper insight into our

operational costs, such as the fuel and maintenance costs of our harvesting machines, which helps us identify opportunities to further improve efficiency."

CENIBRA is driving business process improvements across the board, including everything from faster payroll processing to end-of-month closing. Oliveira confirms: "In-memory

processing from SAP S/4HANA means that financial reporting is up to 180 times faster. As a result, we can complete our month-end closing process on time, every time, which offers our decision-makers timely insight into our financial performance."

As part of the SAP S/4HANA deployment, CENIBRA has enabled the SAP Fiori design system, which empowers employees to access the SAP solution directly from a smartphone or tablet. Antunes comments: "The ability to get up-to-date information at the touch of a screen is especially valuable for our warehouse teams. Before, employees scanned items in the warehouse to a third-party application using custom hand-held devices, which replicated to our SAP ERP platform several hours later. Today, our team can scan inventory using their mobile devices directly into SAP S/4HANA, offering us a real-time view of stock levels."

With the flood of new data and transactions enabled by SAP S/4HANA, the CENIBRA team also planned to improve its business continuity in case of disaster. By harnessing the performance of IBM Power servers and IBM FlashSystem storage, CENIBRA ensures it can complete daily data backups within the allotted time windows, significantly reducing the business risk of data loss.

"Since moving to IBM Power E950 servers and IBM FlashSystem 5030 storage, we have accelerated our daily backups from four hours to just two hours, which helps us protect our vital business data," says Oliveira.

Going forward, CENIBRA is already exploring new ways to harness its SAP solution to streamline its processes. For example, the company plans to use SAP S/4HANA and robotic process automation (RPA)

technology to automatically extract and post data from PDF invoices, which has the potential to save many hours of manual work each month. Additionally, the move to SAP S/4HANA lays the foundations for the next phase of its digital transformation initiative, which will see CENIBRA move to the cloud. In the future, the company will explore IBM Power Systems Virtual Server as part of its cloud strategy.

"Moving to SAP S/4HANA on IBM Power Systems with SLES for SAP Applications with the help of IBM Consulting is an important step in achieving our ambitions around cloud," concludes Antunes. "Thanks to SAP and IBM, CENIBRA will be able to meet customer demands for capacity and delivery schedules, and is in a strong position to pursue an ambitious global business growth strategy."

About Celulose Nipo-Brasileira SA (CENIBRA)

Headquartered in Belo Oriente, Brazil, Celulose Nipo-Brasileira SA (CENIBRA) is one of the world's leading producers of bleached eucalyptus pulp for the manufacture of paper and cardboard products. With an annual production capacity of 1.2 million tons, CENIBRA exports 98% of its pulp to markets in Asia, Europe and North America. The company employs some 4,000 people, and generates revenues of approximately 3.7 billion Reais (US$700 million).

Solution components

- IBM® Consulting™
- IBM FlashSystem® 5030
- IBM Power® E950
- IBM PowerVM®
- SAP S/4HANA®
- SUSE Linux Enterprise Server for SAP Applications