

## Alcon strives to position Singapore as a testimony to the advancement of vision care manufacturing

18 July 2025 | Opinion

**"By 2050, an estimated 50% of the world's population will be myopic. In Asia, the prevalence of myopia exceeds 80% in many countries. We are strategically investing on Tuas manufacturing facility strengthening Singapore's role as a strategic hub for innovative vision care solutions" explains Wong Chiak Wu, Vice President, Manufacturing Plant Management – Single Site at Alcon**



### Wong Chiak Wu, Vice President, Manufacturing Plant Management – Single Site at Alcon

Alcon, the global leader in eye care expanded its state-of-the-art manufacturing and logistics facility in Tuas Biomedical Park, Singapore. Senior Minister of State for the Ministry of Trade and Industry, Ms. Low Yen Ling graced the event to commemorate Alcon's two decades of innovation, high-precision manufacturing and contribution to the global eye care industry. Tuas facility is one of Alcon's largest high-tech manufacturing facilities, equipped with advanced automation, smart manufacturing systems, and industry 4.0 capabilities, setting elevated standards for eye care portfolio and technologies worldwide.

Driving Excellence in Sustainable Manufacturing, the new facility expansion strives to reinforce Singapore's role as a key hub for Alcon's manufacturing operations in Asia. Following the launch event, in an exclusive interaction with Biospectrum Asia, **Wong Chiak Wu, Vice President, Manufacturing Plant Management – Single Site at Alcon** shared a wider outlook of the company's strategic vision aligning with emerging eyecare industry dynamics.

- **How does Alcon's new manufacturing facility in Asia enhance manufacturing processes and product innovation by leveraging automation, real-time data analytics, and digital simulations?**

The currently completed Tuas facility in Singapore is one of Alcon's largest high-tech manufacturing sites globally. It incorporates advanced automation, real-time digital systems, and Industry 4.0 capabilities to meet growing global demand for

our innovative contact lenses portfolio.

The facility's expansion reinforces Singapore's role as a key hub for Alcon's manufacturing operations in Asia. The newly completed site features dedicated production lines optimizing efficiency processes that ensure consistent lens quality and wearer comfort. Our use of patented surface innovations, such as SMARTSURFACE® Technology—enhances moisture retention for prolonged, all-day comfort. The new technologies at this site allow us to respond faster, reduce potential disruptions, and ultimately deliver better-performing contact lenses with comfort and clarity wearers need in everyday life.

- **How is Alcon's manufacturing facility in Asia setting industry benchmarks in MedTech production? How does the new facility overcome conventional limitations?**

Our state-of-the-art Singapore facility reflects the future of smart manufacturing in MedTech. Featuring high levels of automation, integrated digital systems, and sustainability-focused design, it delivers energy and water savings, waste reduction, and improved throughput.

This site was built with both operational excellence and environmental performance in mind. Our Tuas site achieved zero waste to landfill, and by embedding advanced automation and integrated digital systems, we're able to deliver energy and water savings, waste reduction, and improved throughput. Together, these capabilities allow us to deliver high-volume, high-quality output—sustainably, reliably, and with the agility needed to serve a fast-changing vision care landscape.

- **How does Precision Manufacturing and Smart Operation Management enable Alcon to scale innovation efficiently and troubleshoot production disruptions? What are the implications for the Asian vision care industry?**

At Alcon, precision manufacturing and smart operations are critical to how we deliver high-quality, high-volume vision care solutions at scale. Our Smart Manufacturing Operations Management (S-MOM) system integrates planning, scheduling, and supply chain logistics—reducing planning time by over 80%, from three days to 2-3 hours per week.

We also monitor Real-Time Intelligent Overall Equipment Effectiveness (OEE) Monitoring to optimize machine performance and minimize downtime. To enhance the skills set of our associates, we deploy Augmented Reality (AR) for training, enabling simulations of machine maintenance and disruptions situations.

These advanced capabilities, housed within our digitally integrated Alcon Manufacturing & Logistics Singapore facility, position us to meet growing demand across Asia with agility, consistency, and innovation.

- **Will the new facility harness AI to reshape vision care by improving risk prediction, screenings, diagnosis, pathogenesis, and treatment paradigms?**

At Alcon, we are reimagining what's possible in MedTech manufacturing by embedding a future-forward mindset into how we operate. Our Singapore facility plays a key role in that journey—by leveraging data and digital insights, we are able to improve responsiveness, drive smarter decision-making, and create more scalable and resilient operations. This proactive approach helps ensure uninterrupted operations, which is essential for consistently producing advanced lenses like PRECISION1® with SMARTSURFACE® Technology. These innovations contribute to delivering superior comfort and clarity to millions of wearers worldwide.

- **How does Alcon's strategic outlook align with Singapore's goal of high-tech and precision-driven manufacturing? What does it hold for the Singapore ecosystem?**

Singapore serves as a strategic anchor in Alcon's regional supply chain. The Tuas facility not only reflects our commitment to precision-driven manufacturing but also strengthens our ability to meet global demand for innovative vision care products.

Singapore's strong infrastructure, skilled workforce, and innovation ecosystem make it an ideal location for our high-tech manufacturing operations. We see this partnership as mutually reinforcing—contributing to national goals while advancing Alcon's mission to help people see brilliantly.

This state-of-the-art facility underscores Singapore's position as a leader in precision manufacturing and medical technology, supporting the Singapore government's ambition to create 13,400 new high-value manufacturing jobs by 2025. The expansion is expected to create high-value roles at Alcon, while training grants from the Economic Development Board are helping our associates upskill in new and emerging technologies, strengthening both talent development and innovation capabilities in the country's MedTech sector.

- **Could you brief the investment and fund allocation strategies Alcon adopted to design these Smart Manufacturing and AI-driven Innovations in driving MedTech solutions?**

Our investment in the Tuas facility represents a strategic commitment to Singapore and to advancing smart manufacturing in the MedTech sector. This expansion reflects our shared commitment to high-tech, precision-driven manufacturing and reinforces our ability to meet growing global demand for innovative vision care products.

Beyond technology, Singapore's collaborative innovation ecosystem has been instrumental in our success. We've partnered with the Singapore Economic Development Board through the Partnerships for Capability Transformation (PACT) Scheme to advance mold development for key production lines, and with SIMTech to complete eight digital transformation projects, enhancing site efficiency and productivity through advanced automation and data systems.

With talent as a key enabler of innovation, Alcon is committed to nurturing the next generation of MedTech professionals. Through partnerships with local educational institutions and workforce development programs such as the Talent Advancement Program and the Alcon Education Assistance Program, Alcon continues to build capabilities in precision engineering, biomedical sciences, and automation, contributing to the expansion and advancement of the country's MedTech sector.

- **What are the current market dynamics in the Vision-care industry? How can Asia capitalize on the potential and tackle the challenges ahead?**

The need for eye care has never been more critical. [By 2050, an estimated 50% of the world's population will be myopic](#), a vision condition more commonly known as "nearsightedness." In Asia, the prevalence of myopia exceeds 80% in many countries, and Alcon is well positioned to help meet this growing demand through our innovative contact lenses product portfolio.

Through smart manufacturing, we ensure precision and consistency in products like PRECISION1®, which feature patented SMARTSURFACE® Technology for all-day comfort. Our investment in digital and automated systems enables us to maintain excellence in production and better meet the growing global demand for vision care solutions.

- **Considering current Myopia scenarios, how would you configure vision care objectives? As technology evolves, how should future treatment modalities adapt?**

While Alcon Manufacturing & Logistics does not produce or develop treatment modalities, our focus is on delivering high-quality contact lenses that address the needs of today's vision care consumers. Through smart manufacturing, we ensure precision and consistency in products like PRECISION1®, which feature patented SMARTSURFACE® Technology for all-day comfort. Our investment in digital and automated systems enables us to maintain excellence in production and better meet growing global demand, especially as myopia prevalence increases in Asia.

- **Looking back on 20 years in Singapore, what does the opening of the expanded Tuas facility represent for Alcon's next chapter in Asia's MedTech landscape?**

Alcon is honored to mark its 20th anniversary in Singapore, a significant milestone reflecting two decades of innovation and high-precision manufacturing in the region. Our expanded Tuas manufacturing facility strengthens Singapore's role as a strategic hub for our operations in Asia, supporting the growing global demand for advanced vision care products.

With continued investments in technology, talent, and sustainability, Alcon remains committed to contributing to Singapore's vibrant MedTech ecosystem and helping millions of people see brilliantly worldwide.