Raffles Medical Group transforms laboratory systems with future-ready technology

Raffles Medical Group

Industry: Private Healthcare Services

The Customer

Leading private healthcare provider in Asia, offering integrated medical services across primary care, specialist disciplines, and diagnostics

Raffles Medical Group is a healthcare leader delivering advanced medical services across Asia, with operations in Singapore, China, Vietnam, Cambodia, and Japan.

Helmed by their flagship hospital Raffles Hospital Singapore and catering to both local and international patients, the group serves hundreds of thousands of patients annually just in Singapore alone.

RafflesMedicalGroup

Challenges

- Overcome slowdowns and human error from manual workflows.
- Needed to transition from siloed data and processes.
- Needed to scale innovation and technology stack to support growth and expansion while supporting evolving healthcare standards.

Solutions

- Implemented a robust LIS to connect front/backend teams and laboratories.
- Introduced automation to streamline operations and enhance efficiency.
- Created a cohesive model by centralising information for better care delivery.

Results

- Delivered unified care delivery model easily scalable for future expansion.
- Enhanced reporting accuracy.
- Boosted overall patient safety.

> " This new LIS is a game-changer. Orchestrating analysers, e-ordering, patient billing, and meeting compliance — all in one system alone — is huge for us. It's a system built for today and ready for tomorrow,."
>
> **— Anastacia Pajarillaga**
> Head of Department of Laboratory,
> Raffles Medical Group, Singapore

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The Challenge

Modernising laboratory systems to enable automation, seamless integration, and scalability

As Raffles Medical Group expanded its footprint and embraced digital transformation, it required a robust and comprehensive Laboratory Information System (LIS). The goal was clear, to create an integrated platform that could seamlessly connect their front and backend teams to laboratories, support automation, and scale easily for future growth.

Raffles Medical Group's vision was to move beyond existing manual workflows, which could sometimes slow operations with potential for human errors, toward a streamlined, automated environment. With a growing network of laboratory users (hospitals, medical clinics, and other laboratories), the goal was to unify data and processes, transitioning from siloed operations to a more cohesive care delivery model. This strategic shift also aimed to proactively address evolving healthcare standards, supporting not just compliance, but exemplary reporting accuracy and patient safety.

> " Given the scale of our LIS, we knew overhauling it would be a massive undertaking – it could take years just to roll out across Singapore alone."
>
> **— Anastacia Pajarillaga**
> Head of Department of Laboratory,
> Raffles Medical Group, Singapore

Raffles Medical Group was ready to embrace a comprehensive, future-ready solution. Their ambition: to integrate departments, ensure robust regulatory compliance, optimise resources, elevate quality control, foster sustainability, and introduce a vital new blood bank capability.

"When we looked at Raffles Medical Group's vision, we saw an incredible opportunity. It wasn't just about technical upgrades; it was about empowering their teams to do even more," explains Ignatius Wong, Senior Director, Product Management at Lumen Technologies Asia-Pacific. "We knew that by evolving their lab systems, we could help them streamline workflows, enhance patient safety, and ultimately build a future-ready foundation for continued growth and innovation in healthcare."

The Solution

All-in-one LIS: Automated, Compliant, and Future-Ready

To bring this vision to life, Lumen didn't just upgrade Raffles Medical Group's LIS. They conceptualised, designed, and implemented a next-generation solution packed with advanced features and custom builds – ready to dramatically boost efficiency, enhance patient safety, and ensure support for regulatory compliance.

The first step involved completely modernising the LIS's underlying technology. Lumen developed a robust architecture that ensures seamless workflows and integrated data pipelines, establishing a foundation where every piece of information is traceable and accurate – critical for patient safety and operational precision.
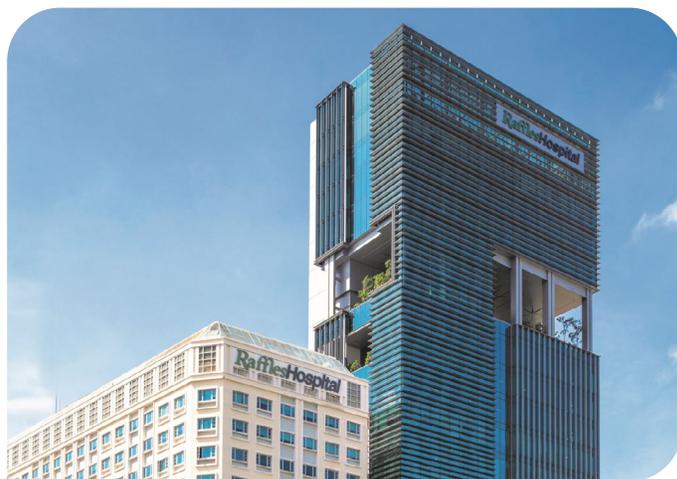
Automation became central. Manual data entry was drastically reduced, minimising errors and speeding up workflows. The new system seamlessly integrated with Raffles Medical Group's Electronic Medical Record (EMR), billing platforms, and other laboratory systems, ensuring smoother daily operations and enhanced departmental coordination. This immediately cut waiting times and elevated accuracy, significantly improving the patient experience.

To assist Raffles Medical Group in proactively managing regulatory requirements with real-time oversight, Lumen enabled the LIS to connect with relevant national health data reporting systems. This integration means continuous monitoring, timely reporting, and helps maintain robust compliance with current healthcare regulations.

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The new solution also introduced advanced billing and analytics engines. These tools automate financial processes, provide actionable insights into performance, and incorporate quality control validations for laboratory systems – ensuring operational excellence at every single stage.

Finally, sustainability was a core design principle. By embracing paperless ordering, significant cuts were made in paper use – freeing up valuable storage space previously hogged by old request forms. It's a win for efficiency, and the planet!

With high-availability infrastructure, the system is ready for Raffles Medical Group's future growth, including regional expansion. This means the LIS can grow and evolve right alongside the group's ambitions, without compromising on performance or compliance.

The Benefits

Benefits in Action: Safer, Smarter, and More Scalable Labs

The modernised LIS has transformed Raffles Medical Group's laboratory operations, setting a new benchmark for efficiency and safety – thus building greater trust and reinforcing their leadership in delivering superior patient care.

A key to this success was Lumen's proactive, client-centric approach. In envisioning the transformation, Lumen offered Raffles Medical Group visibility into the solution's real-world application and future operations, including a reference site visit. Lumen proposed the architecture and technology stack combined with implementation insights that would elevate Raffles Medical Group's LIS capabilities: consistently fast response times, remarkable stability, with minimal downtime.

The rollout was incredibly smooth, thanks to the DevOps approach. By creating dedicated testing and simulation environments within Raffles Medical Group's own setup, their team could get hands-on understanding of every iterative improvement. This ensured a seamless launch, with staff also empowered for future growth and scalability.

Lumen's winning proposal combined ready-to-deploy features with tailored customisations. It shortened timelines, and reduced costs with minimal disruption to daily operations. To serve the diverse Asian market, Lumen built in multi-language flexibility.

The impact was immediate: requesting doctors reported faster receipt of results, a testament to the system's newfound efficiency. "Lumen's ability to seamlessly blend proven features with essential customisations was invaluable. Envisioning the future together gave us the confidence to choose them as our partner to advance our digital goals," Pajarillaga added.

Raffles Medical Group's partnership with Lumen clearly demonstrates the incredible potential of modernising healthcare. By addressing critical operational challenges, automating workflows, championing innovation, and supporting robust compliance, the new LIS empowers the group to deliver high quality patient care while confidently preparing for future growth – enhancing Raffles Medical Group's leadership position in private healthcare.

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