

SHAPING INNOVATION, TRANSFORMING TOMORROW

A*STAR ANNUAL REPORT APRIL 2025 - MARCH 2026

Agency for Science, Technology and
Research (A*STAR) Annual Report and
Audited Financial Statements 2025/2026
S.154 of 2026

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Ordered by Parliament to lie upon the Table:
10 September 2026



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About A*STAR

A global leader in science, technology, and open innovation.

Our Mission

We advance science and develop innovative technology to further economic growth and improve lives.

The Agency for Science, Technology and Research (A*STAR) drives mission-oriented research that advances scientific discovery and technological innovation. We play a key role in nurturing and developing talent and leaders for our research institutes, the wider research community, and industry.

Our research creates economic growth and jobs for Singapore. As a Science and Technology Organisation, we bridge the gap between academia and industry in terms of research and development. In these endeavours, we seek to integrate the relevant capabilities of our research institutes and collaborate with the wider research community as well as other public sector agencies towards meaningful and impactful outcomes.

Our Vision

A*STAR is a catalyst, enabler, and convener of significant research initiatives among the research community in Singapore and beyond.

Through open innovation, we collaborate with our partners in both the public and private sectors, and bring science and technology to benefit the economy and society.

Together with the other public sector entities, we develop industry sectors by: integrating our capabilities to create impact with multinational corporations and globally competitive companies; partnering local enterprises for productivity and gearing them for growth; and nurturing R&D-driven start-ups by seeding for surprises and shaping for success.

Our research, in addition, also contributes to societal benefits such as improving outcomes in healthcare, urban living, and sustainability. These serve to enhance lives in Singapore and beyond.

Subsidiary Company

Name of subsidiary company
Accelerate Technologies Pte Ltd (A*ccelerate)
% of shareholdings A*STAR has in company
100%

A*ccelerate is the entity executing license agreements and holding equity in spin-off and investee companies. A*ccelerate has a wholly owned subsidiary, A*ccelerate Venture Creation Pte Ltd (A*VC), an investment holding company. Collectively, A*ccelerate and A*VC hold equity stakes in over 50 spin-offs and investee companies in the biomedical and physical sciences. A*STAR (Suzhou Industrial Park) Co. Ltd is also a wholly owned subsidiary of A*ccelerate. It provides funding and infrastructure to help Singapore companies carry out R&D productisation and expand their market in China through A*STAR Partners’ Centre (A*PC) located in Suzhou Industrial Park.

- Subsidiaries of A*ccelerate**
- A*ccelerate Venture Creation Pte Ltd
 - A*STAR (Suzhou Industrial Park) Co. Ltd

For more information, visit
<https://www.a-star.edu.sg/enterprise>

Our Institutions and Platforms

The agency’s statutory board staff strength is 197^[1]. The broader A*STAR community comprises a total of over 5,600 individuals (as of 31 March 2026), including scientists and researchers, technical and non-technical staff, as well as personnel involved in industry development, commercialisation, and corporate functions.

Biomedical Research Entities

- A*STAR Bioinformatics Institute (A*STAR BII)
- A*STAR Bioprocessing Technology Institute (A*STAR BTI)
- A*STAR Genome Institute of Singapore (A*STAR GIS)
- A*STAR Infectious Diseases Labs (A*STAR ID Labs)
- A*STAR Institute for Human Development and Potential (A*STAR IHDP)
- A*STAR Institute of Molecular and Cell Biology (A*STAR IMCB)
- A*STAR Singapore Immunology Network (A*STAR SigN)
- A*STAR Singapore Institute of Food and Biotechnology Innovation (A*STAR SIFBI)
- A*STAR Skin Research Labs (A*STAR SRL)

Science and Engineering Research Entities

- A*STAR Institute of Advanced Intelligence and Computing (A*STAR IAIC)
- A*STAR Institute of Microelectronics (A*STAR IME)
- A*STAR Institute of Materials Research and Engineering (A*STAR IMRE)
- A*STAR Institute of Sustainability for Chemicals, Energy and Environment (A*STAR ISCE²)
- A*STAR National Metrology Centre (A*STAR NMC)
- A*STAR Singapore Institute of Manufacturing Technology (A*STAR SIMTech)

Joint Institutions

- Advanced Remanufacturing and Technology Centre (ARTC)
- Skin Research Institute of Singapore (SRIS)
- InVivos

National Centres and Programmes

*Platforms managed by A*STAR but funded nationally.*

- AI Centre of Excellence for Manufacturing (AIMfg)
- Biomedical Sciences Industry Partnership Office (BMS IPO)
- Centre for Advanced Technologies in Online Safety (CATOS)
- Consortium Management Office (CMO)
- Diagnostics Development (DxD) Hub
- Experimental Drug Development Centre (EDDC)
- Low-Carbon Technology Translational Testbed (LCT³)
- MedTech Catapult
- National Additive Manufacturing Innovation Cluster (NAMIC)
- Nucleic Acid Therapeutics Initiative (NATi)
- National Quantum Office (NQO)
- National Robotics Programme (NRP)
- National Semiconductor Translation and Innovation Centre (NSTIC)
- National Supercomputing Centre (NSCC)
- Singapore Biodesign (SB)
- Technology Centre for Offshore and Marine, Singapore (TCOMS)
- Urban Solutions and Sustainability Innovation & Enterprise (USS I&E)

^[1] The reported figure is as of 30 September 2025.

Message from Chairman and CEO

A*STAR continues to focus our efforts on building and growing capabilities that strengthen Singapore's competitiveness, resilience and future growth.

A particular area of emphasis this year was the advancement of AI-assisted discovery across multiple areas from advanced manufacturing to biomedical research, supported by A*STAR's investments in Data-AI-Compute capabilities and collaborations with our partners.

Advancing Singapore's Innovation Agenda

In FY2025, A*STAR delivered 1,252 industry projects, with companies investing over S\$830 million in R&D. A*STAR spin-offs also raised more than S\$440 million in follow-on funding.

We doubled down on a portfolio of high-potential research areas where A*STAR has built deep capabilities and strong partnerships.

Our early investments in semiconductor research have enabled Singapore to build strategic capabilities in silicon photonics, a leading technology for optical interconnects that allow more rapid and efficient data transfer between chips.

These capabilities have translated into commercial impact, including the acquisition of A*STAR spin-off Advanced Micro Foundry (AMF) by GlobalFoundries in 2025. GlobalFoundries, a leading semiconductor manufacturing company, has also expanded its research collaboration with A*STAR in advanced packaging and silicon photonics.

The National Semiconductor Translation and Innovation Centre (NSTIC) hosted by A*STAR continued to advance key semiconductor domains. NSTIC (GaN) opened in 2025 and is Singapore's first national facility dedicated to gallium nitride semiconductors. The new material is better suited than traditional silicon-based chips to power electronics and high-frequency radio applications like 5G and 6G communications, radar and satellite communications.

These developments reflect the importance of the long-term sustained investment in R&D which has translated into globally competitive technologies that strengthen Singapore's role in the semiconductor value chain.

In advanced manufacturing, AI is supporting Singapore's next phase of industrial transformation. AIMfg, the AI Centre of Excellence for Manufacturing developed jointly with the Ministry of Trade and Industry, is accelerating the adoption of AI capabilities across product innovation, operations optimisation and sustainable manufacturing.

At Mencast Marine, an SME that produces engineering solutions for the offshore and marine industries, A*STAR's advanced manufacturing and AI capabilities supported improvements in design and additive manufacturing. The collaboration led to a 30% increase in propeller manufacturing productivity, opening new opportunities in global supply chains.

We are excited about our partnership with CuspAI which will bring together frontier AI with A*STAR's materials science capabilities to accelerate the design, synthesis and validation of new materials, enabling discoveries to reach industry more quickly.

We continue to push frontiers in biomedical discovery and human health. The national flagship cohort study on maternal and child health, Growing Up in Singapore Towards Healthy Outcomes (GUSTO), continues to produce valuable data from over 800 active participants. In the last decade, research based on GUSTO data has generated over 400 publications on how early-life factors such as maternal well-being and childhood screen exposure affect children's mental and physical health.

The National Precision Medicine (NPM) programme has entered Phase III with the establishment of the PRECISE Genomic Environment, a data infrastructure that enables clinical-grade genomic data processing and secure integration across research and healthcare systems.

AI is also strengthening healthcare-related research. Fragle, a new AI-based method, analyses the size of tumour DNA fragments in blood to enable faster and more efficient cancer monitoring. In collaboration with NCCS and Lucence, a precision health company, A*STAR is developing UNITED 2.0, an AI-powered cancer profiling platform.

Curiosity-driven science remains central to A*STAR's mission, generating discoveries and capabilities that can be translated into wider benefit for Singapore. One example is a nano-scale biopsy needle developed with collaborators from the National University of Singapore, that enables researchers to track gene activity in living cells over time, opening new possibilities for pharmaceutical R&D.

Nurturing Singapore's STEM Pipeline

At the heart of A*STAR's work and impact are our people. A*STAR's scholarship programmes continue to nurture talent across scientific disciplines, advancing the careers of more than 1,500 scholars, 80% of whom are working on Singapore's Research, Innovation and Enterprise priorities. To further strengthen this pipeline, we launched A*STAR Graduate Scholarship tracks in semiconductors and quantum, as two strategic priorities for the agency.

As we conclude RIE2025 and look towards the next phase of Singapore's innovation journey, we thank our colleagues, scholars, partners, and the wider A*STAR community for their dedication, collaboration and belief in the power of science to make a difference. We look forward to continuing our collective work to pursue breakthrough science, and to turn discoveries into consequential impact.



Professor Tan Chorh Chuan
Chairman

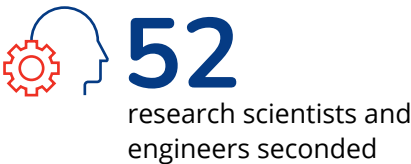
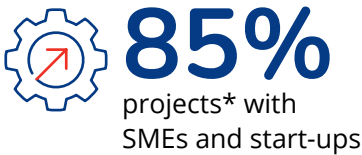
Mr Beh Kian Teik
Chief Executive Officer

FY2025 Key Achievements at a Glance

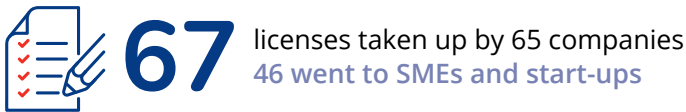
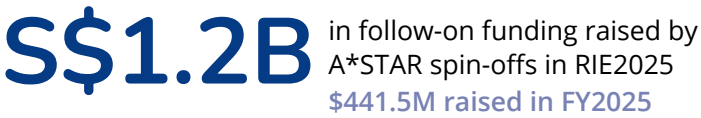
Industry Overview



Supporting Local Enterprises' Productivity and Growth



Strengthening Innovation and Enterprise

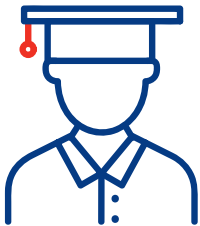
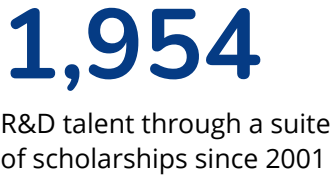


Advancing Quality Science

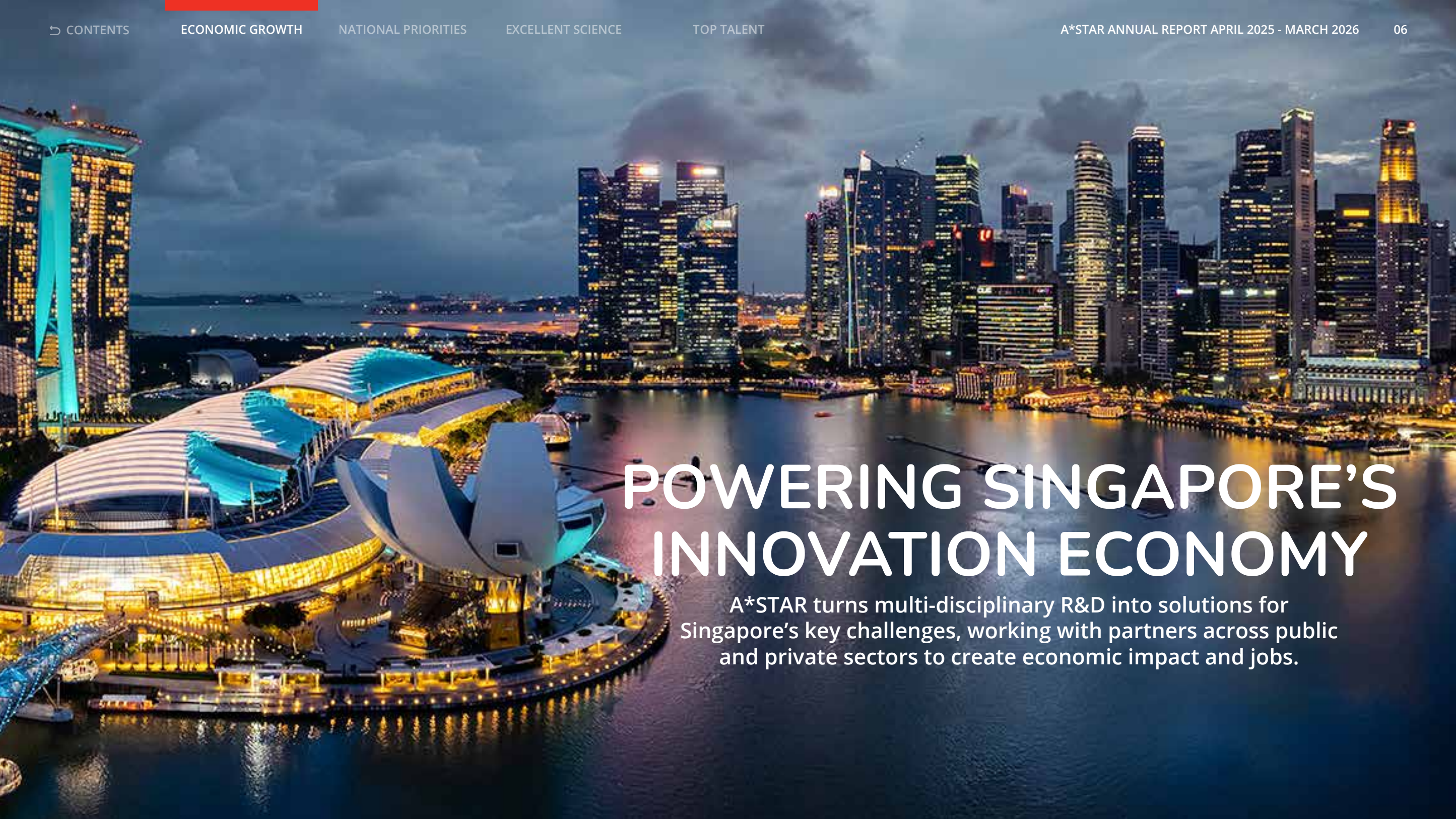


Attracting and Building Pipeline of STEM Talent

As of end FY2025, A*STAR
has built a pipeline of



*Excluded Service-Characterisation, Measurement and Technical Consultancy (C/MTC) projects.

A nighttime aerial photograph of Singapore's skyline. The Esplanade - Theatres on the Bay is in the foreground, illuminated with blue and white lights. The water of the bay reflects the city lights. In the background, the dense skyline of Singapore is visible, with many skyscrapers lit up. The sky is dark with some clouds.

POWERING SINGAPORE'S INNOVATION ECONOMY

A*STAR turns multi-disciplinary R&D into solutions for Singapore's key challenges, working with partners across public and private sectors to create economic impact and jobs.

01

Advanced Manufacturing

Manufacturing contributes about one-fifth of Singapore's GDP and remains a key engine of growth. In RIE2025, investments in AI, additive manufacturing and robotics strengthened Singapore's standing as a global innovation hub. A*STAR helps multinational corporations deepen high-value manufacturing operations here, while enabling local enterprises to move up the value chain.

Moving forward, A*STAR will build on this momentum with smart and sustainable manufacturing solutions that raise productivity, strengthen competitiveness and enhance resilience across high-value sectors such as aerospace, automotive and semiconductors. A significant part of this effort is dedicated to transforming SME business models and integrating them within global supply chains.



Aerospace: A Singapore Success Story

Singapore's aerospace sector is a vital engine of economic growth, with more than 130 aerospace companies spanning across manufacturing, Maintenance, Repair and Overhaul (MRO), R&D and aftermarket services, including local SME suppliers. Today, Singapore accounts for about 10% of global MRO output. As Asia Pacific's airline market expands and passenger numbers are expected to double by 2043, demand for MRO services will continue to grow. Meeting this demand will require the industry to increase capacity without proportional increases in cost, space or labour. To strengthen competitiveness and embed local suppliers more deeply in global supply chains, A*STAR partners Singapore enterprises and MNCs to develop advanced aerospace solutions.

Singapore's early and sustained investments in MRO and advanced manufacturing are helping the sector scale for the next phase of global growth.

Scaling Aerospace Manufacturing for Global Demand

A*STAR, Rolls-Royce and Singapore Aero Engine Services Private Limited (SAESL) will further advance automation, digitalisation and next-generation manufacturing through the second phase of the Smart Manufacturing Joint Lab (SMJL Phase Two). Building on earlier productivity gains, SMJL Phase Two innovations and Rolls-Royce's ongoing improvement initiatives are expected to enable the Fan Blade Singapore facility to increase production by over 30% without expanding footprint. The collaboration will complement SAESL's separate S\$242 million expansion investment, which aims to boost its MRO capacity by 40%, reinforcing its position as the world's largest Rolls-Royce Trent Engine MRO facility. These initiatives will support high-value manufacturing and MRO activities in Singapore, and create opportunities for local SMEs. SAESL's expansion alone is also expected to generate around 500 high-value jobs in Singapore over the next five years.

Strengthening Singapore's Aviation Competitiveness

To support growing global aviation demand, Singapore must strengthen the resilience of its aerospace ecosystem through more reliable operations as well as localised manufacturing and maintenance capabilities. The first phase of the joint labs between A*STAR, Singapore Airlines (SIA) and SIA Engineering Company (SIAEC) brought production of over 100,000 aircraft cabin components back to Singapore, and reduced the time required to produce the parts by 30 to 50%. Concurrently, AI-driven Aircraft Predictive Maintenance solutions were developed to help SIA avert flight delays and Aircraft-on-Ground (AOG) incidents. These were further scaled in the second phase of joint labs to strengthen fleet reliability, accelerate domestic high-value manufacturing, integrate SMEs into the aerospace supply chain, and reinforce Singapore's position as a leading global aviation hub.

01

Advanced Manufacturing



Enabling Sustainable Manufacturing Through Materials Innovation

As high-technology industries adopt more sustainable manufacturing practices, products from smartphones to cars must be designed for easier repair, recycling and reuse. Hence, there is an increasing demand for high-performance adhesive solutions to support secure bonding while enabling controlled removal when needed. A*STAR and tesa — a manufacturer of sustainable adhesive solutions — have established the company's first joint innovation centre in Southeast Asia to develop new polymer concepts for removable adhesive solutions for automotive and electronics industries. The partnership establishes Singapore as a permanent location in tesa's global technology network for Debonding on Demand innovation. Thus, strengthening the country's position as an advanced manufacturing node, while creating opportunities for local manufacturers to adopt and commercialise new design approaches and material technologies.



Building the Factory of the Future

Hyundai is reimagining vehicle production through a corporate lab with A*STAR and NTU. Located within the Hyundai Motor Group Innovation Centre Singapore in Jurong Innovation District, the lab will focus on next-generation manufacturing technologies, including: development of AI technologies for smart manufacturing; robotics technologies to improve production efficiency, quality and worker conditions; 3D printing technologies for auto parts; development of intelligent robotic systems to enhance defect detection and inspection accuracy, minimise equipment downtime, and increase engineer and technician productivity. The partnership bolsters Singapore's position as a mobility innovation and manufacturing hub, develops local talent and supports high-value R&D.



Piloting Smarter, Greener Factories

Improving established manufacturing processes — whether to boost efficiency, meet new regulations or address sustainability requirements — is difficult while actual production is still running. It is like repairing an aircraft mid-flight. A collaboration between A*STAR and Siemens aims to de-risk that process. Called the Smart and Sustainable Advanced Manufacturing Catalyst, it acts as a hands-on demonstration-and-experimentation facility — a test bed where companies can pilot smart, sustainable manufacturing tech in a low-risk setting and then scale what works. It lowers the barrier for a manufacturer to test whether an AI-driven quality system or a “lights-out” fully autonomous production setup actually fits their needs, before rolling it out across their own factories. The aim is to help bridge the gap between frontier research and real-world deployment, helping local manufacturers digitalise and decarbonise operations.



Closing the AI Gap for Manufacturers

Manufacturers often struggle to adopt AI due to limited expertise across AI and manufacturing, fragmented data, and concerns about reliable deployment in industrial environments. To lower these barriers, A*STAR and Microsoft signed an MoU to develop agentic AI solutions, strengthen AI engineering and deployment capabilities, and drive adoption through the Sectoral AI Centre of Excellence for Manufacturing (AIMfg), hosted by A*STAR. The partners also intend to advance AIMie, AIMfg's agentic AI platform, for industrial deployment. Designed to work with manufacturers' existing IT infrastructure, AIMie will enable scalable, reusable AI solutions for predictive maintenance, operations optimisation and quality assurance. The initiative aims to accelerate AI adoption, helping manufacturers raise productivity, improve efficiency and increase manufacturing value-add.

How Singapore is Powering the Next Wave of Global Semiconductor Innovation

Semiconductors are a strategic pillar of Singapore’s economy, contributing 6% of GDP. They enable advances in AI, high-performance computing, decarbonisation via power electronics, sensors and actuators, as well as high-speed wireless communications.

In RIE2025, Singapore established the National Semiconductor Translation and Innovation Centre (NSTIC), hosted by A*STAR, to accelerate the translation of critical technologies for the global semiconductor industry. Bringing together researchers and capabilities from A*STAR and the local universities, NSTIC bridges research and industrial-scale production, helping companies shorten development timelines, and reduce the risks of bringing new technologies to market.

The A*STAR-hosted RIE Flagship in Semiconductors under RIE2030 will build on this foundation by setting national R&D roadmaps and strengthening our capabilities in radio frequency gallium nitride (RF GaN), piezoelectric micro-electro-mechanical systems (PiezoMEMS), silicon photonics, flat optics, advanced packaging, power electronics and integrated circuit design.

SIGNIFICANT DEVELOPMENTS IN THE PAST YEAR

Powering National Semiconductor Translation Capabilities

Challenge

Future 6G communications, radar and next-generation satellite systems are expected to operate at higher frequencies, enabling faster data transmission and more compact antennas. These applications require semiconductor technologies that deliver higher power, efficiency and signal quality, and RF GaN is a key enabling technology.

Response

To capture these growth opportunities, A*STAR established Singapore’s first boutique foundry for RF GaN prototyping and manufacturing, NSTIC (GaN). In 2025, it became fully operational, alongside newly established electrical and reliability test labs. Together, these capabilities enable companies to prototype, test and validate GaN devices using factory floor production processes.

Impact

In FY2025, the centre released the first version of its 0.25 µm GaN-on-silicon carbide (SiC) Process Design Kit (α-PDK). This allows companies to design products within NSTIC (GaN)’s capabilities which are comparable to leading international GaN foundries. NSTIC (GaN) has attracted six industry partnerships with companies including Incize, and Rohde & Schwarz, strengthening Singapore’s position as a trusted hub for GaN innovation and manufacturing.

Accelerating the Path from Prototype to Production

Challenge

PiezoMEMS underpin a wide range of products, from smartphones and industrial sensors to medical imaging devices. However, many high-performance piezoMEMS devices today rely on lead-based materials, resulting in sustainability concerns and limiting future adoption. At the same time, companies face significant challenges translating promising piezoMEMS innovations from the laboratory into manufacturable products.

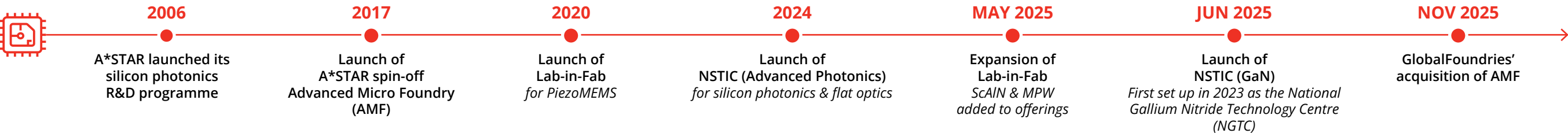
Response

In 2020, A*STAR, STMicroelectronics and ULVAC established the “Lab-in-Fab” joint laboratory, a 200-mm facility that enables R&D and prototyping in a manufacturing environment. This helps companies scale to volume production without recreating and revalidating their processes.

In 2025, the “Lab-in-Fab” was extended for a second phase, which adds lead-free material scandium aluminium nitride (ScAlN) and multi-project wafer (MPW) services to the offerings.

Impact

Through our MPW runs, 12 start-ups, schools and companies across seven countries have developed and tested prototypes more affordably. The new lead-free piezoMEMS technology is currently in development with five companies, validating its potential for real-world applications.



Challenge

Large AI models require huge amounts of data to be moved within a data centre, taking up to 40% of the centre’s energy consumption. To improve the energy efficiency of data centres, one solution is to move data with photons instead of electrons. In delivering ultra-fast, energy-efficient performance, silicon photonics is a promising solution.

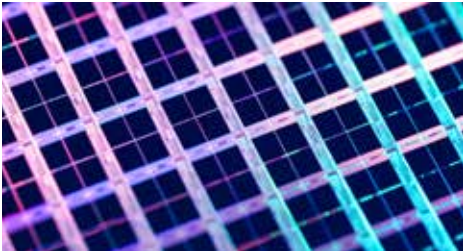
Response

A*STAR launched its silicon photonics R&D programme in 2006. This early investment led to the A*STAR spin-off Advanced Micro Foundry (AMF) in 2017, as the world’s first dedicated silicon photonics foundry to serve the growing silicon photonics market.

Beyond AMF, A*STAR continues to push the boundaries and launched NSTIC (Advanced Photonics) in 2024, with a focus on next-generation silicon photonics and flat optics. In 2025, NSTIC (Advanced Photonics) established Singapore’s first 200-mm thin-film lithium niobate platform capable of supporting future ultra-high-speed ≥ 400 gigabit per second per wavelength optical communication systems. In flat optics, it developed a titanium dioxide-on-glass platform for thinner, lighter meta-lenses.

Impact

Over the years, AMF has brought Singapore-developed silicon photonics innovations to global markets. In 2025, GlobalFoundries acquired AMF. With the acquisition, GlobalFoundries plans to expand production capacity and establish a silicon photonics research and development center of excellence in Singapore to advance the innovation roadmap, strengthening the country’s position as a global silicon photonics hub.



Since its launch, NSTIC (Advanced Photonics) thin-film lithium niobate photonics platform has been developed with Complementary Metal-Oxide-Semiconductor (CMOS) compatible fabrication processes. This allows partners to manufacture their innovations using standard, high volume semiconductor manufacturing processes, significantly reducing production costs and time to market for industry partners looking to scale their technologies. Its titanium dioxide-on-glass platform helped secure two large-scale industry engagements to develop flat optics devices for automotive and consumer electronics applications.

02

Growth of Local Companies

A*STAR is dedicated to building a strong pipeline of innovative local enterprises that will contribute to Singapore’s next bound of growth. This includes translating R&D into competitive advantage through technology transfer, strategic partnerships, and capability building programmes such as Technology for Enterprise Capability Upgrading (T-Up) which seconds A*STAR scientists or engineers as technical advisors.

Under RIE2025, more than 250 SMEs benefitted from A*STAR’s support. These collaborations enabled the integration of 16 companies to the supply chains of MNCs and large enterprises, with Applied Total Control Treatment exemplifying how local companies can scale globally. Looking ahead, RIE2030 raises the ambition to turn research into more economic value and build Singapore enterprises with global reach.



Helping Local Manufacturers Compete Globally Through Joint Labs

As industries become more technology-intensive, local enterprises must innovate faster and build proprietary capabilities to stay competitive. To accelerate this shift, A*STAR launched separate Joint Labs with Applied Total Control Treatment, Abrasive Engineering (AE) and Grand Venture Technologies. These collaborations advance AI-enabled automated surface treatment, high-purity coating technologies and advanced ceramic manufacturing across the aerospace, semiconductor and MedTech sectors. Together, the Joint Labs deepen local enterprises’

innovation capabilities, anchor high-value manufacturing activities in Singapore and help homegrown companies compete more effectively in global markets. In particular, AE and A*STAR have since moved into Phase Two of their joint lab, focusing on the SME’s in-house integration of advanced engineering design and automation. Through the partnership, AE has transformed from a service provider into a technology product owner, driving S\$3.5 million in revenue growth during the joint lab period.

Scaling Local Production with AI-Assisted Design and Additive Manufacturing

Amid increasing global competition, rising costs, an ageing workforce, and growing demand for more efficient marine propeller designs, manufacturers face mounting pressure to optimise operations. A*STAR partnered Mencast to develop next-generation technologies that combine AI-assisted design with robotic Wire Arc Additive Manufacturing (WAAM). This integrated approach aims to enable sustainable, digitally driven production of propellers optimised for improved hydrodynamic performance and fuel efficiency. Building on these co-developed technologies, Mencast continues to industrialise, validate, and refine both the manufacturing processes and AI-assisted design technologies for future commercial deployment. Early pilot implementations have demonstrated the potential to deliver up to 30% improvement in manufacturing productivity, while supporting workforce transformation from traditional foundry operations to advanced digital manufacturing roles.



02

Growth of Local Companies

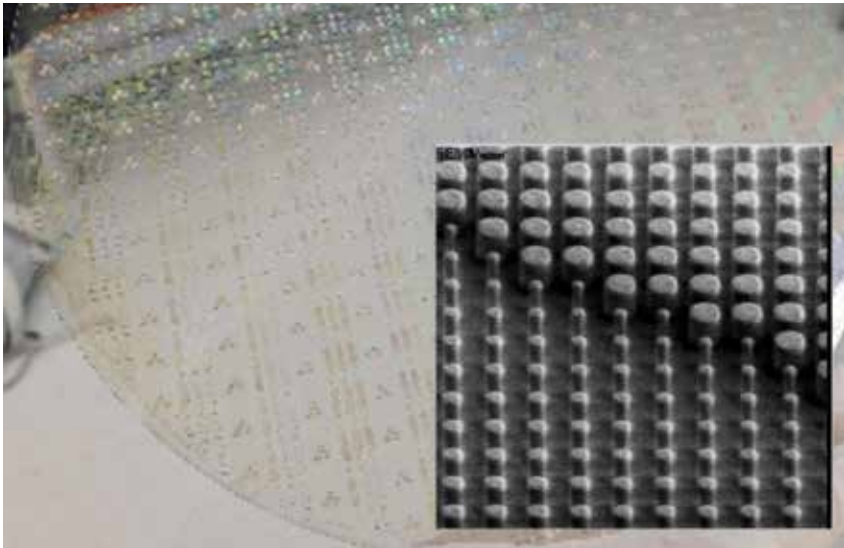


Powering the Future of Singapore’s Digital Economy

Meeting the demand for high-speed internet remains difficult, since conventional fibre-optic networks can be costly and time-consuming to deploy, while existing wireless systems face bandwidth and spectrum limitations. To overcome these challenges, A*STAR supported local deep-tech company Transcelestial through its T-Up program to develop customised precision optics test stations to optimise its proprietary laser communications system. The collaboration achieved a ten-fold reduction in sensor noise, enabled up to 50% faster calibration, and improved long-distance communication performance. By 2025, Transcelestial had deployed more than 150 laser networks across Asia and announced Singapore’s first inter-satellite laser communications mission.

Driving Deep-Tech Scaling and Capital Market Success in Photonics

Conventional optical systems face fundamental limitations in size and accuracy in nanometre-scale fabrication. Flat optics can deliver the same or better optical performances in a smaller size. Hence, it is the technology of choice for compact applications such as AR/VR, 3D sensing, and Internet of Things (IoT) imaging. A*STAR partnered MetaOptics Technologies to co-develop a 4-inch rapid-prototyping, high-resolution Direct Laser Writer that generate “quick turn samples” ready for customer evaluation. The partnership also enabled MetaOptics Technologies to develop meta-lenses for mass production, by adopting a standard semiconductor manufacturing process, deep ultraviolet (DUV) immersion photolithography on 12-inch glass wafers. These initiatives enabled MetaOptics Technologies to successfully commercialise products like 3D biometric sensors and become the world’s first pure-play metalens company to list on the SGX Catalist, raising S\$6 million in a fully subscribed IPO. This demonstrates a clear pathway from publicly funded R&D to international capital markets.



Accelerating Innovation in Gut Health and Functional Foods

As demand grows for functional foods that support gut health, companies face growing pressure to develop products backed by scientific evidence. However, traditional human trials are costly and time-consuming, making it impractical to evaluate every functional food or ingredient.

To meet the need for an effective laboratory-based evaluation tool, AMILI, a precision health company focused on the microbiome, partnered with A*STAR through the T-Up programme to develop the Functional Microbiota Assay (FMA). The in-vitro platform evaluates how specific ingredients impact the human gut microbiome at a fraction of the time and cost of a human trial, while delivering high-resolution insights into changes in microbial composition and function in response to specific ingredients. With the FMA, companies’ commercial leaders can identify likely responder populations while scientific heads can accelerate product development and reduce risk in early-stage R&D.

The FMA enabled AMILI to achieve a six-fold increase in testing scalability, attracting 15 commercial clients and research partners, and generating S\$1.5 million in revenue.

03

Growing Singapore's Deep-Tech Ecosystem

Important breakthroughs sitting in a lab do not translate into commercial ventures on their own. A*STAR helps make that leap. We identify high-potential intellectual property, co-develop solutions for real business challenges, and support licensing and commercialisation. These efforts enable breakthrough technologies to take on a life of their own as globally investible companies that create quality jobs, attract private capital, strengthen strategic industries and deliver real-world impact.

Making Cell Therapies More Affordable and Accessible



Cell therapies are transforming the treatment of diseases such as cancer by using living cells to target disease. However, they remain costly and difficult to manufacture at scale. One bottleneck lies in the nutrient formulations the cells need to grow. Optimising these formulations is slow, painstaking work, traditionally requiring months of trial-and-error.

Tapping on A*STAR's expertise in culture media development, bioprocess analytics and computational modelling, A*STAR spin-off AuctuCel launched Fluxperior, an AI platform that uses computer simulations to model optimal nutrient requirements without extensive lab testing. The platform reduces cell culture media development time from six months to one, cutting costs by up to 80% and increasing cell productivity by 20%. By reducing the cost and complexity of cell therapy manufacturing, Fluxperior strengthens Singapore's biomanufacturing value proposition and demonstrates the successful commercialisation of A*STAR-developed technologies.

Strengthening Singapore Food Innovation for Global Markets

Imitation meat and fish products are preferred by consumers conscious about sustainability or animal welfare. One problem with these alternative proteins is that they have a different fat profile from animal-based products.

Consumers also miss out on the health benefits of omega-3 fatty acids. These "healthy fats" have a range of benefits, including enhancing brain function and supporting heart health. The body cannot naturally produce them, making dietary intake or supplements essential.

Sustainable food technologies can strengthen food security and reduce environmental impact, but many start-ups face challenges scaling internationally due to funding needs, regulatory complexity, and market access barriers. Food-tech pioneer ImpacFat, an A*STAR spin-off, has secured strategic investments for its expansion into Japan and launched commercial operations for cultivated omega-3 ingredients for food and cosmeceutical applications. The company is developing the world's first cultivated omega-3 rich fish fat using patented stem-cell technology and owns a global patent across major global markets. Its international expansion demonstrates the potential of Singapore-developed food technologies while beefing up the country's agrifood innovation ecosystem and attracting foreign investment.



Accelerating Industrial 3D Printing with AI

Industrial 3D printing is often costly, with time-consuming trial-and-error cycles required to determine optimal printing parameters for new components. A*STAR developed a proprietary additive manufacturing digital twin platform that combines AI with physics-based modelling to enable manufacturers to optimise component design, material microstructure, mechanical properties and printing parameters in a virtual environment before production. By reducing the need for physical testing, the technology shortens development cycles, minimises material waste and deployment. Facilitated by the National Additive Manufacturing Innovation Cluster (NAMIC), Synacore was spun off from A*STAR to productise and commercialise the technology, as well as foster industry partnerships with A*STAR's Additive Innovation Centre to drive adoption. The collaboration demonstrates how A*STAR and NAMIC connect research with industry to accelerate commercialisation, strengthening Singapore's advanced manufacturing and deep-tech ecosystem, as well as enhancing the nation's competitiveness.

03

Growing Singapore's Deep-Tech Ecosystem

Through A*STAR's venture-building programmes, we connect scientific innovation with entrepreneurial talent, industry partners and global market opportunities — helping deep-tech start-ups achieve commercial success.

RIE2025 achievements reflect growing investor confidence in Singapore-developed innovations. A*STAR-supported ventures have raised more than S\$1.2 billion in follow-on funding since RIE2015.

Accelerating Growth of Promising Robotics Companies



Singapore's robotics and embodied AI sector comprises a growing cluster of high-potential start-ups, yet many struggle to secure funding, navigate go-to-market strategies, and forge essential industry connections. The National Robotics Programme (NRP) launched RoboNexus, a strategic initiative designed to fast-track promising Singapore-based robotics start-ups and SMEs onto the global stage. By aligning agency partners — SGInnovate, Enterprise Singapore and EDBI — with global venture capitalists, RoboNexus provides tailored mentorship, business development, and international market access. EDBI operates under SG Growth Capital, the investment platform of the Singapore Economic Development Board and Enterprise Singapore. Following successful debut, RoboNexus enabled its inaugural batch of participants, such as LionsBot, KABAM Robotics, and XSQUARE Technologies, to strengthen innovation capabilities, expand talent pipelines, drive local adoption, and attract significant industry interest. The collaborative framework of RoboNexus not only empowers individual companies to scale but also solidifies Singapore's reputation as a vital hub for advanced robotics innovation.

Turning Research into Ventures

Launched in 2025, A*STAR's Entrepreneur Partners Programme pairs seasoned entrepreneurs with A*STAR researchers and intellectual property to co-create deep-tech spin-offs that can attract international investment. The initiative began onboarding partners in February 2026, and will continue to strengthen Singapore's innovation ecosystem by accelerating the translation of research into market-ready solutions.



Helping Ventures Go International

A*STAR's Venture Atelier Partners Programme brings together a spectrum of deep science capabilities with leading global venture studios, incubators, and investment firms. Matching high-potential intellectual property with experienced venture builders, the programme accelerates venture development, provides structured training for scientist-entrepreneurs, and drives the focused growth of portfolio companies. Through a growing network spanning therapeutics, MedTech, and Physical Science — including partners like 65LAB, Flagship Pioneering, ClavystBio, and Xora — A*STAR bolsters Singapore's position as a premier node for deep-tech innovation and long-term economic value creation.

04

MedTech

MedTech spans a wide and fast-evolving field of products, devices and systems that help prevent, diagnose, monitor and treat diseases or medical conditions. These range from MRI scanners and joint replacements to diagnostic tests and wearable devices.

Valued at around US\$550 billion in 2025, the global market has a projected growth of 4.5%. A*STAR drives MedTech commercialisation by advancing research and forging partnerships that move innovation from lab to market. These products target conditions such as cancer, where faster, more accurate diagnosis and treatment can make a critical difference.

Growing Globally-Competitive Health-Tech Enterprises

Promising MedTech innovations can struggle to reach the market, held back by funding gaps, limited venture-building expertise and lengthy commercialisation timelines. A new MoU between A*STAR and ClavystBio — a life sciences venture capital investor established by Temasek — aims to address these challenges. The MedTech Venture Partnership combines A*STAR's deep scientific expertise with the specialised productisation and diagnostics development capabilities of the MedTech Catapult and Diagnostics Development (DxD) Hub. Integrating these national platforms with ClavystBio's venture-building experience and potential investors, the collaboration supports start-ups in developing market-fit, regulatory-compliant products



from the outset. Together, they bolster Singapore's MedTech venture ecosystem by turning research into investible companies faster, while helping homegrown health-tech enterprises scale into globally competitive players.

Enabling Precise Tumour Profiling with AI-Powered Platform

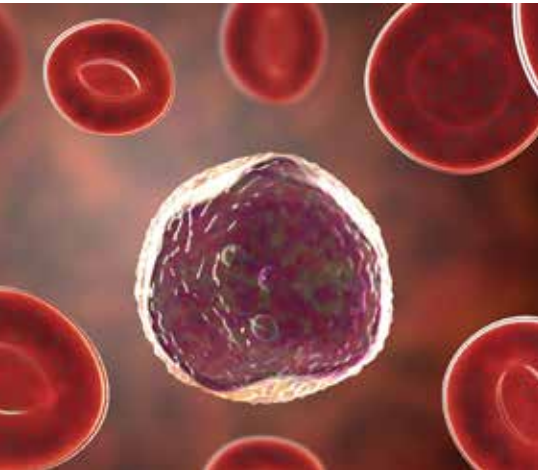


Understanding the precise genetic changes driving a patient's cancer is vital for selecting effective targeted treatments. However, many existing cancer profiling tests do not capture the full complexity of a tumour, limiting treatment selection. To address this gap,

Lucence — a precision health company spun off from A*STAR — is developing a new cancer profiling platform with DxD Hub, and National Cancer Centre Singapore (NCCS). As part of the broader goal of advancing tumour Whole Genome Sequencing for research, UNITED 2.0 will integrate Whole Exome Sequencing and Whole Transcriptome Sequencing, which respectively identify genetic mutations, and measure gene activity in tumours. Together, they will enable more comprehensive tumour profiling to support treatment decisions. DxD Hub and Lucence are also collaborating to develop bioinformatics pipelines, laboratory workflows for a validated laboratory-developed test, and highly sensitive assays for early relapse monitoring. These initiatives strengthen Singapore's capabilities in precision oncology and advance its position as a global hub for precision medicine innovation.

Detecting Cancer Mutations More Accurately with AI Blood Test

Current blood tests for detecting common cancer mutations often require complex and expensive DNA sequencing. Yet, mutations vary between patients, making test results inconsistent and treatment response difficult to track. A*STAR researchers have developed a new AI-based method, Fragle, that makes the tracking of cancer cheaper, easier and faster. It analyses DNA fragment sizes in the blood to reveal distinct patterns that differentiate cancerous DNA from healthy ones. Having demonstrated high accuracy across various cancer types with just a small blood sample, Fragle has entered a clinical study of over 100 patients with A*STAR and NCCS. The technology offers access to affordable cancer monitoring, and creates opportunities for future clinical and commercial deployment.



04

MedTech

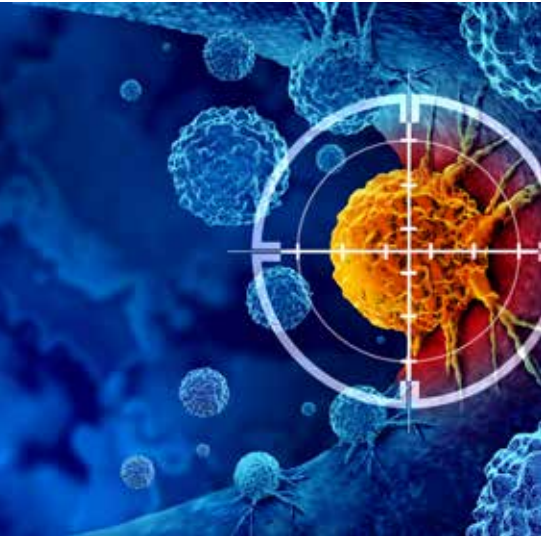
Bringing Diagnostic Tests Direct to Patients

Performing diagnostic tests in a doctor’s office, an ambulance or a patient’s home means quicker decisions about treatment and more convenience for patients. This point-of-care testing (POCT), rather than sending a sample to a lab, is becoming increasingly important in infectious disease, fertility and chronic disease management. However, market expertise and robust validation are required for the commercialisation of these solutions. To plug the gap, DxD Hub teamed up with multinational diagnostics company CorDx to establish a joint innovation centre at Biopolis. The partnership drives diagnostics innovation with a focus on POCT solutions. By anchoring diagnostic product development and manufacturing activities in Singapore, the collaboration strengthens the local supply chain and end-to-end product development capabilities ecosystem, while enhancing national resilience in diagnostic supplies.



Improving Cancer Care with Predictive Tool

Traditional colorectal cancer treatment is often reactive. Chemotherapy and drugs are prescribed first, before tumour response is observed by doctors. That can mean unnecessary side effects, costs and delays to effective care. A*STAR, NCCS, and an international research team, take a predictive and proactive approach to treatment with CAN-Scan. The machine-learning platform integrates multi-omics — a comprehensive biological blueprint that combines detailed genetic and molecular information — with patient-derived cell lines and drug screening. By comparing a patient’s tumour molecular characteristics with the database, alternative treatments can be identified. The platform advances Singapore’s precision oncology capabilities for personalised cancer treatment, and new drug development.

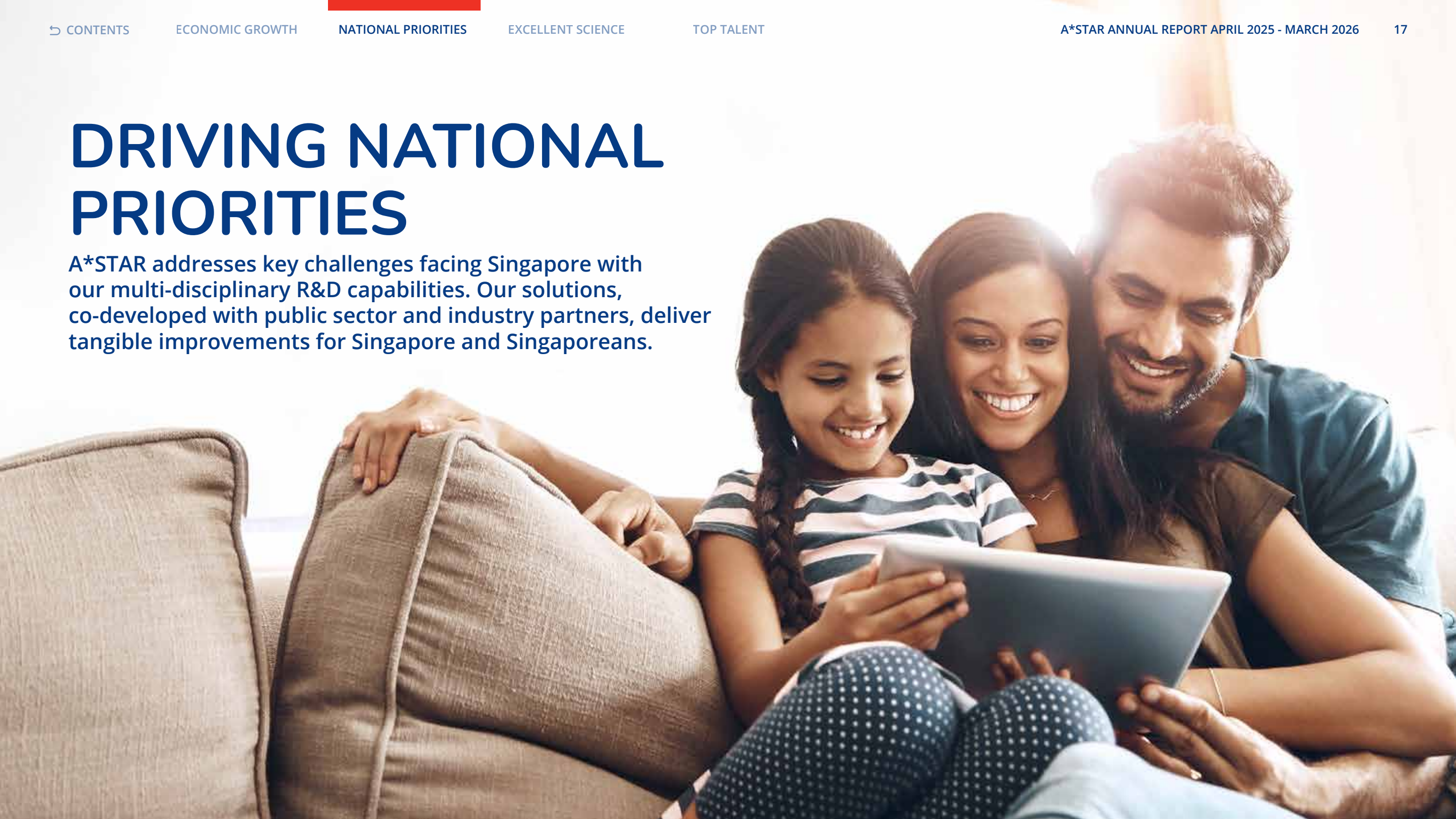


Accelerating Diagnostics for Regional Avian Influenza Preparedness

Rapid response to an outbreak of avian influenza is vital to minimise the threat to public health, as well as disruption to trade and food supply chains. Access to fast, accurate diagnostic kits that can be quickly deployed across the region is critical to pandemic preparedness. DxD Hub and Japan’s National Institute for Environmental Studies jointly developed the Steadfast H5 Avian Influenza Multiplex RT-PCR Kit. The kit enables the detection of highly pathogenic avian influenza (HPAI) within three hours — significantly faster than conventional sequencing methods, which typically take several days. The kit was used for avian influenza surveillance by the Laboratory for Wildlife Medical Science in Japan, with funding from its Ministry of Environment. Comparing against sequencing results, it demonstrated high diagnostic performance for HPAI. The kit has since been licensed and is being prepared for distribution to surveillance centres, clinics, hospitals, and laboratories across Japan and Southeast Asia.

DRIVING NATIONAL PRIORITIES

A*STAR addresses key challenges facing Singapore with our multi-disciplinary R&D capabilities. Our solutions, co-developed with public sector and industry partners, deliver tangible improvements for Singapore and Singaporeans.

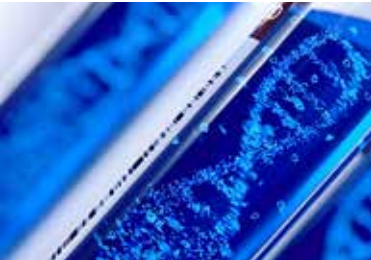


05

Precision Health

Understanding why diseases develop and progress differently amongst individuals is key to improving health outcomes. As a national priority in RIE2030, precision medicine harnesses genomics, AI and health data to enable more personalised, preventive and effective healthcare while opening new opportunities in biomedical innovation. A*STAR supports this effort through its strengths in genomics, population-scale data generation and analytics, helping advance more targeted approaches to prevention, diagnosis and treatment.

Building Singapore’s Genomic Data and Analytics Engine for Precision Medicine



A person’s lifetime disease risk depends on their genetic makeup combined with lifestyle factors such as diet and exercise. Understanding how these elements interact — as well as their impact on the efficacy of treatments — is the goal of precision medicine and preventive care. The aim is to combine deep biological insights from genomics with the power of AI to predict and prevent disease.

Underpinning this approach, the National Precision Medicine (NPM) programme brings together research, healthcare and industry partners to advance precision health. Since 2017, the programme has expanded from

sequencing the DNA of 10,000 individuals in Phase I to 100,000 in Phase II. A*STAR generated, analysed and curated population-scale genomic data while developing reference resources.

With a strong genomic baseline established through healthy cohorts, Phase III — launched last year — shifts the programme closer to healthcare frontlines. It will study up to 450,000 patients across Singapore’s public healthcare clusters to uncover how genomic insights can improve health outcomes and pilot the integration of genomics data into healthcare delivery. A*STAR is supporting this transition by co-establishing the national genomic data infrastructure for clinical-grade genomic data processing and analytics. This includes setting standards and ensuring that the resulting data can be integrated into the national TRUST also known as Trusted Research and Real World-Data Utilisation and Sharing Tech platform used by researchers across the ecosystem.

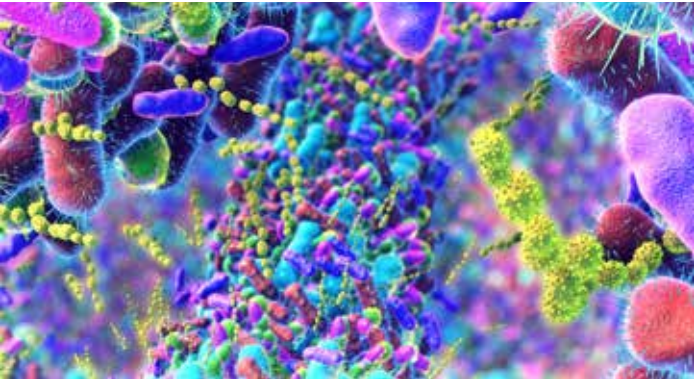
Informing Healthcare Policies Through National Data Platform



Healthcare data must be protected to safeguard patient privacy. But limited access can also constrain research that improves healthcare.

By linking longitudinal data from the Growing Up in Singapore Towards healthy Outcomes (GUSTO) study with national health datasets, A*STAR researchers uncovered new insights into healthcare spending during pregnancy. The study revealed that women without gestational diabetes incurred higher hospital expenses in the final trimester, possibly due to conditions undetected earlier. Enabled by the TRUST platform, A*STAR accessed anonymised health data at scale, turning protected real-world records into actionable insights for evidence-based healthcare planning and policymaking.

Exploring How Microbes in the Digestive Tract Impact the Brain



The ecosystem of microbes that lives inside our digestive systems does not just impact our physical health. Growing evidence links gut microbiome to brain function. Yet, this field of study is still in its infancy, limiting the development of targeted prevention and treatment strategies, particularly in Asian populations.

To address this gap, the Gut Linked Outcomes in Wellbeing study brings together a multi-institutional team of clinicians and researchers including A*STAR, to investigate how the human gut microbiome — sometimes referred to as the body’s second genome — influences mental health.

Building on the NPM programme’s PRECISE-SG100K Cohort, more than 6,000 participants will be recruited.

Microbial signatures and biomarkers from stool, skin, saliva and blood samples will be collected and assessed alongside comprehensive psychological data across Singapore’s major ancestry groups. The findings could potentially lead to more targeted care, new dietary interventions or microbial therapies.

Unlocking Human Potential Across Life Stages

By studying how genes, environment and life experiences interact from before birth through adolescence, A*STAR — alongside academic and healthcare institutions — are uncovering the foundations of lifelong physical, cognitive and mental well-being. Through landmark longitudinal cohorts such as Growing Up in Singapore Towards healthy Outcomes (GUSTO) and Singapore Preconception Study of long-Term maternal and child Outcomes (S-PRESTO), researchers are generating Asian-relevant evidence that enables earlier interventions, shapes public policy and strengthens preventive health strategies. Leveraging strengths in population health research and data analytics, A*STAR supports Singapore's RIE2030 ambitions to improve health outcomes and well-being across generations.

GUSTO: Understanding How Early Life Shapes Future Health

Challenge

Many aspects of lifelong health and development are shaped by conditions during pregnancy and early childhood. Understanding these long-term influences requires long-term data on hundreds of families. However, most global research has been based on Western populations that offer limited insights for Asians.

Response

Launched in 2009, the GUSTO study aims to understand how conditions in pregnancy influence the subsequent health of women and their children, as well as how early childhood environments affect development.

A collaboration between the National University of Singapore, National University Health System, KK Women's and Children's Hospital and A*STAR, the results from GUSTO have informed national policy on gestational diabetes and national screen use guidance. As the families at the heart of the research progress through life, the cohort study continues to uncover new insights into the factors that shape health and development across the life course, with findings informing research, policy and potential interventions.

GUSTO FY2025 HIGHLIGHTS

Maternal Well-being Supports Children’s Learning

Mothers with higher depression or anxiety symptoms tended towards strict, punitive parenting or an overly lenient approach with few boundaries. These parenting styles were linked to behavioural difficulties in their children. On the other hand, mothers with higher positive well-being tended to parent with warmth and clear boundaries associated with cognitive benefits for children. However, reducing the mother’s anxiety and depression alone was not enough to optimise a child’s development. Helping mothers to thrive emotionally may be an important lever for children’s early learning.

These were the findings of A*STAR researchers aiming to better understand how a mother’s well-being influences her child’s development.

Early Screen Exposure Linked to Adolescent Mental Health

Many parents use screens to soothe restless children, but little is known about the long-term effects of screen exposure during infancy. A*STAR researchers found that children exposed to prolonged screen time under the age of two had negative consequences later in life. These include changes in brain development linked to increased anxiety and slower decision-making in teenage years. The findings provide locally grounded evidence to inform national health and education agencies as they refine screen use guidance, preschool practices, and public communication on healthy digital habits.



Gender-Specific Pathways of Adolescent Depression

Depressive symptoms often emerge during early adolescence, yet most research focuses on older teenagers, long after early brain and emotional development have taken place. Analysing brain scans from more than 500 children, A*STAR researchers identified differences in how key brain regions developed in boys and girls. Among girls, growth in brain areas involved in emotional processing were associated with symptoms such as low mood and poor self-esteem. Among boys, developments in those brain regions were linked to symptoms including tiredness and feelings of ineffectiveness. The findings could support earlier identification of adolescents at risk of depression and enable more timely interventions.

Regular Sleep Schedule Lowers Obesity Risk

Many children do not get enough sleep during weekdays and try to catch up on weekends. Using sleep data and MRI scans to measure abdominal fat, A*STAR researchers found that only children who consistently met recommended sleep duration guidelines experienced lower obesity risk. The findings reinforce the importance of healthy, regular sleep routines in preventing childhood obesity.

IARP 2.0: Understanding How Adolescent Well-Being is Shaped

Challenge

Adolescent health is shaped by a complex mix of family, school, digital and environmental influences. Yet, few studies track how these factors interact over time, limiting our ability to develop effective strategies that build resilience and improve long-term well-being.

Response

Launched in RIE2025, the Integrative Adolescence Research Programme (IARP) is building one of Singapore’s most comprehensive platforms to understand adolescent development. By integrating data from multiple longitudinal cohorts and new studies spanning early childhood to late adolescence, IARP examines how digital habits, family and school environments, biological factors and environmental exposures shape mental health, physical well-being and academic outcomes.

Impact

These insights will help identify earlier intervention opportunities and inform evidence-based strategies to support healthier, more resilient future generations.

S-PRESTO: Looking Beyond BMI as a Health Marker for Asian Women

Challenge

For many Asian women, the numbers on the scale tell only part of the story. Even with a healthy BMI, some may carry higher body fat, lower muscle mass and reduced bone density, masking significant metabolic and musculoskeletal risks that conventional screening can miss.

Response

Drawing on data from nearly 200 women, A*STAR researchers revealed this hidden health risk affecting one in four normal-weight Chinese women. Launched in 2015, S-PRESTO investigates how women’s health before and during pregnancy influences lifelong outcomes for both mother and child.

Impact

These findings challenge long-held assumptions about healthy weight and reveal critical gaps in how health risks are assessed in Asian populations. By enabling earlier identification of women at risk despite a normal BMI, the research could transform screening and prevention strategies, helping more women maintain stronger bones, healthier muscles and better long-term health.

06

Therapeutics

From drug discovery and diagnostics to treatment selection and disease monitoring, advances in biomedical research are accelerating innovation and enabling more personalised care.

As part of Singapore’s RIE2030 vision, A*STAR is harnessing AI and cutting-edge science to advance next-generation therapeutics, strengthen pandemic resilience and improve diagnostics. By bridging discovery, clinical translation and industry adoption, A*STAR is turning breakthrough research into healthcare solutions that improve lives while cementing Singapore’s position as a global biomedical innovation hub.



Advancing a First Disease-Modifying Therapy into Clinical Trials

LMNA-related dilated cardiomyopathy (DCM) is an aggressive inherited heart disease that rapidly progresses to end-stage heart failure. Through the T-Up programme, A*STAR supported biotechnology company Nuevocr in developing NVC-001, the first disease-specific therapy for LMNA DCM designed to address the underlying mechanobiological root cause of disease. In 2025, NVC-001 received U.S. FDA clearance to begin its first-in-human clinical trial, marking an important milestone in bringing a potential disease-specific treatment closer to patients. The A*STAR spin-off also secured a US\$50 million Series B financing in 2025 to support its clinical development plans in the U.S. and Europe, while advancing its early-stage pipeline and discovery activities in Singapore.

Targeting Singapore’s Deadliest Cancer Through National Research Collaboration

Lung cancer is the deadliest cancer globally, and in Singapore, three people die from the disease each day. Most cases are detected only after the cancer has spread, making it much harder to treat. Unlike the West, where most lung cancer cases are linked to smoking, nearly half of lung cancer patients in Singapore have never smoked.

In response, the national research collaboration Conquering Lung cancer Across all stages with Research and InnovatiON (CLARION) is deepening understanding of lung cancer in Asian patients, while advancing earlier detection and more personalised treatment. A*STAR brings strengths in advanced computational modelling and genomic analysis to help unlock disease insights and accelerate the development of precision diagnostics and targeted therapies.

Supported by the Ministry of Health’s National Medical Research Council, CLARION brings together expertise in medicine, genomics, translational science and data science. Apart from A*STAR, the partners include the National Cancer Centre Singapore, and National University Cancer Institute, Singapore.



Unlocking RNA Secrets with Large Language Model

RNA enables our cells to read and use the instructions encoded in DNA, playing a vital role in how our cells function. It lies at the centre of many modern medical innovations, from mRNA vaccines to gene therapies. But aspects of its structure and function are still poorly understood. RNA databases present an untapped resource to bridge that gap.

A*STAR researchers have co-developed the RiboNucleic Acid Language Model (RiNALMo), one of the world’s largest RNA language models trained on 36 million non-coding RNA sequences and powered by 650 million parameters. The model can extract hidden knowledge and capture structural information embedded within the RNA sequences.

RiNALMo provides a foundation for AI-driven design and optimisation of RNA molecules. This supports the development of next-generation therapeutics and strengthens Singapore’s capabilities at the intersection of AI and life sciences.

06

Therapeutics

Bridging Research and Manufacturing to Strengthen Vaccine Supply

Vaccine manufacturing increasingly demands processes that are fast, consistent and scalable — while meeting strict regulatory requirements. Achieving that across a global production network is a complex systems engineering challenge.

A*STAR established a collaboration with global pharma company GSK to tackle one piece of that puzzle: developing chemically defined culture media for the Haemophilus influenzae Type B (HiB) cells used in vaccine production. The collaboration draws on A*STAR’s expertise in metabolic modelling and metabolomics to design growth media that outperform conventional alternatives in consistency and yield.

The partnership will enable GSK’s manufacturing facility in Singapore, already a key global supplier of HiB active ingredients for GSK’s conjugate vaccines, to achieve more consistent cell growth, higher yields and reduced media variability. This ultimately would contribute towards more reliable, large-scale supply to global vaccine networks.



Reinforcing Pandemic Preparedness Through mRNA Vaccine Manufacturing Innovation

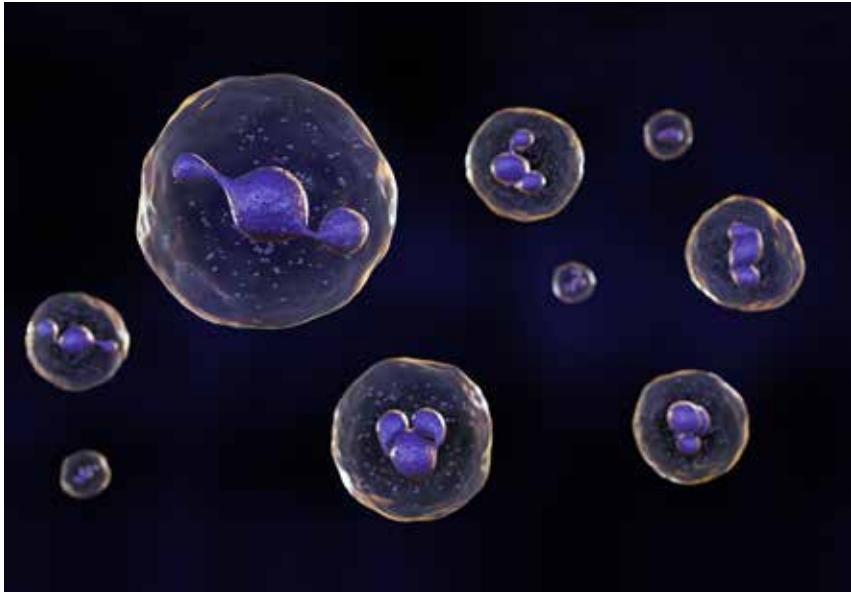
Traditional vaccine manufacturing is complex, expensive and slow to adapt. The COVID-19 pandemic demonstrated the usefulness of platforms based on mRNA that can develop and manufacture vaccines in shorter timeframes.

Building on the launch of Asia’s first-of-its-kind automated mRNA BioFoundry last year, A*STAR is helping to advance these capabilities through participation in the Wellcome Leap RNA Readiness + Response (R3) programme. Together with partners like UK’s Centre for Process Innovation, A*STAR is leading the establishment of one of the world’s few R3G Good Manufacturing Practice (GMP) biofoundries in Singapore. The biofoundry will serve as a test bed for the advanced RNA manufacturing processes.

The initiative positions Singapore as a key node in a globally-connected RNA manufacturing network, and strengthens the country’s pandemic preparedness. By simplifying production and enabling more agile manufacturing, the initiative speeds up next-generation RNA medicine development and strengthens Singapore’s pandemic readiness.

06

Therapeutics



Tracking Changes of Skin Microbes as We Age

Our skin hosts a living ecosystem of fungi, bacteria and other microbes that plays an important role in skin health. However, understanding skin microbe activity and their changes over time remain less clear. To date, A*STAR findings have opened up the possibility of more targeted treatments that slow skin ageing, reduce inflammation and prevent disease.

Attempts to study the skin microbiome have long been hampered by low microbial biomass, along with contamination of samples with human cells, and the inherent instability of RNA molecules. A*STAR researchers have pioneered a metatranscriptomics technique to reliably map the activity of microbes, even in low abundance.

In another study, A*STAR researchers worked with NUS and NTU to analyse data from two long-term Singapore cohort studies spanning children and adults. Their findings reveal dramatic shifts in skin microbial communities across life stages, show how these changes influence skin health through intricate cellular signalling pathways, and guide the future development of novel skin care products.

Offering New Treatments for Chronic Wounds

Wounds that won't heal in older people or patients with diabetes are increasingly prevalent. These wounds can be extremely debilitating and, as societies around the world age, they present a growing public health challenge.

A*STAR researchers collaborated with international research partners to uncover a surprising role for a type of immune cell called neutrophils, in reinforcing the skin's barrier to infection. Besides hunting down microbial invaders in the body, the researchers also found they play a role in strengthening the extracellular matrix, which acts as the skin barrier's scaffolding and communications network.

The study suggests new strategies for wound healing and infection control. By manipulating neutrophil function, it might be possible to accelerate healing in patients with chronic wounds, potentially reducing healthcare costs and recovery times.



Advancing Chronic Wound Treatment to Human Trials

Chronic wounds such as diabetic foot ulcers and pressure sores remain a major unmet need affecting millions of people around the world. They are slow to heal, prone to infection, and can lead to severe complications, including amputations. Current treatments offer limited effectiveness.

A*STAR researchers have co-developed Product Ten, a hydrogel treatment designed to accelerate healing in chronic wounds that traditional therapies struggle to close. Developed using the Perturbed Wound Model, a patented preclinical platform pioneered by A*STAR and NTU, the hydrogel treatment — now named Acelevaé — will enter its first human clinical trial at Changi General Hospital through spin-off Argonaute Lifesciences.

If successful, Acelevaé could improve wound healing outcomes for patients and reduce the risk of complications.



07

Data, AI and Compute Capabilities

Data, AI and advanced computing are powering the next wave of innovation and economic growth. A*STAR is accelerating Singapore’s digital transformation by advancing AI, modelling and simulation, quantum technologies and high-performance computing, translating frontier research into practical solutions. This has delivered breakthroughs from inclusive AI models and trusted digital solutions to quantum computing capabilities.

Advancing Maritime Resilience with AI

Global supply chains face growing disruption from congestion at maritime bottlenecks, extreme weather events and geopolitical shifts. A*STAR is advancing maritime resilience with PSA BDP, a leading global logistics and supply chain solutions provider, and member of the PSA Group. Combining A*STAR’s AI expertise with PSA BDP’s global logistics capabilities, the partnership aims to develop advanced modelling, simulation, and optimisation computational techniques that replicate real-world scenarios. The goal is to help logistics providers, shipping lines and port operators anticipate disruptions and evaluate alternative scenarios with data-driven tools. The initiative demonstrates how A*STAR’s research translates into industry-ready solutions for supply chain resilience, reinforcing Singapore’s position as a leading global trade and logistics hub.

Bridging Materials Design and Real-World Applications

Advanced materials are foundational to technologies ranging from semiconductors and advanced electronics to low-carbon solutions. Yet, translating AI-designed materials into physical ones that can be synthesised and validated quickly remains a major bottleneck in materials science. A*STAR partnered frontier AI materials science company CuspAI to bridge this gap, tapping its AI-driven materials discovery platform to complement the agency’s expertise in materials science and autonomous laboratories. The partnership strengthens Singapore’s capabilities in AI-enabled materials innovation, supporting future advances in semiconductors, advanced electronics and sustainability.

Strengthening Trust in Digital Journalism

As generative AI makes fake news increasingly difficult to detect, A*STAR is strengthening trust in digital journalism with PROVO, an AI-powered content provenance tool. By embedding Coalition for Content Provenance and Authenticity (C2PA) digital credentials into newsroom images and videos, PROVO enables the public to verify their origin and authenticity. In partnership with Mediacorp’s Channel News Asia (CNA), A*STAR is trialling the tool in a pilot newsroom environment, allowing users to distinguish trusted



journalism from fabricated content. The collaboration advances Singapore’s digital trust infrastructure, and supports the responsible adoption of AI to combat misinformation.

Building Inclusive AI for Regional Adoption



Global AI platforms often fail to capture Southeast Asian language nuances, limiting the adoption of large language models in the region. A*STAR is advancing inclusive AI with Multimodal Empathetic Reasoning and Learning in One Network (MERaLiON), a multilingual, conversational model designed for Southeast Asia’s diverse

landscape that is capable of recognising and responding to emotional cues. By integrating regional voice, acoustic and emotional data, MERaLiON understands colloquial languages, interprets code-switched speech and responds with greater contextual awareness. With a consortium of 18 industry partners, including ST Engineering, NCS, DBS, Microsoft and MOH Office of Healthcare Transformation (MOHT), A*STAR is piloting real-world use-cases for this AI platform. Pushing beyond voice AI to multimodal and agentic applications across healthcare, transportation, finance and digital services, the initiative reinforces Singapore’s competitiveness in inclusive and scalable AI technologies.

Shaping the Future of Supercomputing

Quantum computing represents one of the most promising technological developments that could accelerate drug discovery, materials science, financial modelling, logistics and AI. Yet, the field faces critical commercialisation, hardware, and talent gaps. For Singapore, staying ahead of developments in quantum computing is a strategic priority. A*STAR is playing a key role in developing Singapore's quantum ecosystem — translating deep research into real-world applications, building advanced infrastructure and attracting talent, as well as forging partnerships with leading international research institutions and industry.

Positioning Singapore at the Forefront of Quantum Hardware

As the race to realise large-scale quantum computing accelerates, Singapore is advancing the next frontier of quantum hardware. Through a strategic collaboration, Singapore brings together its established semiconductor capabilities, A*STAR-hosted National Quantum Federated Foundry's capabilities in quantum device nanofabrication, and Qolab's expertise in superconducting quantum systems. Spearheaded by the National Quantum Office (NQO)

hosted by A*STAR, the goal is to build scalable, manufacturable technologies that enable industrial-scale fault tolerant quantum computers. Qolab, a quantum computing company, was co-founded by 2025 Physics Nobel Laureate Professor John M. Martinis. By addressing critical hardware challenges, the initiative strengthens Singapore's quantum ecosystem while building on the nation's longstanding strengths in semiconductor capabilities to advance next-generation quantum technologies.

Advancing Singapore's Quantum Edge

Singapore is accelerating the translation of quantum research through a strategic partnership between NQO and quantum computing company Quantinuum. Geared towards driving innovation across sectors such as pharmaceuticals, materials science and finance, the collaboration brings Quantinuum's Helios quantum computer and a new R&D and Operations Centre to Singapore. Providing researchers and industry partners access to leading quantum computing capabilities, Helios is a high-performance system that uses quantum bits (qubits) to perform complex simulations in physics and materials science. Singapore will be the first country outside the US to host the Quantinuum Helios system.

Strengthening Singapore's Role in Global Quantum Innovation

NQO is forging a global network of alliances with leading institutions across Europe and Asia to accelerate the development of next-generation quantum technologies.

Recent collaborations with France, Japan and Sweden exemplify this approach. Building on longstanding France-Singapore ties, NQO and its national-level quantum programmes are advancing research and development in neutral-atom processors, silicon spin-qubit technologies, quantum algorithms and error-correction capabilities with leading entities.

In Japan, a landmark MoU with RIKEN Centre for Computational Science brings together world-leading supercomputing capabilities and Singapore's hybrid quantum-classical platforms to tackle complex challenges in areas covering chemistry, material science, optimisation and fluid dynamics. Meanwhile, a strategic partnership with Sweden links Singapore's quantum community to eleven leading Swedish universities and research institutes, which have committed to promoting collaboration in the field of quantum technology.

Together, these initiatives combine strengths in quantum hardware, algorithms, and high-performance computing to accelerate the development of practical and scalable quantum solutions. They also deepen research collaboration, support talent mobility and reinforce Singapore's position as a key node in the global quantum value chain.

08

Sustainability

As climate change and resource constraints reshape the global economy, A*STAR is advancing scientific capabilities that underpin Singapore's transition to a more sustainable and climate-resilient future. Through breakthroughs in next-generation energy technologies and sustainable materials, A*STAR is enabling industries to accelerate decarbonisation, strengthen resilience and adopt more sustainable practices.

Creating Value from Biomass Waste

As demand for cleaner energy grows, A*STAR advances sustainable battery technologies that support Singapore's transition to a low-carbon, circular economy. In partnership with Singapore-based green energy company GEIH, A*STAR is commercialising a proprietary process that transforms waste feedstock-derived biochar into high-value hard carbon. This material has applications in sodium-ion batteries that power alternative energy storage applications, including grid-scale systems, electric vehicles and consumer electronics. By converting waste feedstocks into a crucial battery material, the technology reduces reliance on critical minerals. In creating value from waste, such advancements in materials science innovation strengthen resource resilience and support Singapore's clean energy ambitions.

Unlocking Clean Energy with Ammonia Innovation

Decarbonising energy-intensive industries requires clean fuels that can deliver reliable power at scale. Through a collaboration with US green energy company Amogy, A*STAR is exploring the potential of ammonia as a low-carbon energy carrier for sectors such as data centres, heavy industry and maritime. Combining advanced catalyst research with ammonia-to-power and ammonia-to-hydrogen technologies, the partnership will demonstrate and validate systems that convert ammonia into electricity on

Singapore's Jurong Island, under real-world operating conditions. These technologies will enable Singapore to decarbonise electricity and hydrogen generation without land, intermittency, transport and storage constraints. The initiative will accelerate the commercial deployment of ammonia-based energy solutions, supporting Singapore's ambitions to build a resilient low-carbon economy and establish itself as a regional leader in clean energy innovation.

Positioning Singapore for the Fusion Economy

Even though fusion energy is moving closer to commercial reality, the global industry still faces a shortage of suppliers for critical reactor components. A*STAR captures early-mover advantages in the emerging fusion energy sector with the launch of its Strategic Tokamak Research for Industrial Deployment and Energy (STRIDE) programme. STRIDE integrates A*STAR's expertise in additive manufacturing, materials engineering, and advanced plasma diagnostic systems. Helping Singapore build the capabilities needed to participate in an emerging global industry, A*STAR also secured a five-year research agreement with Commonwealth Fusion Systems to build expertise that supports commercial fusion power plants. Such initiatives strengthen Singapore's role in the global fusion supply chain, foster specialised talent and generate versatile technologies applicable to adjacent high-growth sectors, including aerospace and precision engineering.



CREATING IMPACT THROUGH EXCELLENT SCIENCE

A*STAR advances science that expands the frontiers of knowledge, and delivers solutions for industry, society, and the world.



Semiconductors and Connectivity Technologies

Delivering record-performance Germanium photodetection for data-centre and AI Interconnects

As modern optical communication networks demand faster data transfer rates, silicon photonics requires advanced photodetectors — light-detecting components — that operate at a high bandwidth to handle massive traffic at high speeds. However, this often compromises their responsivity in converting light to electrical signal and requires complicated fabrication processes. By combining advanced material integration with an optimised design, National Semiconductor Translation and Innovation Centre (NSTIC) researchers developed a germanium-based photodetector that integrates smoothly into standard silicon photonics production lines and demonstrates record bandwidth-responsivity performance.

Xudong Jia, Jiawei Sun, Xuan Sang Nguyen, and Leh-Woon Lim, NSTIC

Enabling mass production of ultra-high-speed optical modulators

In fibre-optic communication systems, thin-film lithium niobate (TFLN) modulators serve as ultra-fast optical switches, encoding digital information onto laser signals by rapidly manipulating the properties of light. Despite their exceptional performance, commercial-scale manufacturing of TFLN modulators has remained a major industry challenge. NSTIC researchers have successfully integrated these advanced modulators onto standard 8-inch wafers using conventional semiconductor manufacturing lines, demonstrating reliable operation, ultra-high-speed performance, and excellent uniformity across the entire wafer.

Yiwen Zhang, Lau Chen, Bo Li, and Landobasa Tobing, NSTIC

Why It Matters



Advancing knowledge: Developed a novel recessed-Ge photodetector architecture by selectively growing high-quality germanium within silicon recesses, enabling simultaneous high responsivity and ultra-high-speed operation.



Technology impact: Achieved a record bandwidth-responsivity product of 121.5 GHz·A/W, combining >100 GHz bandwidth with >1.1 A/W responsivity. This enables optical receivers capable of supporting 400 Gbit/s-per-lane and beyond.



Industry relevance: Demonstrates a manufacturable pathway using standard 200-mm production lines, enabling cost-effective, high-volume deployment of 400 Gbit/s-per-lane optical interconnects for AI infrastructure, hyperscale data centres, and next-generation communication networks.

2026 OPTICAL FIBER COMMUNICATION CONFERENCE AND EXHIBITION >

Why It Matters



Advancing knowledge: Developed a wafer-scale thin-film lithium niobate etching technology with excellent uniformity and reproducibility, enabling the world's first reported fabrication of TFLN modulators on an 8-inch wafer platform entirely within a standard semiconductor manufacturing line.



Technology impact: Establishes a scalable and manufacturable pathway for high-volume production of photonic integrated circuits, delivering bandwidths of up to 110 GHz with excellent wafer-scale uniformity and process reproducibility.



Industry relevance: Enables scalable production of ultrahigh-speed optical transceivers. Ongoing discussions with foundry and product companies highlight its commercial potential for AI infrastructure, hyperscale data centres, and future high-capacity communication networks.

2026 OPTICAL FIBER COMMUNICATION CONFERENCE AND EXHIBITION >

Light-activated ferroelectric materials achieve high-rate strain



Materials that bend or stretch in response to light could be useful in miniature or hard-to-wire environments. But the light responsive materials that can produce a large mechanical strain typically generate deformation too slowly for most use cases. A*STAR researchers, together with collaborators from NTU and NUS, demonstrated that scandium-doped aluminium nitride (AlScN) ferroelectric thin films can achieve photostrictive responses more than 100 times faster than current materials. The high-rate strain response is due to the material's nanoscale polarised structure, enabling rapid light-induced motion without electrical wiring or electrodes. The findings open new possibilities for faster, more efficient light-controlled devices.

Hui Li, and Kui Yao, A*STAR IMRE

Why It Matters



Advancing knowledge: Reveals that nanoscale polar domain architecture plays a critical role in determining photostrictive response speed, offering a new design principle for light-responsive ferroelectric materials.



Technology impact: Enables wireless actuation, remote opto-mechanical interactions.



Industry relevance: Offers potential pathways for future remote micro-actuators, as well as non-contact optomechanical and acoustic systems.

ADVANCED MATERIALS >

Semiconductors and Connectivity Technologies



New light-trapping design enables more compact, energy-efficient lasers

A Bound State in the Continuum (BIC) is a peculiar quantum-optical phenomenon where light becomes

perfectly trapped within a structure. BICs have gained attention as promising elements of lasers, but their practical use is limited because even a tiny deviation from BIC conditions significantly affects Quality Factor — a measure of how the system retains energy. A*STAR researchers with collaborators from France and NTU engineered a BIC in titanium dioxide with a nanostructure composed of an array of tiny pillars. This enabled a high Quality Factor and room-temperature lasing.

Thi Thu Ha Do, Zhiyi Yuan, and Son Tung Ha, A*STAR IMRE

Why It Matters



Advancing knowledge: Shows how metasurface geometry can sustain high-quality optical confinement beyond conventional BIC limitations.



Technology impact: Enables compact, energy-efficient microlasers — potentially useful for integrated photonic circuits, sensing and optical communications.



Industry relevance: Supports engineering into more complex on-chip photonic architectures.

[ACS NANO >](#)

Low-Carbon Technologies

Making non-meltable plastics more recyclable



Non-meltable plastics (thermosets) are extremely durable but notoriously difficult to recycle. A smarter type of thermoset called a Covalent Adaptable Network has gone some way to solving that. Instead of permanent, fixed bonds holding the network together,

they have dynamic covalent bonds that can break and re-form, like a reversible zip. That makes recycling or repair possible but only works when joining parts with the same type of dynamic bonds. A*STAR scientists have developed a solid-state reaction that enables thermosets containing different dynamic bonds (C=C and C=N) to break and exchange partners, resulting in the formation of a new seamless bulk recyclable material.

Jie Zheng, and Zibiao Li, A*STAR IMRE

Upcycling polystyrene into high-value industrial ingredients

Polystyrene is widely used in products like coffee cups and foam packaging, but the range of high-value products accessible from this polymer is limited. A major challenge is that the structure of polystyrene makes it difficult to convert into certain valuable compounds, including phthalic anhydride, an important chemical used in the manufacture of plastics, dyes and specialty materials. A*STAR researchers have developed a two-step process that overcomes this limitation by first rearranging the plastic's molecular structure and then converting it into valuable aromatic compounds through oxidation. The approach can directly transform mixed, real-world polystyrene waste into high-purity chemicals that were previously inaccessible from this type of plastic.

Albert Ong, and Jason Y.C Lim, A*STAR IMRE

Why It Matters



Advancing knowledge: Demonstrates a new approach for fusing chemically distinct cross-linked polymer networks, expanding the design possibilities for recyclable and reconfigurable thermoset materials.



Sustainability impact: Enables thermosets to be fused, reprocessed and tuned helps address a persistent source of difficult-to-recycle plastic waste, supporting repair and reuse over disposal.



Industry relevance: Potentially addresses manufacturing constraints, making it more practical to scale up since catalysts add cost and complexity.

[JOURNAL OF THE AMERICAN CHEMICAL SOCIETY >](#)

Why It Matters



Advancing knowledge: Demonstrates that polymer backbone rearrangement can access completely new products for plastic upcycling that could not be achieved via other means.



Sustainability impact: Supports circular economy strategies while lowering reliance on petroleum-derived feedstocks by directly converting mixed, real-world polystyrene waste into industrially important chemicals.



Industry relevance: Phthalic anhydride and related chemicals underpin multi-billion dollar markets in polymers, dyes, specialty chemicals and other polystyrene-like polymers, since phthalic anhydride and related chemicals are central compounds in polymer production.

[ANGEWANDTE CHIMIE INTERNATIONAL EDITION >](#)

New polymer enables safer solid-state batteries

Conventional lithium-ion batteries — found in phones or electric cars for example — are prone to catching fire or exploding because of the flammable liquid they contain. Elastomeric solid polymer electrolytes offer a promising solid-state solution, but they typically have low ionic conductivity which limits their usefulness in batteries. A*STAR researchers in collaboration with NTU MSE developed a novel all-solid-state polymer made up of a string of positively charged units. The lithium ions move through the structure during charging and discharging, combining the advantages of a liquid with the safety and robustness of a solid. This work addresses key barriers to next-generation battery safety and performance.

Sirin Kamarulzaman, Dorsasadat Safanama, Shermin S. Goh, and Derrick W.H. Fam, A*STAR IMRE

Why It Matters



Advancing knowledge: Improves the ion conductivity of the material without compromising on other useful attributes by engineering the chemical properties of the units in the polymer. Enables safer lithium-metal batteries composed of all-solid-state electrolytes with robust mechanical properties and high lithium-ion conductivity.

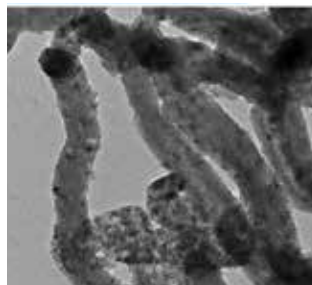


Industry relevance: Simplifies battery assembly, reduces leakage and safety risks with an all-solid-state design. Supporting more sustainable manufacturing and end-of-life recycling pathways.

[NANO ENERGY >](#)

Cryogenic microscopy opens up pathway to alternative battery tech

Magnesium batteries have several benefits over the common lithium batteries that power our phones or electric cars, not least a lower risk of catching fire. But magnesium tends to react with a battery's electrolyte, forming an insulating crust of magnesium oxide that stops it charging. A*STAR scientists, in collaboration with teams from USA and China, used cryogenic transmission electron microscopy to investigate how these deposits form at the nanoscale. Their results help to explain how the crusts accumulate and potentially how to prevent them.



Why It Matters



Advancing knowledge: Explains magnesium deposition behaviour by establishing the relationship between electrolyte composition, the chemistry at the electrode surface and the resulting deposit morphology. This is essential for designing electrolytes and electrodes for magnesium-ion batteries based on an understanding of the chemistry, rather than optimisation by trial and error.



Industry relevance: Magnesium batteries are promising due to their high charge-holding capacity, intrinsic safety and the natural abundance of magnesium. Understanding deposition behaviour lowers technical barriers to industrial development of magnesium battery technologies.

[NATURE COMMUNICATIONS >](#)

New catalyst design boosts CO₂ conversion into useful chemicals

Making valuable chemicals such as ethylene and ethanol directly from CO₂ could provide a more sustainable alternative to producing them from fossil fuels. Tuning of catalyst-support interactions potentially offers a powerful means to steer CO₂ electroreduction reaction pathways. This can be achieved using specialised catalysts composed of nanoparticles of copper hosted on carbon-based support materials. Now A*STAR researchers, in collaboration with teams from NUS, Taiwan and Australia, have shown that adding fluorine to the support material raises the copper's selectivity for C₂₊ products by five-fold during the direct conversion of dilute CO₂ in simulated flue gas. The fluorine draws electrons away from the copper, making it slightly less electron-dense and better able to facilitate carbon-carbon bond formation.

Meng Wang, and Yanwei Lum, A*STAR IMRE Yuke Li, and Jia Zhang, A*STAR IAIC

Why It Matters



Advancing knowledge: Demonstrates that the material supporting a catalyst is not merely passive scaffolding — its chemical properties can be tuned to improve the catalyst's performance.



Sustainability impact: Offers a pathway to convert CO₂ from industrial emissions into valuable chemicals using renewable energy.



Industry relevance: Engineering the interaction between catalyst supports and copper catalysts provides a simple yet effective strategy to enhance the formation of multicarbon (C₂₊) products such as ethylene and ethanol. There have large markets and are currently produced mainly through carbon-intensive processes.

[SCIENCE ADVANCES >](#)

Gaoliang Yang, Tanmay Ghosh, and Zhi Wei Seh, A*STAR IMRE

Genomics & Transcriptomics

Stem cell markers, NOX1 and NPY1R, highlight importance of customised colon cancer treatments

Colorectal cancer is currently treated largely as a single disease, with one screening, prevention and treatment strategy. But doctors know that colorectal cancers have distinct patterns of mutations and severity depending on where they arise. A*STAR scientists, along with collaborators from Japan, NTU and NUS showed that cancers occurring at different locations arise from different stem cell populations, and these populations have distinct molecular properties. This suggests that colorectal cancer should not be treated as a single entity but that different regions of the colon could require targeted treatments.

Maxime Gasnier, and Nick Barker, A*STAR IMCB

How keto diet and drug combo could tackle lung cancer

Cancer stem-like cells often survive in nutrient-poor regions of tumours, but how they adapt to dietary changes is not fully understood. Researchers have explored using a ketogenic diet (high in fat, low in carbs) to curb cancer growth. The idea is to starve tumour cells of the energy from sugars that they need. A*STAR scientists, with collaborators from NUS, Duke-NUS, SERI, SGH, NCCS and SIT, showed that lung cancer stem cells — which can regenerate tumours — thrive even when deprived of sugars. Instead, they use fat-derived molecules called ketones as an alternative fuel. The finding suggests a diet-shift combined with drugs that block ketone metabolism could be effective.

Zhengwei Wu, and Wai Leong Tam, A*STAR GIS

Why It Matters



Advancing knowledge: Explains longstanding clinical observations of regional disease heterogeneity by identifying anatomically distinct stem cell populations as cells of origin for colorectal cancer subtypes.



Industry relevance: The region-specific mouse models provide precise systems for preclinical testing of targeted therapies, and biomarker discovery in colorectal cancer research.

NATURE CELL BIOLOGY >

Why It Matters



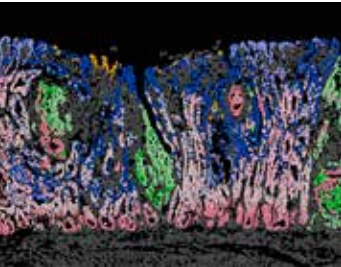
Advancing knowledge: Reveals how lung cancer stem cells adapt metabolically when deprived of nutrients — shifting from sugars to ketones.



Health impact: Provides evidence for a more nuanced interpretation of ketogenic diets in oncology, since dietary interventions are increasingly considered alongside cancer treatment.

CELL METABOLISM >

Identifying hidden cells behind stomach cancer recurrence



Cancer stem cells within tumours are thought to drive relapse, spread and resistance to treatment, but identifying these cancer-sustaining cells has been difficult. A*STAR researchers, with collaborators from Japan, NTU and NUS, identified Aquaporin-5 (AQP5) as a functional marker of gastric cancer stem cells in mouse and human tumours. AQP5-positive cells were able to self-renew, regenerate heterogeneous tumours and drive invasion and metastasis, while AQP5-negative cells lacked these capabilities. Targeted elimination of AQP5-positive cells or inhibition of AQP5 expression blocked tumour initiation and drove regression in established tumours, pointing to a more precise route for tackling gastric cancer at its root.

Grace Lim, Swathi Yada, and Nick Barker, A*STAR IMCB

Why It Matters



Advancing knowledge: Provides direct functional evidence that stomach cancer stem cells with AQP5 are responsible for tumour initiation, maintenance and metastatic spread.



Health impact: Supports therapeutic strategies aimed at preventing relapse, rather than shrinking tumour mass, by pinpointing the specific cell population that drives tumour recurrence.



Industry relevance: Enables diagnosis and drug development, as AQP5 functions both as a marker for identifying cancer stem cells and a driver of tumour regeneration.

SCIENCE >

New microbiome analysis could transform the diagnosis of skin conditions



Understanding the skin microbiome requires knowledge of our microbiome species and their functions. This helps clarify their role in skin conditions such as eczema or acne. A*STAR researchers have developed a robust workflow that sequences all the RNA messenger molecules being produced by these microbes, enabling better analysis of microbial gene expression. By capturing these patterns that DNA-based profiling cannot reveal, the approach helps clarify how bacteria and fungi contribute to skin conditions.

Minghao Chia, and Niranjan Nagarajan, A*STAR GIS

Why It Matters



Advancing knowledge: Establishes metatranscriptomics as a method for analysing the skin microbiome. It enables direct measurement of microbial activity rather than abundance.



Health impact: Improves understanding of how skin microbes influence inflammation, barrier function and conditions such as dermatitis and acne, by identifying active microbial pathways.



Industry relevance: Deepens understanding of how therapeutics, cosmetics and hygiene products modulate microbial function, supporting dermatology, personal care and biotechnology applications.

[NATURE BIOTECHNOLOGY >](#)

Nano-scale biopsy needle enables longitudinal gene activity tracking in living cells

Gene expression studies reveal which genes are active in a cell, but conventional methods usually require breaking cells open, preventing researchers from tracking the same cells over time. A*STAR researchers and collaborators from NUS have developed a non-destructive technique to sample RNA repeatedly from living cells. It uses nanostraws that act as nanoscale biopsy needles. This enables longitudinal transcriptomics, allowing researchers to observe how gene activity changes during drug response, stress, disease progression or the emergence of resistance.

Ying Jie Quek, and Giulia Adriani, A*STAR SgN

Why It Matters



Advancing knowledge: Improves understanding of cellular responses to drugs, stress and disease progression through longitudinal analysis, especially transient states and resistance development.



Industry relevance: Allows incorporation into drug screening and precision medicine workflows, with compatibility for live cells and standard laboratory systems, making it well-suited for pharmaceutical R&D.

[ACS NANO >](#)

p52-ETS1 as a drug target for allergic immune responses

Transcription factor complexes like p52/Relb act as molecular switches that turn on the process of transcribing specific genes. A*STAR scientists discovered that p52 forms a new transcriptional complex with ETS1 to regulate B cell differentiation, and antibody responses without its traditional partner Relb. Together they activate immune responses that drive allergic reactions. The p52-ETS1 complex therefore represents a potential target for drugs to treat a range of B-cell mediated diseases. These findings reveal an important mechanism that helps control immune activation and provide new insights into how immune and allergic responses are regulated.

Dhakshayini Morgan, and Vinay Tergaonkar, A*STAR IMCB
Biyang Zhang, and Kong-Peng Lam, A*STAR SgN

Why It Matters



Advancing knowledge: Reveals an additional layer of immune control through understanding p52's mechanism of action and its interaction with other transcription factors.



Health impact: Drugs that inhibit the p52-ETS1 complex, and prevent it from switching on transcription could help protect against allergic responses, including potentially fatal anaphylaxis.

[NATURE IMMUNOLOGY >](#)

Advanced Manufacturing

Nanoparticle approach prevents cracking in 3D-printed aluminium alloys

3D-printing is widely used to manufacture precise and complex-shaped components. But the technique is not well-suited to high-strength aluminium alloys used in demanding applications such as aircraft components. In the aluminium alloy AA7075, the laser printing process can cause the metal to solidify in a highly directional way and concentrate certain alloying elements in local regions. These effects make the printed material vulnerable to cracking. A*STAR scientists, and collaborators from China, developed a method to embed ceramic nanoparticles in the alloy powder. These particles help the aluminium solidify more evenly during printing, producing a finer grain structure and reducing crack formation. With suitable heat treatment, the printed alloy achieved much better strength and ductility, making this a promising route for 3D-printing high-strength aluminium components.

Tian-Shu Liu, Youxiang Chew and Chaolin Tan, A*STAR IMRE

Why It Matters

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Advancing knowledge: Clarifies how ultra-low concentrations of in-situ nanoparticles influence solidification, recrystallisation and precipitation during additive manufacturing.
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Manufacturing impact: Enables additive manufacturing of high-strength aluminium alloys previously considered unsuitable for printing by suppressing cracking and expanding the process window.
- 

Industry relevance: Minimises cost and processing complexity to support applications in aerospace, automotive and advanced manufacturing sectors seeking lightweight, high-performance components.

JOURNAL OF MATERIALS SCIENCE & TECHNOLOGY >

Smart Materials and Microsystems

Microscopic drum skin design delivers humidity sensing breakthrough

Humidity detection has uses in environmental monitoring, healthcare and manufacturing, but current technologies have limitations. A*STAR researchers, working with STMicroelectronics, have developed a new sensor design. It incorporates a tiny scandium-doped aluminium nitride diaphragm which acts like a microscopic drum skin. As humidity changes, a zinc oxide layer swells and applies stress to the diaphragm. This causes it to vibrate differently depending on the humidity level. This is a fundamentally different sensing mechanism from conventional designs which achieves a Figure of Merit more than an order of magnitude higher than the prior state-of-the-art, alongside fast response times and excellent selectivity across a wide humidity range.

Jihang Liu, and Yao Zhu, A*STAR IME

Why It Matters

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Advancing knowledge: Establishes stress-based transduction as a fundamentally more sensitive sensing mechanism than established humidity-sensor designs.
- 

Societal impact: Improves environmental management, manufacturing process control, building operations and healthcare settings with more accurate and responsive humidity monitoring.
- 

Industry relevance: Enables detection of other gases or vapours by modifying the sensing layer, broadening its use in industrial and environmental monitoring.

SENSORS AND ACTUATORS: B. CHEMICAL >

Artificial Intelligence



Algorithm-pruning technique creates leaner AI models

Large neural networks that underpin AI models can be improved by pruning weights — the values learned during training — that contribute little to a model's output. Cutting redundancy reduces computational and energy load, making them easier to deploy on mobile devices, for example. A*STAR researchers have discovered a property of the way model output degrades as each layer is pruned that makes it much easier to optimise the process. Testing on an AI trained in 3D object recognition showed that the pruned model ran four times faster with no drop-off in capability.

Kaixin Xu, Zhe Wang, and Min Wu, A*STAR IAIC

Why It Matters

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Advancing knowledge: Deepens theoretical understanding of how neural network layers contribute to output degradation.
- 

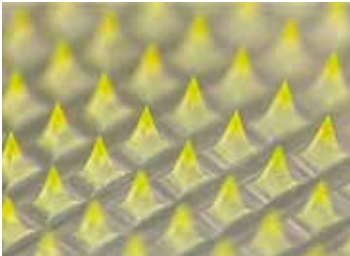
Technology impact / Industry relevance: Enables sophisticated AI models to be deployed on mobile devices and in the real world.

IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE >

Biomaterials

Stick-on microneedle patch could replace painful injections

Microneedle patches are promising medicine delivery devices, as they offer a minimally invasive way to deliver medicines through the skin. However, their tiny needle tips limit dosage and do not work well for drugs that incorporate large protein molecules such as interferon or vaccines. A*STAR scientists developed a microgel-integrated microneedle array patch that allows more protein to be held in the needle tips while protecting it from temperature variations. This addresses a key barrier to using microneedle patches for vaccines, interferon and antibody therapies.



Bae Ki Hyun, A*STAR BTI
Kun Liang, A*STAR SRL
with collaborators from IBB and A*STAR IMCB

Why It Matters



Advancing knowledge: Demonstrates a strategy to reduce dosage limitations and stabilise fragile proteins, addressing a key technical barrier to using microneedle patches for protein-based drugs.



Health impact: Improves patient compliance with needle-free delivery, reducing reliance on trained personnel. Also avoids the need for cold-chain transportation and storage of medicines — crucial for public health in regions with poor infrastructure.



Industry relevance: Supports diverse prophylactic and therapeutic applications, from vaccine delivery to protein-based medicines and therapies.

[SMALL >](#)

Immunology

Mosquito saliva worsens Chikungunya infection

When a mosquito bites, it injects a host of chemicals in its saliva that help it feed, for example by dilating blood vessels and preventing blood clotting. Mosquito saliva is also known to worsen infection with the chikungunya virus, which causes severe joint pain and fever. But the mechanism was poorly understood. A*STAR researchers, with collaborators from NUS, NTU and NCID, have found that a small protein called sialokinin reduces the activity of immune cells that help control infection while weakening the body's virus-specific T-cell response. The work reveals a potential route to reducing the impact of chikungunya and related mosquito-borne diseases.

Siew-Wai Fong, and Lisa F.P. Ng, A*STAR IDL

Why It Matters



Advancing knowledge: Provides a molecular basis for how sialokinin modulates host immune responses and contributes to chikungunya disease severity. The findings are relevant to mosquito-borne diseases in tropical regions, where chikungunya remains a significant and potentially worsening public health concern.



Health impact: Supports therapeutic or vaccine-based strategies that reduce disease severity, not just transmission, by targeting vector-derived factors such as sialokinin.

[NATURE COMMUNICATIONS >](#)

Population Health

Parental engagement shapes how screen time affects child development



For years, public health guidance focused on limiting children's screen time due to concerns it was bad for development. But a more nuanced understanding of media exposure is needed. A*STAR scientists found that parental engagement during media use, rather than screen duration or rule-setting alone, has a direct positive association with prosocial behaviour in preschool children. When parents discuss characters, emotions or conflict resolution with their children, screen experiences can support social development. The findings shift attention from how long children watch screens to how adults actively engage with them during media use.

Xuejiao Chen, and Wei-Jun Jean Yeung, A*STAR IHDP

Why It Matters



Advancing knowledge: Challenges duration-focused models of screen exposure by demonstrating that parental involvement is the dominant factor influencing developmental outcomes.



Health impact: Supports a more balanced, evidence-based public guidance, helping to reduce anxiety around screen use while emphasising active engagement.



Industry relevance: Suggests implications for education technology, parenting programmes and child development policy frameworks.

[BMC PUBLIC HEALTH >](#)

NURTURING TOP TALENT

Talent is the lifeblood of a vibrant ecosystem. A*STAR cultivates research and entrepreneurial talent to advance discovery, translate innovation, and deliver impact — strengthening Singapore's research, innovation, and enterprise landscape.



National Awards

President’s Science Award

Prof Lisa Ng, A*STAR IDL and Biomedical Research Council

Recognised for pioneering contributions to viral immunology, advancing the understanding of arboviruses such as Chikungunya, and strengthening global pandemic preparedness. Prof Ng has led significant translational breakthroughs in diagnostics, vaccine strategies, and global public health responses to emerging viral threats.



President’s Technology Award

Prof Ng Geok Ing, NSTIC

Recognised for advancing Singapore’s capabilities in radio-frequency Gallium Nitride (GaN) technologies, enabling local manufacturing capabilities and nurturing talents in the strategic semiconductor domain. Professor Ng has been instrumental in advancing Singapore’s national capabilities in III-V compound semiconductors, particularly GaN, culminating in the creation of a national platform that positions Singapore among global leaders in GaN technology.

Young Scientist Award

Dr Chan Yi Hao, A*STAR IDL

Recognised for research on viral encephalitis that advances the understanding of how the brain defends itself against life-threatening viral infections. His research seeks to understand why individuals respond differently to infections (like SARS-CoV-2 and COVID-19), uncovering genetic factors and immune mechanisms that shape susceptibility and outcomes.

IES Prestigious Engineering Achievement Award 2025

A*STAR IAIC

Dr Yau Wei Yun, Dr Albertus Adiwahono, Mr Chen Tai Pang Lawrence, Ms Brina Shong, Mr Yesnas Thadimari, Mr Tan Chong Boon, Mr Chen Yuda, Mr Lee Men Huang, Dr Nursultan Imanberdiyev, Mr Ng Kam Pheng , Dr Efe Camci, Mr Mohammad Asif Bin Abdul Sahid, Dr Saurab Verma, Mr Syed Zeeshan Ahmed Mukhtar, Mr Chan Jian Le, and Mr Zhang Kun

In partnership with the Home Team Science & Technology Agency (HTX)

Project: Autonomous Collaborative Patrolling Robots

Recognised for developing collaborative patrolling robots that advance intelligent systems for public safety and operational efficiency, with real-world applications in autonomous patrols, officer mobility, and frontline security operations.

L’Oreal-UNESCO For Women in Science Singapore

Dr Beverly Mok, A*STAR IMCB

Recognised for advancing RNA-based therapeutic strategies for inherited retinal diseases and rare genetic disorders.

Dr Liu Jinyue, A*STAR GIS

Recognised for developing RNA technologies to map brain connectivity, advancing understanding of neural systems.

Singapore 100 Women in Tech

Dr Freda Lim, Ms Maria Therese Quieta, Dr Yin Haiyan, and Dr Qian Hangwei, A*STAR IAIC

Dr Fan Yan, A*STAR NMC

Recognised for excellence in technology and innovation, demonstrating leadership and impact while inspiring greater participation of women in the tech sector.

MTI Firefly Award 2025 - Borderless Award (Silver)

A*STAR Laboratory, Cleanroom & Management (LCaM)

In partnership with JTC and the Singapore Economic Development Board

Recognised for their adaptive repurposing of existing infrastructure to establish NSTIC (R&D Fab) through cross-agency collaboration, delivering state-of-the-art shared cleanroom facilities at significantly reduced time and cost, while strengthening Singapore’s semiconductor competitiveness.

MTI Firefly Award 2025 - Borderless Award (Bronze)

A*STAR NMC

In partnership with Maritime Port Authority (MPA)

Project: Developing a Standardised Data Integrity Inspection Method and Protocol for Digital Bunkering Systems

Recognised for developing a standardised data integrity inspection protocol for digital bunkering systems, enhancing transparency, safeguarding a critical industry, and reinforcing Singapore’s leadership as a global bunkering hub.

MTI Firefly Award 2025 - Exemplary Firefly Award (Silver)

Prof Koh Boon Tong, A*STAR BTI

Recognised for strategic leadership in advancing translational R&D and galvanising biomedical capabilities to drive industry partnerships, strengthening Singapore’s nucleic acid therapeutics ecosystem, and positioning Singapore in next-generation RNA manufacturing.

MTI Firefly Award 2025 - Innovative Project/Policy (Gold)

[A*STAR ARTC, IAIC, IMRE, NMC and SIMTech](#)

Project: Smart Manufacturing Joint Lab (SMJL)

Recognised for improving Rolls-Royce's fan blade production through advanced manufacturing technologies, achieving significant productivity gains, generating industry opportunities, and strengthening Singapore's aerospace ecosystem.

MTI Firefly Award 2025 - Innovative Project/Policy (Silver)

[A*STAR IAIC](#)

Project: Aircraft Predictive Maintenance Technology

Recognised for advancing AI-enabled predictive maintenance to enhance aircraft reliability, reduce operational disruptions, and strengthen Singapore's position as an aviation hub.

International Awards

MIT Technology Review Innovators Under 35 (TR35)

Asia Pacific 2025

[Dr Li Bofan, A*STAR ISCE²](#)

Recognised for developing smart, recyclable membrane systems for sustainable water and chemical purification. Dr Li has advanced greener separation technologies that reduce waste, extend membrane lifespan and improve efficiency in industrial purification processes.

Asia Women Tech Leaders Award 2025

[Dr Nancy Chen, A*STAR IAIC](#)

Recognised for advancing ethical and inclusive AI technologies through innovations in large language models, expanding access and impact across diverse communities.

International Magnesium Science and Technology Award for Innovative Process of the Year 2025

[Dr Sharon Nai, Dr Hang Li Seet, and Dr Mojtaba Salehi, A*STAR SIMTech](#)

Project: Digital Manufacturing of Personalized Magnesium Implants via Binder Jetting and Automated Post-Machining

Recognised for advancing additive manufacturing through digital fabrication of personalised magnesium implants. The innovation has enabled high-precision, biodegradable biomedical solutions tailored to patient needs.

Emerging Investigators by the Journal of Materials Chemistry A

[Dr Wang Jianbiao, A*STAR IMRE](#)

Recognised for developing novel sodium-ion battery materials through structural innovation, advancing energy storage performance and sustainability.

Asia Photonics Technology Innovation Award

[Prof Malini Olivo, Dr Zhang Ruochong, Dr Poongkulali Rajarhm, Dr Qi Yi, and Dr Bi Renzhe, A*STAR SRL](#)

Recognised for developing an innovative handheld confocal Raman skin analyser, advancing sustainable photonics technologies and diagnostic capabilities.

International Fellowships

American Association for Cancer Research (AACR) Academy Fellow

[Prof Ashok Venkitaraman, A*STAR IMCB](#)

Recognised for pioneering research on BRCA2 and genome maintenance, advancing understanding of breast cancer development and enabling new therapeutic strategies.

Associate Member at European Molecular Biology Organization (EMBO)

[Dr Wan Yue, A*STAR GIS](#)

Recognised for outstanding research excellence in RNA science, including developing high-throughput approaches to map RNA structures and interactions across diverse systems, deepening understanding of gene regulation and enabling new avenues for disease-targeted RNA technologies.

Fellow of the Royal Society of Chemistry (FRSC)

[Dr Julian Chan, A*STAR ISCE²](#)

Recognised for sustained contributions to chemical sciences, including innovations in plastic upcycling for sustainable materials.

IEEE-Eta Kappa Nu (IEEE-HKN) Professional Membership

[Dr Nancy Chen, A*STAR IAIC](#)

Recognised for outstanding contributions to engineering, leadership, and service, demonstrating excellence in scholarship and professional impact within the IEEE community.

Fellow of the International Speech Communication Association (ISCA) 2025

[Dr Nancy Chen, A*STAR IAIC](#)

Recognised for transformative contributions to speech communication, including multilingual speech processing and multimodal human-machine interaction.

Major National and International Grants

NRF Competitive Research Programme (CRP) 32nd Grant

Dr Wu Wei, A*STAR SigN

Exploiting Tumor-specific RNA-editing for Antigen-based Cancer Therapy (EXTRACT)

Dr Sherry Aw, A*STAR IMCB

Mechanistic understanding of a programmable RNA-sensing ribozyme to develop a platform for cell context-specific release of non-coding RNA therapeutics

NRF Competitive Research Programme (CRP) 33rd Grant

Dr Jayantha Gunaratne, A*STAR IMCB

NICHES: Niche-Driven Immuno-evasion and Metastasis in High-risk Cancer Subtypes for Effective Stratification

Prof Lam Ping Koy, A*STAR Q.InC

Quantum Data Storage and Transduction for Scalable Quantum Technologies

NRF Thematic Competitive Research Programme (CRP) 2025 Call

Dr Ivan Verzhbitskiy, A*STAR Q.InC

Atomic Scale Engineering of Nonreciprocal Devices Towards THz Sensing

Dr Yau Wei Yun, A*STAR IAIC

Biologically Inspired Embodied AI Action Architecture

Dr Zhang Yong-Wei, A*STAR IAIC

Predictive Platform for Thermal Transport in Advanced Nanoengineered Systems

National Medical Research Council (NMRC) Individual Research Grant and Young Individual Research Grant

[25 A*STAR researchers](#) were awarded the funds to nurture basic, translational and clinical research that are relevant to human health and potential.

Manufacturing, Trade and Connectivity (MTC) Individual Research Grant and Young Individual Research Grant

[11 A*STAR researchers](#) were awarded for both grants which support novel and fresh R&D investigator-led ideas in the manufacturing, trade and connectivity domain sectors.

4th Science of Learning (SoL) Grant Call

Dr Cai Shirong, A*STAR IHDP

Environments of Adolescents on Sleep and socio-Emotional development (EASE)

Dr Alicia Salamanca Sanabria, A*STAR IHDP

Digital InteRvention to promotE Adolescent sleep, learning and Mental well-being (DREAM)

MTC Programmatic Fund

Dr Kai Dan, A*STAR ISCE²

Developing Liquid Wood Resin for Sustainable Specialty Polymers

Dr Ken Lee, A*STAR ISCE²

Sustainable Chemistry for High-Value Glycoside Products via Traceless Activation

Other Awards and Recognition

50th International Exhibition of Inventions Geneva (Silver Medal)

Prof Malini Olivo and Dr Renzhe Bi, A*STAR SRL

Recognised for developing a handheld Raman probe with enhanced sensitivity and portability, enabling improved molecular detection for clinical diagnostics and field applications.

AAAI-26 (Association for the Advancement of Artificial Intelligence)

Best Demonstration Awards

Dr Fang Fen, Dr Yang Muli, Dr Yang Xulei, and Dr Li Zhengguo, A*STAR IAIC

Dr Liang Xinan, Dr Tobias Mass, and Dr Xu Xuewu, A*STAR IMRE

Project: Next-Generation Metalens Vision System: Powered by AI and Applied to AI

Recognised for developing an end-to-end AI-powered metalens vision system integrating advanced imaging and machine perception capabilities.

Clarivate Highly Cited Researchers 2025

Dr Chen Jinmiao, A*STAR BII

Dr Fu Huazhu, Prof Ong Yew Soon, and Prof Zhang Yong Wei, A*STAR IAIC

Dr Seh Zhi Wei, A*STAR IMRE

Dr Xi Shibo, A*STAR ISCE²

Dr Yang Yi Yan, A*STAR BTI

Recognised as one of the world's most influential scientific minds globally, with highly cited research ranking in the top 1% globally by field and year on Web of Science™. Their contributions span diverse fields, reflecting a relentless pursuit of innovation and excellence.

World's Top 2% Scientists by Stanford University

Career Long Impact 2024, 77 A*STAR staff were recognised

Single Year Impact 2024, 112 A*STAR staff were recognised

Organisation Details

Board Secretary

Dr Wendy Soon, Director, Strategic & Corporate Planning

*A*STAR*

Email

wendy_soon@a-star.edu.sg

**AGENCY FOR SCIENCE,
TECHNOLOGY AND RESEARCH**

REPORT AND FINANCIAL STATEMENTS

YEAR ENDED 31 MARCH 2026

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

REPORT AND FINANCIAL STATEMENTS

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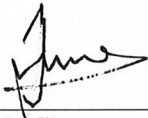
AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

STATEMENT BY AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

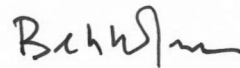
In our opinion,

- (a) the accompanying financial statements of the Agency for Science, Technology and Research (the “Agency”), set out on pages FS1 to FS28 are properly drawn up in accordance with the provisions of the Public Sector (Governance) Act 2018 (the “PSG” Act), the Agency for Science, Technology and Research Act 1990 (the “Act”) and Statutory Board Financial Reporting Standards (“SB-FRSs”) so as to present fairly, in all material respects, the state of affairs of the Agency as at 31 March 2026, and of the results, changes in equity and cash flows of the Agency for the financial year ended on that date;
- (b) the receipts, expenditure, investments of moneys and the acquisition and disposal of assets by the Agency during the financial year are, in all material respects, in accordance with the provisions of the PSG Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Agency; and
- (c) proper accounting and other records have been kept, including records of all assets of the Agency whether purchased, donated or otherwise.

On behalf of the Agency



Tan Chorh Chuan
Chairman



Beh Kian Teik
Chief Executive Officer

Singapore
27 July 2026



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Singapore 018961

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Independent auditors' report

Members of the Agency
Agency for Science, Technology and Research

Report on the audit of the financial statements

Opinion

We have audited the financial statements of Agency for Science, Technology and Research (the "Agency"), which comprise the statement of financial position as at 31 March 2026, the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including material accounting policy information, as set out on pages FS1 to FS28.

In our opinion, the accompanying financial statements are properly drawn up in accordance with the provisions of the Public Sector (Governance) Act 2018 (the "PSG Act"), the Agency for Science, Technology and Research Act 1990 (the "Act") and Statutory Board Financial Reporting Standards ("SB-FRSs") so as to present fairly, in all material respects, the state of affairs of the Agency as at 31 March 2026 and the results, changes in equity and cash flows of the Agency for the year ended on that date.

Basis for opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the '*Auditors' responsibilities for the audit of the financial statements*' section of our report. We are independent of the Agency in accordance with the Accounting and Corporate Regulatory Authority *Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities* ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information contained in the annual report. Other information is defined as all information in the report other than the financial statements and our auditors' report thereon.

We have obtained the Statement by Agency for Science, Technology and Research prior to the date of this auditors' report.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information obtained prior to the date of this auditors' report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the provisions of the PSG Act, the Act and SB-FRSs, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

A statutory board is constituted based on its constitutional act and its dissolution requires Parliament's approval. In preparing the financial statements, management is responsible for assessing the Agency's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless there is intention to wind up the Agency or for the Agency to cease operations.

Those charged with governance are responsible for overseeing the Agency's financial reporting process.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.

- Obtain an understanding of internal controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Agency's internal controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Agency's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Agency to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal controls that we identify during our audit.

Report on other legal and regulatory requirements

Opinion

In our opinion:

- (a) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by the Agency during the year are, in all material respects, in accordance with the provisions of the PSG Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Agency; and
- (b) proper accounting and other records have been kept, including records of all assets of the Agency whether purchased, donated or otherwise.

Basis for opinion

We conducted our audit in accordance with SSAs. Our responsibilities under those standards are further described in the 'Auditors' responsibilities for the compliance audit' section of our report. We are independent of the Agency in accordance with the ACRA Code together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management's compliance.

Responsibilities of management for compliance with legal and regulatory requirements

Management is responsible for ensuring that the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the PSG Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Agency. This responsibility includes monitoring related compliance requirements relevant to the Agency, and implementing internal controls as management determines are necessary to enable compliance with the requirements.

Auditors' responsibilities for the compliance audit

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the PSG Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Agency.

Our compliance audit includes obtaining an understanding of the internal control relevant to the receipts, expenditure, investment of moneys and the acquisition and disposal of assets; and assessing the risks of material misstatement of the financial statements from non-compliance, if any, but not for the purpose of expressing an opinion on the effectiveness of the Agency's internal control. Because of the inherent limitations in any internal control system, non-compliances may nevertheless occur and not be detected.

The engagement partner on the audit resulting in this independent auditors' report is Low Gin Cheng, Gerald.



KPMG LLP
Public Accountants and
Chartered Accountants

Singapore
27 July 2026

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

STATEMENT OF COMPREHENSIVE INCOME

Year ended 31 March 2026

	<u>Note</u>	<u>2026</u> \$	<u>2025</u> \$
Other income	7	6,300,104	2,614,070
Expenses		(46,694,230)	(43,956,983)
Staff and related expenses	8	(28,143,246)	(27,533,913)
Depreciation of property, plant and equipment	15(a)	(1,501,885)	(4,493,037)
Information technology cost		(8,064,037)	(5,748,638)
Finance cost		(14,307)	(162,318)
Other administrative expenses	9	(8,970,755)	(6,019,077)
Deficit before grants		(40,394,126)	(41,342,913)
Government grants		44,955,694	41,552,431
Operating grants	11	44,471,624	40,483,211
Deferred capital grant amortised	10	484,070	1,069,220
Surplus before contribution to consolidated fund		4,561,568	209,518
Contribution to consolidated fund	12	(775,467)	(35,618)
Net surplus, representing total comprehensive income for the year		<u>3,786,101</u>	<u>173,900</u>

The accompanying notes form an integral part of these financial statements.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

STATEMENT OF FINANCIAL POSITION

As at 31 March 2026

	Note	2026 \$	2025 \$
<u>ASSETS</u>			
Non-current assets			
Property, plant and equipment	15	1,241,295	3,281,584
Intangible assets	16	11,557,762	5,126,088
Total non-current assets		12,799,057	8,407,672
Current assets			
Other receivables	14	28,999,878	26,692,956
Cash and cash equivalents	13	47,269,377	56,473,086
Total current assets		76,269,255	83,166,042
Total assets		89,068,312	91,573,714
<u>LIABILITIES AND EQUITY</u>			
Non-current liabilities			
Deferred capital grants	10	11,041,383	6,776,869
Total non-current liabilities		11,041,383	6,776,869
Current liabilities			
Other payables	17	13,852,017	24,030,723
Grants received in advance	11	18,663,219	17,983,231
Provision for reinstatement cost	20	2,111,283	2,628,967
Provision for contribution to consolidated fund	12	775,467	35,618
Lease liabilities	19	-	1,105,564
Total current liabilities		35,401,986	45,784,103
Capital and reserves			
Share capital	18	417,128	417,128
Capital account	21	34,829	34,829
Accumulated surplus		42,172,986	38,560,785
Total capital and reserves		42,624,943	39,012,742
Total liabilities and equity		89,068,312	91,573,714
Trust and Agency Funds			
Net (liabilities)/assets of Research and Development Fund	22	(57,931,391)	39,052,133
Net liabilities of National Metrology Fund	23	-	(806,250)

The accompanying notes form an integral part of these financial statements.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH**STATEMENT OF CHANGES IN EQUITY****Year ended 31 March 2026**

	Share capital	Capital account	Accumulated surplus	Total
	\$	\$	\$	\$
Balance as at 1 April 2024	417,128	34,829	38,656,065	39,108,022
Net surplus for the year, representing total comprehensive income for the year	-	-	173,900	173,900
Dividends paid to Ministry of Finance (Note 18)	-	-	(269,180)	(269,180)
Balance as at 31 March 2025 and 1 April 2025	417,128	34,829	38,560,785	39,012,742
Net surplus for the year, representing total comprehensive income for the year	-	-	3,786,101	3,786,101
Dividends paid to Ministry of Finance (Note 18)	-	-	(173,900)	(173,900)
Balance as at 31 March 2026	417,128	34,829	42,172,986	42,624,943

The accompanying notes form an integral part of these financial statements.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

STATEMENT OF CASH FLOWS

Year ended 31 March 2026

	2026	2025
	\$	\$
Cash flows from operating activities		
Deficit before grants	(40,394,126)	(41,342,913)
Adjustments for:		
Depreciation of property, plant and equipment	1,501,885	5,177,062
Loss on disposal of property, plant and equipment	216,781	70,389
Loss/(gain) on lease modifications	133,934	(466,126)
Interest income	(1,034,135)	(1,734,237)
Interest expense	14,307	162,318
	(39,561,354)	(38,133,507)
Changes in working capital:		
Other receivables	(2,753,516)	(12,773,958)
Other payables	(12,111,790)	6,959,086
Provision for reinstatement	(517,684)	-
Cash used in operations	(54,944,344)	(43,948,379)
Interest received	1,480,729	1,721,628
Contribution to consolidated fund	(35,618)	(55,133)
Net cash used in operating activities	(53,499,233)	(42,281,884)
Cash flows from investing activities		
Addition to property, plant and equipment	(182,342)	(5,277,423)
Addition to intangible assets	(4,503,532)	-
Net cash used in investing activities	(4,685,874)	(5,277,423)
Cash flows from financing activities		
Grants received	49,900,196	48,381,026
Principal payment of lease liabilities	(730,591)	(2,646,552)
Interest paid	(14,307)	(116,122)
Dividends paid to Ministry of Finance	(173,900)	(269,180)
Net cash from financing activities	48,981,398	45,349,172
Net decrease in cash and cash equivalents	(9,203,709)	(2,210,135)
Cash and cash equivalents at the beginning of the financial year	56,473,086	58,683,221
Cash and cash equivalents at the end of the financial year (Note 13)	47,269,377	56,473,086

The accompanying notes form an integral part of these financial statements.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

1 GENERAL

The Agency for Science, Technology and Research (the “Agency”) was established as a statutory board in Singapore under the provisions of the Agency for Science, Technology and Research Act 1990 (the “Act”). The principal place of business is located at 2 Fusionopolis Way, Innovis #08-01, Singapore 138634. The financial statements are expressed in Singapore dollars, which is the functional currency of the Agency and the presentation currency for the financial statements.

The Agency was formerly known as National Science & Technology Board (“NSTB”), which was established on 11 January 1991 under the provisions of the National Science & Technology Board Act, 1990. On 1 January 2002, the National Science & Technology Board Act was renamed the Agency for Science, Technology and Research Act and NSTB changed its name to the Agency for Science, Technology and Research.

The Agency manages the Research and Development Fund received from the Government with a mission to advance science and develop innovative technology to further economic growth and improve lives, and aspires to be a global leader in science, technology and open innovation.

The Agency also acts as an agent to distribute grants received from the Government to National Metrology Centre (“NMC”) and Health Sciences Authority (“HSA”) with respect to the Chemical Metrology Programme.

The financial statements of the Agency for the financial year ended 31 March 2026 were authorised for issue by members of the Agency on 27 July 2026.

2 BASIS OF PREPARATION

STATEMENT OF COMPLIANCE - The financial statements have been prepared in accordance with the provisions of the Public Sector (Governance) Act, the Agency for Science, Technology and Research Act 1990 (the “Act”) and the Statutory Board Financial Reporting Standards (“SB-FRS”). SB-FRS includes Statutory Board Financial Reporting Standards, Interpretations of SB-FRS (“INT SB-FRS”) and SB-FRS Guidance Notes as promulgated by the Accountant-General.

BASIS OF MEASUREMENT - The financial statements have been prepared on the historical cost except as disclosed in the accounting policies below.

MEASUREMENT OF FAIR VALUES - Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Agency takes into account the characteristics of the asset or liability which market participants would take into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these financial statements is determined on such a basis leasing transactions that are within the scope of SB-FRS 116 *Leases*, and measurements that have some similarities to fair value but are not fair value, such as value in use in SB-FRS 36 *Impairment of Assets*.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

2 BASIS OF PREPARATION (cont'd)

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

CHANGES IN MATERIAL ACCOUNTING POLICIES

New accounting standards and amendments

The Agency has applied the amendments to SB-FRS 21 *Lack of Exchangeability* for the first time for the annual period beginning on 1 April 2025. The application of these amendments to accounting standards did not have a material effect on the financial statements.

3 MATERIAL ACCOUNTING POLICIES

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

FINANCIAL INSTRUMENTS - Financial assets and financial liabilities are recognised on the Agency's statement of financial position when the Agency becomes a party to the contractual provisions of the instrument.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial instrument and of allocating interest income or expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts or payments (including all fees paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial instrument, or where appropriate, a shorter period.

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

FINANCIAL INSTRUMENTS (cont'd)

Financial assets

The Agency classifies its financial assets into the following measurement categories:

- Amortised cost

The classification of financial assets depends on the Agency's business model for managing the financial assets as well as the contractual terms of the cash flows of the financial assets.

(i) At initial recognition

At initial recognition, the Agency measures a financial asset at its fair value plus, for an item not at fair value through profit or loss, transaction costs that are directly attributable to its acquisition or issue of the financial assets. Transaction costs of financial assets carried at fair value through profit or loss are expensed in the Statement of Comprehensive Income.

(ii) At subsequent measurement

Financial assets of the Agency mainly comprise cash and cash equivalents and other receivables.

There are three prescribed subsequent measurement categories, depending on the Agency's business model in managing the assets and the cash flow characteristic of the assets. The Agency manages these group of financial assets by collecting the contractual cash flow and these cash flows represents solely payment of principal and interest. Accordingly, these group of financial assets are measured at amortised cost subsequent to initial recognition.

A gain or loss on financial assets that is subsequently measured at amortised cost and is not part of a hedging relationship is recognised in the Statement of Comprehensive Income when the asset is derecognised or impaired. Interest income from these financial assets are recognised using the effective interest rate method.

The Agency assesses on a forward-looking basis the expected credit losses associated with its financial assets carried at amortised cost.

For other receivables and cash and cash equivalents, the general 3-stage approach is applied. Credit loss allowance is based on 12-month expected credit loss if there is no significant increase in credit risk since initial recognition of the assets. If there is a significant increase in credit risk since initial recognition, lifetime expected credit loss will be calculated and recognised.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

FINANCIAL INSTRUMENTS (cont'd)

Financial assets (cont'd)

Derecognition of financial assets

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Agency has transferred substantially all risks and rewards of ownership.

Financial liabilities and equity instruments

Classification as debt or equity

Financial liabilities and equity instruments issued by the Agency are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of the Agency after deducting all of its liabilities. Equity instruments are recorded at the proceeds received, net of significant direct issue costs.

Pursuant to the Finance Circular Minute ("FCM") No. 26/2008 on Capital Management Framework ("CMF"), equity injection from the Government is recorded as share capital.

Other financial liabilities

Other payables are initially measured at fair value, net of transaction costs and are subsequently measured at amortised cost, using the effective interest method, with interest expense recognised on an effective yield basis.

Derecognition of financial liabilities

The Agency derecognises financial liabilities when, and only when, the Agency's obligations are discharged, cancelled or they expire.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

IMPAIRMENT OF NON-FINANCIAL ASSETS - At the end of each reporting period, the Agency reviews the carrying amounts of its assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Agency estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in the Statement of Comprehensive Income.

When an impairment loss is subsequently reversed, the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in the Statement of Comprehensive Income.

PROPERTY, PLANT AND EQUIPMENT - These are stated at cost less accumulated depreciation and any accumulated impairment losses.

Assets under construction included in property, plant and equipment is not depreciated as these assets are not available for use. These are carried at cost, less any accumulated impairment loss. Depreciation of these assets, on the same basis as other assets, commences when the assets are ready for their intended use.

Depreciation is charged over their estimated useful lives, using the straight-line method, on the following bases:

Furniture, fixtures and equipment	-	5 to 8 years
Leasehold improvements	-	10 years or remaining lease periods
IT computer equipment	-	3 years
Motor vehicles	-	10 years
Office space lease	-	Lease period

The estimated useful lives, residual values and depreciation method of property, plant and equipment are reviewed at the end of each reporting period with the effect of any changes in estimates accounted for on a prospective basis.

The gain or loss arising on disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amounts of the asset is recognised in the Statement of Comprehensive Income.

Fully depreciated assets still in use are retained in the financial statements.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

INTANGIBLE ASSETS

Initial recognition

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in Statement of Comprehensive Income as incurred.

Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the Agency intends to and has sufficient resources to complete development and to use or sell the asset. Otherwise, it is recognised in the Statement of Comprehensive Income as incurred.

Capitalised development expenditure is measured at cost less accumulated amortisation and accumulated impairment losses.

Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is recognised in Statement of Comprehensive Income as incurred.

Subsequent to initial recognition, the intangible asset is measured at cost, which includes capitalised borrowing costs, less accumulated amortisation and accumulated impairment losses.

Amortisation

Amortisation is calculated based on the cost of the asset, less its residual value.

Amortisation is recognised in the Statement of Comprehensive Income on a straight-line basis over the estimated useful lives of intangible assets from the date that they are available for use. The estimated useful lives of intangible assets are as follows:

- capitalised development costs - 6 years

Amortisation methods, useful lives and residual values are reviewed at the end of each reporting period and adjusted if appropriate.

CASH AND CASH EQUIVALENTS IN THE STATEMENT OF CASH FLOWS - Cash and cash equivalents in the Statement of Cash Flows comprise cash balances and short-term bank deposits placed with the Accountant-General's Department and are subject to an insignificant risk of changes in value.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

PROVISIONS - Provisions are recognised when the Agency has a present obligation (legal or constructive) as a result of a past event, it is probable that the Agency will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

LEASES

The Agency as lessee

At the inception of the contract, the Agency assesses if the contract contains a lease. A contract contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Reassessment is required only when there are changes to the terms and conditions of the contract.

- Right-of-use assets

The Agency recognises a right-of-use asset and lease liability at the date which the underlying asset is available for use. Right-of-use assets are measured at cost which comprises the initial measurement of lease liabilities adjusted for any lease payments made at or before the commencement date and lease incentive received. Any initial direct costs that would not have been incurred if the lease had not been obtained are added to the carrying amount of the right-of-use assets.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

Right-of-use assets are presented within “Property, plant and equipment”.

- Lease liabilities

The initial measurement of lease liability is measured at the present value of the lease payments discounted using the implicit rate in the lease, if the rate can be readily determined. If that rate cannot be readily determined, the Agency will use its incremental borrowing rate.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

LEASES (cont'd)

Lease payments include the following:

- Fixed payment (including in-substance fixed payments), less any lease incentives receivables;
- Variable lease payment that are based on an index or rate, initially measured using the index or rate as at the commencement date;
- Amount expected to be payable under residual value guarantees;
- The exercise price of a purchase option if it is reasonably certain to exercise the option; and
- Payment of penalties for terminating the lease, if the lease term reflects the Agency exercising that option.

For contracts that contain both lease and non-lease components, the consideration needs to be allocated to each lease component on the basis of the relative standalone price of the lease and non-lease component. The Agency has elected to not separate lease and non-lease component for property leases and account these as one single lease component.

Lease liability is measured at amortised cost using the effective interest method. Lease liability shall be remeasured when:

- There is a change in future lease payments arising from changes in an index or rate;
- There is a change in the Agency's assessment of whether it will exercise an extension option; or
- There are modifications in the scope or the consideration of the lease that was not part of the original term.

Lease liability is remeasured with a corresponding adjustment to the right-of-use asset, or is recorded in the Statement of Comprehensive Income if the carrying amount of the right-of-use asset has been reduced to zero.

- Short-term and low-value leases

The Agency has elected to not recognise right-of-use assets and lease liabilities for short-term leases that have lease terms of 12 months or less and leases of low value leases. Lease payments relating to these leases are expensed to Statement of Comprehensive Income on a straight-line basis over the lease term.

GOVERNMENT GRANTS

GOVERNMENT GRANTS - Government grants are recognised when there is a reasonable assurance that the Agency will comply with the conditions attached to them, and that the grants will be received.

Government grants for the establishment of the Agency are taken to the Capital Account.

Government grants for development projects are taken to the government grant account initially. They are taken to the deferred capital grants account upon utilisation of grants if the assets are capitalised or to the Statement of Comprehensive Income if the assets are written off in the year of purchase. Deferred capital grants are recognised in the Statement of Comprehensive Income over the periods necessary to match the depreciation of the assets financed with the related grants. On disposal of the assets, the balance of the related grants is recognised in the Statement of Comprehensive Income to match the net book value of assets disposed.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

GOVERNMENT GRANTS (cont'd)

Government grants to meet the Agency's current year operating expenses are recognised as income in the current year.

TRUST AND AGENCY FUNDS - Trust and agency funds are set up to account for moneys held in trust for the Government. Profit or loss of these funds are taken directly to the funds and the net assets relating to these funds are shown as separate line items on the Statement of Financial Position.

Trust and agency funds are accounted for on an accrual basis. Grants utilised are taken up upon approval of grant requests by the Agency.

Research and Development Fund

The Agency manages and holds in trust grants from the Government to provide financial assistance for Research and Development ("R&D") activities undertaken by A*STAR Research Entities ("ARES") and other public organisations. The Agency recovers from the Government expenses incurred in managing the trust grants.

ARES funded by Agency is incorporated under the Singapore Companies Act which the Agency is the only member. Any surplus funds in the research institutes are returned to the Government. As the Agency does not derive economic benefits from the activities of these research institutes, the financial statements of the research institutes are not consolidated with the financial statements of the Agency.

As the Agency does not derive economic benefits from the activities of the Research and Development Fund, accordingly, the financial statements of the Research and Development Fund are not consolidated with the financial statements of the Agency.

National Metrology Centre Fund

The Agency acts as an agent to distribute grants received from the Government to National Metrology Centre ("NMC") and Health Sciences Authority ("HSA") with respect to the Chemical Metrology Programme. As the Agency does not derive economic benefits from the activities of the National Metrology Central Fund, accordingly, the financial statements of the National Metrology Central Fund are not consolidated with the financial statements of the Agency.

ROYALTY INCOME – Royalty income arises from the right given to access the Agency's intellectual property and is recognised over time in accordance with the substance of the relevant agreement.

LICENSING FEES - Licensing fees arise from the right to use the Agency's intellectual property and are recognised at a point of time when the performance obligation is fulfilled.

INTEREST INCOME - Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

3 MATERIAL ACCOUNTING POLICIES (cont'd)

RETIREMENT BENEFIT OBLIGATIONS - Contributions on the employees' remuneration are made to the Central Provident Fund ("CPF") as required by law. The CPF contributions are recognised as expenses in the period when the employees rendered their service.

EMPLOYEE LEAVE ENTITLEMENT - Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the end of the reporting period.

CONTRIBUTION TO CONSOLIDATED FUND - Under Section 13(1)(e) and the First Schedule of the Singapore Income Tax Act 1947, the income of the Agency is exempted from income tax.

In lieu of income tax, the Agency is required to make contribution to the Government Consolidated Fund in accordance with the Statutory Corporations (Contributions to Consolidated Fund) Act 1989. The provision is based on the guidelines specified by the Ministry of Finance. It is computed based on the net surplus of the Agency for each of the financial year at the prevailing corporate tax rate for the Year of Assessment. Contribution to consolidated fund is provided for on an accrual basis.

4 CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Agency's accounting policies, which are described in Note 3, management is required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

There are no critical judgements made in applying the Agency's accounting policies that have significant effect on the amounts recognised in the financial statements. There are also no assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

5 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT

(a) *Categories of financial instruments*

The aggregate carrying amounts of financial assets and financial liabilities at amortised cost are as follows:

	2026 \$	2025 \$
Financial assets*	74,266,140	81,465,926
Financial liabilities	<u>13,852,017</u>	<u>25,136,287</u>

**Exclude prepayments*

(b) *Financial risk management policies and objectives*

The Agency is exposed to financial risk arising from its operations which include interest rate risk, credit risk and liquidity risk. The Agency has written policies and guidelines, which set out its general risk management framework as discussed below.

There has been no change to the Agency's exposure to these financial risks or the manner in which it manages and measures the risks.

(i) Interest rate risk management

Surplus funds in the Agency are placed with Accountant-General's Department as disclosed in Note 13. Interest rate sensitivity analysis has not been presented as management does not expect any reasonably possible changes in interest rates to have a significant impact on the Agency's operations and cash flows.

(ii) Credit risk management

Credit risk refers to the risk that counterparty will default on its contractual obligation, resulting in financial loss to the Agency.

(i) *Risk management*

The Agency adopts the following policy to mitigate the credit risk.

The Agency has no significant concentration of credit risk. Cash transactions are mainly with quality financial institutions. The Agency has policies that limit the amount of credit exposure to any financial institution.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

5 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (cont'd)

(b) *Financial risk management policies and objectives (cont'd)*

(ii) Credit risk management (cont'd)

(ii) *Impairment of financial assets*

The Agency assessed on a forward-looking basis and the expected credit losses associated with its financial assets. For other receivables and cash and cash equivalent, the general 3-stage approach is applied. Credit loss allowance is based on 12-month expected credit loss if there is no significant increase in credit risk since initial recognition of the assets.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating estimated credit losses, the Agency considers reasonable and supportable information that is relevant and available without undue cost or effort.

This includes qualitative and quantitative information and analysis, based on the Agency's historical experience and informed credit assessment and includes forward-looking information.

The Agency has no financial assets that are subject to material credit losses where the expected credit loss model has been applied.

Other receivables mainly comprised of amounts due from companies funded through the Agency and Government grants receivable. The Agency assessed that there is immaterial loss allowance relating to these receivables.

The Agency considers that its cash and cash equivalents have low credit risk based on external credit ratings of the counterparties of A+. The amount of the allowance on cash and cash equivalents is negligible.

(iii) Liquidity risk management

Liquidity risk arises in the general funding of the Agency's operating activities. It includes the risks of not being able to fund operating activities in a timely manner. To manage liquidity risk, the Agency places surplus funds with the Accountant-General's Department which are readily available when required.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

5 FINANCIAL INSTRUMENTS, FINANCIAL RISKS AND CAPITAL RISKS MANAGEMENT (cont'd)

(b) *Financial risk management policies and objectives* (cont'd)

(iii) Liquidity risk management (cont'd)

The table below analyses the Agency's non-derivative financial liabilities into relevant maturity groupings based on the remaining period from the reporting date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

	Less than <u>1 year</u> \$	Between 1 <u>and 2 years</u> \$	Between 2 <u>and 5 years</u> \$	Over <u>5 years</u> \$
At 31 March 2026				
Other payables	13,852,017	-	-	-
At 31 March 2025				
Other payables	24,030,723	-	-	-
Lease liabilities	1,122,000	-	-	-

(iv) Fair values of financial assets and financial liabilities

The carrying amounts of financial assets and financial liabilities as reported in the financial statements approximate their respective fair values due to the relatively short-term maturity of these financial instruments.

(c) *Capital risk management policies and objectives*

The Agency manages its capital base in consideration of current economic conditions and its plan for the year in concern. The request for grants from the Ministry of Trade and Industry ("MTI") is made through the annual budget exercise. The Agency is not exposed to any external capital requirements. However, it is required to comply with FCM No. 26/2008 under the Capital Management Framework for Statutory Boards.

The capital structure of the Agency consists of accumulated surplus, capital account and share capital.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

6 RELATED PARTY TRANSACTIONS

Some of the Agency's transactions and arrangements are with related parties and the effect of these on the basis determined between the parties is reflected in these financial statements. The balances are unsecured, interest-free and repayable on demand unless otherwise stated.

In addition to the information disclosed elsewhere in the financial statements, the following transactions took place between the Agency and related parties based on agreed terms.

The Agency had the following significant transactions with its supervisory ministry, MTI, and other related parties during the year:

	2026	2025
	\$	\$
<i>MTI</i>		
Services and expenses paid to MTI	175,197	823,117
Reimbursement to MTI	-	191,146
Expenses paid on behalf of MTI	115,815	1,165,225
<i>Other Ministries and Statutory Boards</i>		
Services and expenses paid to other ministries	953,737	1,581,899
Services and expenses paid to other statutory boards	9,482,475	11,908,533
Services and expenses paid to organ of state	916	-
Expenses paid on behalf of other ministries	227,596	283,168
Expenses paid on behalf of other statutory boards	982,107	1,401,265
Computer and IT related expenses paid to other statutory boards	13,967,932	4,989,160

Compensation of key management personnel

The remuneration of key management personnel during the financial year were as follows:

	2026	2025
	\$	\$
Short-term benefits	4,359,976	3,971,941
Contributions to Central Provident Fund	119,287	110,991
	4,479,263	4,082,932

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

7 OTHER INCOME

	2026	2025
	\$	\$
Royalty income	118,243	265,603
Licensing fees	5,147,726	145,914
Interest income	1,034,135	1,734,237
Others	-	468,316
	<u>6,300,104</u>	<u>2,614,070</u>

8 STAFF AND RELATED EXPENSES

	2026	2025
	\$	\$
Salaries and wages	24,755,279	24,270,493
Contributions to Central Provident Funds	2,549,925	2,513,972
Others	838,042	749,448
	<u>28,143,246</u>	<u>27,533,913</u>

9 OTHER ADMINISTRATIVE EXPENSES

	2026	2025
	\$	\$
Board members fees	265,700	305,629
Board meetings expenses	63,086	174,070
Training and recruitment	1,992,304	1,917,199
Repairs and maintenance	274,693	268,083
Travel and entertainment	392,333	363,039
Professional fees	2,361,954	1,578,750
Corporate events and public relations	1,915,872	1,046,599
Others	1,704,813	365,708
	<u>8,970,755</u>	<u>6,019,077</u>

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

10 DEFERRED CAPITAL GRANTS

	2026	2025
	\$	\$
At the beginning of financial year	6,776,869	4,207,090
Transfer from grant received in advance (Note 11)	4,748,584	3,638,999
Transfer to Statement of Comprehensive Income	(484,070)	(1,069,220)
Depreciation of grant funded property, plant and equipment	(484,070)	(998,831)
Loss on disposal of property, plant and equipment	-	(70,389)
At the end of financial year	11,041,383	6,776,869

11 GRANTS RECEIVED IN ADVANCE

	2026	2025
	\$	\$
At the beginning of the financial year	17,983,231	13,724,415
Grants received during the year	49,900,196	48,381,026
Transfer to deferred capital grants during the year (Note 10)	(4,748,584)	(3,638,999)
Purchase of property, plant and equipment	(4,748,584)	(3,638,999)
Transfer to Statement of Comprehensive Income during the year	(44,471,624)	(40,483,211)
At the end of the financial year	18,663,219	17,983,231

12 CONTRIBUTIONS TO CONSOLIDATED FUND

The total contributions for the year can be reconciled to the surplus as follows:

	2026	2025
	\$	\$
Surplus of the Agency before contribution to Consolidated Fund	4,561,568	209,518
Contribution at 17% (2025: 17%)	775,467	35,618

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

13 CASH AND CASH EQUIVALENTS

	2026	2025
	\$	\$
Cash with Accountant-General's Department	<u>47,269,377</u>	<u>56,473,086</u>

Cash and cash equivalents are denominated in Singapore dollars. The average effective interest rate is 2.06% (2025: 3.09%) per annum.

With effect from April 2010, cash is placed with the Accountant-General's Department ("AGD") under the Centralised Liquidity Management ("CLM") scheme. This scheme involves placing funds directly with the AGD for cost efficiency and better credit risk management.

14 OTHER RECEIVABLES

	2026	2025
	\$	\$
Prepayments	2,003,115	1,700,116
Deposits	750	174,239
Interest receivable	465,281	911,875
Other receivables		
- Third parties	6,697,110	4,581,511
- Companies funded through Agency	18,513,256	19,226,123
- Grants receivable	-	10,506
- Others	1,320,366	88,586
	<u>28,999,878</u>	<u>26,692,956</u>

The other receivables from companies funded through the Agency are unsecured, interest-free and repayable on demand.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

15 PROPERTY, PLANT AND EQUIPMENT

	Furniture, fixtures and equipment	Leasehold improvements	IT computer equipment	Asset under construction	Office space lease	Total
	\$	\$	\$	\$	\$	\$
Cost:						
At 1 April 2024	1,710,347	12,177,851	10,204,675	2,077,370	18,637,811	44,808,054
Additions (Note (b))	-	-	-	3,743,080	6,421,405	10,164,485
Transfer	-	-	126,381	(126,381)	-	-
Transfer to intangible assets (Note 16)	-	-	-	(5,126,088)	-	(5,126,088)
Disposal/write off (Note (c))	(776,056)	(126,710)	(1,421,726)	(222,946)	(22,553,355)	(25,100,793)
At 31 March 2025	934,291	12,051,141	8,909,330	345,035	2,505,861	24,745,658
Additions (Note (b))	-	-	58,913	128,371	-	187,284
Disposal/write off (Note (c))	-	-	(326,070)	(215,728)	(2,505,861)	(3,047,659)
At 31 March 2026	934,291	12,051,141	8,642,173	257,678	-	21,885,283
Accumulated depreciation and impairment losses:						
At 1 April 2024	1,348,475	11,406,183	9,000,160	202,146	12,836,287	34,793,251
Depreciation (Note (a))	113,475	104,715	786,830	-	4,172,042	5,177,062
Disposal/write off (Note (c))	(743,559)	(116,037)	(1,415,307)	(202,146)	(16,029,190)	(18,506,239)
At 31 March 2025	718,391	11,394,861	8,371,683	-	979,139	21,464,074
Depreciation (Note (a))	76,390	96,860	310,820	-	1,017,815	1,501,885
Disposal/write off (Note (c))	-	-	(325,017)	-	(1,996,954)	(2,321,971)
At 31 March 2026	794,781	11,491,721	8,357,486	-	-	20,643,988
Net book value:						
At 31 March 2026	139,510	559,420	284,687	257,678	-	1,241,295
At 31 March 2025	215,900	656,280	537,647	345,035	1,526,722	3,281,584

- (a) The net depreciation charge, after recovery from entities funded through the Agency, is \$1,501,885 (2025: \$4,493,037).
- (b) During the year, the Agency acquired property, plant and equipment amounting to \$187,284 (2025: \$3,743,080) of which \$4,942 (2025: \$1,832) was unpaid as at 31 March 2026.
- (c) During the year, the Agency entered into lease modifications to fully terminate all office spaces. Consequently, \$508,907 (2025: \$6,524,165) and \$133,934 (2025: gain \$466,126) were adjusted against the right-of-use asset and recognised as loss/gain on lease modifications in Statement of Comprehensive Income, respectively.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

16 INTANGIBLE ASSETS

	Assets under construction \$
Cost	
At 1 April 2024	-
Transfers from assets under construction (Note 15)	5,126,088
At 31 March 2025	5,126,088
Additions	6,431,674
At 31 March 2026	11,557,762
Accumulated amortisation and impairment losses	
At 1 April 2024	-
Amortisation	-
At 31 March 2025	-
Amortisation	-
At 31 March 2026	-
Net book value:	
At 31 March 2026	11,557,762
At 31 March 2025	5,126,088

During the year, the Agency acquired intangible assets amounting to \$6,431,674 of which \$1,929,974 was unpaid as at 31 March 2026.

17 OTHER PAYABLES

	2026 \$	2025 \$
Non-trade payables to:		
- Third parties	7,135	13,117,189
Accrued operating expenditure	11,909,966	10,911,702
Accrued capital expenditure	1,934,916	1,832
	13,852,017	24,030,723

18 SHARE CAPITAL

	2026 Number of shares	2025 Number of shares	2026 \$	2025 \$
Issued and fully paid up:				
Balance at beginning and end of financial year	417,128	417,128	417,128	417,128

The share capital account represents capital injections by the Minister of Finance, a body corporate incorporated by the Minister of Finance (Incorporation) Act 1959, in its capacity as shareholder under the debt-equity framework for statutory boards, implemented with effect from 1 September 2004. Under this framework, capital projects will be partially funded by the Ministry of Finance as equity injection, and the remaining through loans or general funds of the Agency.

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

18 SHARE CAPITAL (cont'd)

Ministry of Finance is entitled to receive dividends annually, computed based on the cost of equity applied to the Agency's equity base and it is capped at statutory board's annual accounting surplus. The shares carry neither rights nor par value. During the financial year, the Agency paid dividends to Ministry of Finance in respect of the financial year ended 31 March 2025 amounting to \$173,900 (2025: in respect of financial year ended 31 March 2024 amounting to \$269,180).

19 LEASES – The Agency as a lessee.

The Agency leases office space for the purpose of back-office operations.

Right-of-use assets classified within property, plant and equipment

	<u>2026</u>	<u>2025</u>
	\$	\$
Office space lease	<u>-</u>	<u>1,526,722</u>

Depreciation charge during the year:

	<u>2026</u>	<u>2025</u>
	\$	\$
Office space lease	<u>1,017,815</u>	<u>4,172,042</u>

The Agency has recovered a portion of the depreciation charge from entities funded through the Agency (Note 15).

Lease liabilities

	<u>2026</u>	<u>2025</u>
	\$	\$
Current	<u>-</u>	<u>1,105,564</u>

Amounts recognised in Statement of Comprehensive Income

	<u>2026</u>	<u>2025</u>
	\$	\$
Interest expense on lease liabilities	14,307	116,122
Lease expense – low value leases	<u>124,060</u>	<u>148,676</u>

AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

NOTES TO FINANCIAL STATEMENTS

31 March 2026

19 LEASES – The Agency as a lessee (cont'd)

Amounts recognised in the Statement of Cash Flows

	2026	2025
	\$	\$
Total cash outflow for leases	744,898	2,762,674

Lease liabilities from financing activities

	1 April 2024 \$	Principal and interest payments \$	Non-cash changes			31 March 2025 \$
			New lease \$	Derecognition of lease liability \$	Interest expense \$	
Lease liabilities	6,079,926	(2,762,674)	4,662,481	(6,990,291)	116,122	1,105,564

	1 April 2025 \$	Principal and interest payments \$	Non-cash changes			31 March 2026 \$
			New lease \$	Derecognition of lease liability \$	Interest expense \$	
Lease liabilities	1,105,564	(744,898)	-	(374,973)	14,307	-

20 PROVISION FOR REINSTATEMENT COST

Provision for reinstatement cost is determined based on quotation from external advisor for the renovation project to reinstate the rented premises to the original condition upon termination of the lease. The costs are capitalised as part of property, plant and equipment and is depreciated over the lease terms.

	2026	2025
	\$	\$
Balance as at beginning of the year	2,628,967	823,847
Additions	-	1,805,120
Utilisation	(517,684)	-
Balance at the end of the year	2,111,283	2,628,967

21 CAPITAL ACCOUNT

The capital account comprises capital fund and carrying amount of net assets transferred from the Science Council of Singapore on 11 January 1991.

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22 RESEARCH AND DEVELOPMENT FUND

Trust and agency funds are government grants where the Agency is not the owner and beneficiary of the funds. The Agency is merely administering the funds on behalf of the holders of these funds.

	2026	2025
	\$	\$
At beginning of the year	39,052,133	40,734,630
Add: Receipts	1,918,287,956	1,734,352,173
Grants received	1,918,287,956	1,734,352,173
Less: Disbursements	(2,015,271,479)	(1,736,034,670)
Research operations	(1,426,683,774)	(1,228,178,733)
Ecosystem Research Funding	(241,216,969)	(238,375,390)
Human capital	(64,120,043)	(59,618,443)
Infrastructure	(187,113,666)	(112,324,831)
Pre-commercialisation	(76,810,139)	(77,955,896)
Cross-Council Programmes and others	(19,326,888)	(19,581,377)
At end of the year	(57,931,391)	39,052,133
Net (liabilities)/assets represented by:	(57,931,391)	39,052,133
Cash and bank balances	196,164,098	149,700,377
Other current assets	96,417,019	166,036,559
Non-current assets	614,825	682,962
Current liabilities	(350,512,508)	(276,684,803)
Non-current liabilities	(614,825)	(682,962)

Research and Development Fund was set up with grants from the Government to provide financial assistance for Research and Development (“R&D”) activities undertaken by research entities and other public organisations.

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23 NATIONAL METROLOGY FUND

	2026	2025
	\$	\$
At beginning of the year	(806,250)	-
Add: Grants received	17,225,458	14,845,016
Less: Disbursements	(16,419,208)	(15,651,266)
National Metrology Centre	(11,527,300)	(11,195,533)
Health Sciences Authority	(4,891,908)	(4,455,733)
At end of the year	<u>-</u>	<u>(806,250)</u>
Net liabilities represented by:		
Amount due from Agency	<u>-</u>	<u>(806,250)</u>

With effect from 1 January 2008, National Metrology Centre (“NMC”) was transferred from SPRING Singapore to the Agency. The Agency acts as an agent to distribute grants received from the Government for the purposes of the Chemical Metrology Programme.

24 NEW OR REVISED ACCOUNTING STANDARDS AND INTERPRETATIONS

Below are the mandatory standards, amendments and interpretations to existing standards that have been published, and are relevant for the Agency’s accounting periods beginning on or after 1 April 2026 and which the Agency has not early adopted:

- Amendments to SB-FRS 109 and SB-FRS 107: *Amendments to the Classification and Measurement of Financial Instruments*
- Amendments to SB-FRS 109 and SB-FRS 107: *Contracts Referencing Nature-dependent Electricity*
- Annual Improvements to SB-FRSs - Volume 11
- SB-FRS 118 *Presentation and Disclosure in Financial Statements*
- SB-FRS 119 *Subsidiaries and Small Entities without Public Accountability: Disclosures*
- Amendments to SB-FRS 119: *Subsidiaries and Small Entities without Public Accountability: Disclosures*
- Amendments to SB-FRS 110 and SB-FRS 28: *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*

Management has considered and is of the view that the adoption of the new or revised accounting standards and interpretations will have no material impact on the financial statements in the period of their initial adoption, apart from SB-FRS 118 *Presentation and Disclosure in Financial Statements* issued on 9 December 2024, effective for financial years beginning on or after 1 January 2027.

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24 NEW OR REVISED ACCOUNTING STANDARDS AND INTERPRETATIONS (cont'd)

SB-FRS 118 is a new standard that replaces SB-FRS 1 *Presentation of Financial Statements*. SB-FRS 118 introduces new categories of subtotals in the Statement of Comprehensive Income. Entities are required to classify all income and expenses within the income and expenditure statement into one of five categories: operating, investing, financing, income taxes and discontinued operations, wherein the first three are new. It also requires disclosure of newly defined management-defined performance measures, subtotals of income and expenses, and includes new requirements for the location, aggregation and disaggregation of financial information.

In addition, narrow-scope amendments have been made to SB-FRS 7 *Statement of Cash Flows*, which include changing the starting point for determining cash flows from operations under the indirect method, from 'net (deficit)/ surplus' to 'operating profit or loss' and removing the optionality around classification of cash flows from dividends and interest. In addition, there are consequential amendments to several other standards. SB-FRS 118 will apply retrospectively.

The new standard may have impact on the disclosure in the financial statements but not on the measurement or recognition of items in the Agency's financial statements. The Agency is currently assessing the impact of applying the new standard on the financial statements.

25 SUBSEQUENT EVENTS

Subsequent to year end, following a review by the Ministry of Finance (MOF) of funding to Statutory Boards for development or acquisition of fixed assets, MOF has worked with the Agency to adjust the share capital structure, so that it better considers the cost recoverability of the underlying assets.

The Agency will reduce its share capital by \$416,128, through cancellation of 416,128 shares at zero consideration, with a corresponding increase in the Agency's accumulated surpluses.