Business challenge

To claim the top spot in India's pulp and paper industry, TNPL is rapidly expanding its business—but the hardware platform for its mission-critical Oracle E-Business Suite solutions was fast approaching capacity.

Transformation

TNPL engaged IBM® Systems Lab Services and SBA Info Solutions to move its Oracle E-Business Suite solutions to IBM Power® Systems S922 servers running IBM AIX® and IBM Storage.

Manoharan K
Chief Information Officer
Tamilnadu Newsprint and Papers Limited

Business benefits:

>2x increase
in end-user application performance boosts productivity

66% faster
reporting supports timely, well-informed decision-making

66% faster
backups and high-availability configuration help protect critical data

Tamilnadu Newsprint and Papers Limited
Achieving growth, operational efficiency, quality and environmental goals with IBM and Oracle

Founded in 1985, Tamilnadu Newsprint and Papers Limited (TNPL) is a leading manufacturer and marketer of packaging and paper products. With manufacturing facilities across Tamilnadu, India, TNPL produces 600,000 tons of paper and packaging board products a year, and generates annual revenues of approximately USD 543 million.

"We have boosted end-user application performance for Oracle E-Business Suite by a factor of more than two on average with IBM Power Systems."

Manoharan K

Chief Information Officer

Tamilnadu Newsprint and Papers Limited

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Riding a wave of growth

As India's economy booms, the country will be the world's third-largest consumer market by 2030. Tamilnadu Newsprint and Papers Limited (TNPL) aims to leverage these new opportunities to fuel its business growth, and take its place as the country's largest manufacturer of paper and packaging products.

In the last decade TNPL expanded its production capacity from 235,000 tons per year to 600,000 tons per year. TNPL plans to expand further to one million tons per year, and venture into new product lines in the next decade. As TNPL builds new facilities, its current employee population of 2,500 people will likely grow by more than 25 percent.

Achieving these ambitious goals presents some tough challenges. TNPL is under constant pressure to balance operational efficiency with quality products to compete effectively with low-cost international manufacturers. Simultaneously, TNPL must maintain full compliance with increasingly stringent environmental protection regulations. To help manage this, TNPL converts mill-waste materials into cement products, and converts effluent into irrigation water at its effluent treatment plant.

Rapid expansion, legacy infrastructure

TNPL relies on its Oracle E-Business Suite solution to drive its business operations from end-to-end. TNPL's Oracle Database size is 3TB, which is currently growing at the rate of 600GB per year. With the planned massive increases in workload—and with ERP system users set to increase by 25 percent—the company knew that it would be essential to move to a new hardware platform to support the expanded business.

Manoharan K, Chief Information Officer, remarks, "In recent years, we've seen an increase in the number of ERP users and a sharp rise in demand for new workloads like data analytics and the industrial internet of things [IIoT]. Our aging legacy server and storage infrastructure was reaching capacity, and becoming a cause of increasing concern. If our Oracle E-Business Suite system goes offline, it will have severe impact on our business operations—from production in our factories to the movement of goods from our warehouses to the end customer."

He confirms, "Keeping our business systems running smoothly with the legacy hardware infrastructure was becoming a delicate balancing act, and we decided to look for a future-ready hardware platform to support the long-term goals of our company."

Selecting a future-ready platform

TNPL went through a tender process to select the new platform for its Oracle E-Business Suite solution. The company selected the high-performance IBM Power Systems S922 servers running IBM AIX and IBM Storage, with backup to an IBM TS4300 Tape Library managed by IBM Spectrum™ Protect.

"By working with IBM Systems Lab Services and SBA Info Solutions Pvt. Ltd to move to IBM Power Systems servers and IBM Storage, we have the dependable platform we need to keep sprinting toward our 2030 growth goal."

Manoharan K, Chief Information Officer, Tamilnadu Newsprint and Papers Limited

"Two of our most important criteria for the new solution were performance and price," recalls Manoharan K. "We wanted at least twice the performance and capacity of our existing platform at a competitive price point. At the same time, we wanted a platform that would enable us to take advantage of the latest technology advances—helping us to drive more efficient and cost-effective operations."
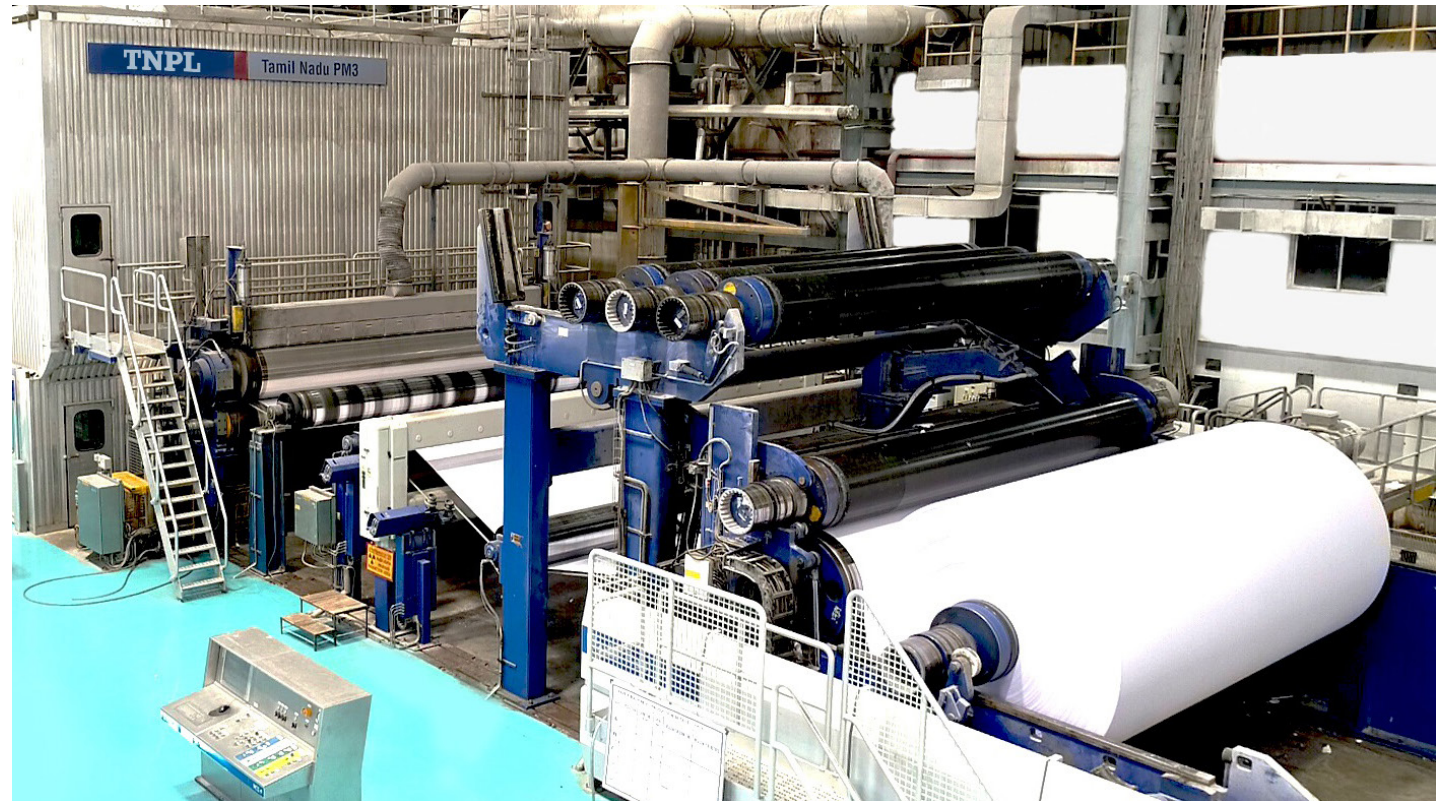
Proving the concept

After reviewing IBM client references, TNPL was confident that the IBM POWER9™-processor-based systems would be compatible with its Oracle solutions. TNPL invited IBM Systems Lab Services to perform an in-depth proof-of-concept exercise to ensure that the platform would meet its rigorous requirements.

"While TNPL approached four OEMs, only IBM performed the proof of concept to prove that its solution met our performance target," explains Manoharan K. "We use a significant amount of custom and legacy Oracle code, and before we committed to the new platform we wanted to ensure that the IBM POWER architecture would be fully compatible."

He continues, "We were extremely impressed by how quickly IBM Systems Lab Services mobilized their resources to deliver the proof of concept—the team exceeded all of our expectations. The project was a great success, and we validated that the new environment would meet and exceed our performance requirements without any compatibility-related issues."

Engaging expert partners

Working together with IBM Systems Lab Services and IBM Silver Business Partner SBA Info Solutions Pvt. Ltd, TNPL deployed two IBM Power Systems S922 servers in its primary data center. The solution is deployed in an active / passive configuration for high availability with IBM PowerHA®. A disaster recovery site was deployed with an additional server that brought down the company's recovery time objective (RTO) from four hours to one hour, ensuring compliance with ISO 27001. TNPL has contracted SBA Info Solutions Pvt. Ltd to provide ongoing support for the platform, with 24/7 access to expert technical assistance, 365 days a year.

Manoharan K says, "The combination of IBM Power Systems servers and IBM Storage offers us the flexibility we need to support a fast-growing business. On the server side, as our number of users, analytics volumes and IIoT workloads grow, we can scale up gradually by activating dormant processor capacity within the system."

He adds, "On the storage side, we can operate a mix of solid-state and hard-disk drives in a single, compact footprint—helping us to deliver low-latency performance without sending costs soaring. And with IBM Spectrum Protect managing our backups, we have the peace of mind that our critical business data is always safe."

"While TNPL approached four OEMs, only IBM performed the proof of concept to prove that its solution met our performance target."

Manoharan K, Chief Information Officer, Tamilnadu Newsprint and Papers Limited

By working together with IBM Systems Lab Services to integrate the IBM POWER9-processor-based systems, TNPL achieved a smooth deployment.

"This was a complex project involving changes at multiple layers of the technology stack. IBM Systems Lab Services and SBA Info Solutions Pvt. Ltd worked together seamlessly, and their skills and expertise were exceptional," comments Manoharan K.

"Although we allocated 16 hours of total downtime to complete the migration, the IBM team helped us complete the process in under 12 hours, and we couldn't be happier with how the project went overall."

He continues, "We asked IBM and SBA Info Solutions to ensure the new hardware platform went live within three months of the date of our purchase order, since the annual maintenance contract of our legacy hardware infrastructure was coming up for renewal. TNPL was delighted when the new solution went live within just two months."

He adds, "We were particularly impressed with the depth and breadth of the IBM Systems Lab Services team's technical expertise. We received premium-quality support throughout the engagement, and at every step of the way the IBM team exceeded all the expectations we had around delivery performance. Working with IBM on this project was an excellent experience, and we wouldn't hesitate to recommend them to others."

Green light for growth

With Oracle E-Business Suite running on IBM infrastructure, TNPL has gained the headroom it needs to continue the rapid expansion of its business.

Today, 550 people across all levels of the business—from engineers and managers on the factory floor to officers and executives in the back office—rely on the IBM and Oracle solutions to drive their business operations. The IBM solutions also meet the storage and backup needs of the company's Zimbra Collaboration Suite e-mail system and Alfresco Content Services enterprise content management system.

"When we began working on this project, we aimed to double our application performance," explains Manoharan K. "Thanks to IBM Power Systems S922 servers and IBM Storage, we have boosted end-user application performance for Oracle E-Business Suite by a factor of more than two on average, and some reports and programs have seen more than seven times faster performance."

He continues, "This helped to cut the time taken by the period closure programs by half. The operational and management teams can now get access to near real-time data faster than ever, contributing to timely and better-informed decision making. The IBM Storage solutions will support the increased demand on our ERP system as we move toward TNPL's vision of one million tons of production capacity in the coming decade."

He adds, "Crucially, we have eliminated the short-term outages that were common on the legacy hardware infrastructure, ensuring that our business operations run flawlessly 24/7. All of our core business systems—including Oracle E-Business Suite and Oracle Database—are now running smoothly on the new platform."

Protecting critical data

TNPL ensures that its operations are well protected in the event of an unplanned downtime at its primary data center with the failover clustering enabled by IBM PowerHA and the backup capabilities of IBM Spectrum Protect.

The company now completes regular data backups to the IBM TS4300 Tape Library in just three hours, 66 percent faster than previously possible.

TNPL can also switch over operations to its disaster recovery site within just 30 minutes—83 percent faster than the previous environment.

Looking to the future

Based on the success of its migration to the IBM platform, TNPL is now in a strong position to drive new, data-driven initiatives to support its growing business. The company is currently exploring opportunities to enhance its facilities with IIoT, advanced analytics and mobile solutions. TNPL also plans to enable cloud backups for its mission critical data.

With IBM POWER9-processor-based systems at the heart of its business, TNPL has the scalable, high-performance infrastructure it needs to support innovative, data-driven services in the future.

For example, by instrumenting its mills with IIoT devices and capturing sensor data and Open Platform Communications (OPC) tags, TNPL will be able to harness predictive modeling and prescriptive analytics to maximize the availability and production throughput of its plant and machinery, optimize the quality and minimize the consumption of input materials, and reduce its variable costs. These capabilities will be crucial to improve operational efficiency and compete with international players in the domestic and global market.

Manoharan K concludes, "Our Oracle E-Business Suite solutions are at the foundation of everything we do. By working with IBM Systems Lab Services and SBA Info Solutions Pvt. Ltd to move to IBM Power Systems servers and IBM Storage, we have the dependable platform we need to keep sprinting toward our 2030 growth goal—beginning with two new production facilities opening in the next 36 months."

"The combination of IBM Power Systems servers and IBM Storage offers us the flexibility we need to support a fast-growing business. On the server side, as our number of users, analytics volumes and IIoT workloads grow, we can scale up gradually by activating dormant processor capacity within the system."

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Solution components

- IBM® AIX®
- IBM Storage
- IBM Systems Lab Services
- IBM Power® Systems S922
- IBM PowerHA®
- IBM Spectrum™ Protect
- IBM TS4300 Tape Library
- Oracle E-Business Suite
- Oracle Database
- SBA Info Solutions Pvt. Ltd

Take the next step

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