

**Speech for Mr Heng Swee Keat,
Chairman of the National Research Foundation
at the 2025 President's Science and Technology Awards Ceremony
3 Oct 2025**

President Tharman Shanmugaratnam,

Recipients of the 2025 Young Scientist Awards and President's Science and Technology Awards,

Ladies and gentlemen,

Good evening and a warm welcome to everyone to the 2025 President's Science and Technology Awards (PSTA for short) Ceremony.

2. For over three decades, since 2009, these awards have recognised outstanding achievements in science and technology. They honour excellence that benefits Singapore and beyond, inspiring new generations to pursue these fields with purpose and ambition.
3. The awards ceremony is typically held at the Istana, but this year, it is hosted at the University Cultural Centre because the Istana is still undergoing restoration works. But tonight's celebration remains just as significant, being held at the National University of Singapore (NUS) one of the key pillars of our research and innovation ecosystem.

The importance of science in a rapidly changing world

4. We live in a time of rapid, exciting change. Science and Technology continues to advance dramatically, and the increasing convergence of key scientific disciplines is driving very novel discoveries and innovations. Models and approaches by which research discoveries can be commercialised or applied, are spreading across the world. All these are growing the impact of Science and Technology on economies and societies. This is to be welcomed as global challenges in health, climate change, and security demand better solutions and faster translation.
5. Singapore has been consistently investing in science and technology since our first National Technology Plan in 1991. Under the current five-year Research, Innovation and Enterprise (RIE) 2025 plan, Singapore has invested about \$28 billion, or approximately 1% of GDP, over the five years, FY 2020 to FY 2025.

6. This long-term strategic investment has resulted in a vibrant RIE ecosystem. In the latest Global Innovation Index 2025 released last month, Singapore ranked 5th globally and 2nd in the SEAO region, comprising Southeast Asia, East Asia and Oceania. This reflects not just the resilience and depth of our innovation system, but also our global relevance. The Business Expenditure on R&D, or BERD, has nearly doubled from S\$4.2B in 2012 to S\$8.1B in 2022. This reflects the growing confidence of businesses in Singapore as an innovation hub. Singapore is home to over 4500 tech startups, and venture capital investment in early-stage deep tech deals has more than tripled from S\$0.5B in 2020 to S\$1.6B in 2023. These have been built on the foundations of cutting-edge basic research and talent in our universities, A*STAR and institutions.

Talent at its Finest: Young Scientist Award Winners

7. At the heart of every successful research and innovation ecosystem is talent. This is an area of particular focus and action in Singapore. We have endeavoured to nurture curiosity from young, build pathways into STEM fields, and support researchers to grow and thrive. It is therefore fitting to begin by celebrating four **Young Scientist Award** recipients whose achievements span biomedicine and artificial intelligence. Their work ranges from developing new therapeutics and revealing how the brain defends itself from viral infections, to advancing generative AI and creating more efficient machine learning models.
8. These accomplishments illustrate how fundamental science can lead to practical applications, how curiosity-driven inquiry strengthens public health, and how advances in AI can shape industries and daily life. Importantly, they reflect the importance of nurturing and supporting young RIE talent who will become our research leaders of the future.

Advancing Impact with Industry: The President's Science Award and the President's Technology Award

9. For research ideas to improve lives, they must move from lab to market. This happens when researchers and industry co-develop, test and scale solutions together. Singapore has built an enabling environment for this: corporate laboratories on our campuses, shared testbeds and standards, and teams that bring engineers, clinicians and entrepreneurs together. The **President's Science Award** and the **President's Technology Award** this year are good examples of how high impact can be achieved if this is done well.

10. This year, the President's Science Award is conferred on two outstanding scientists whose work, in close collaboration with industry and public-health partners, has advanced human health. From the Agency for Science, Technology and Research (A*STAR), **Professor Lisa Ng** has deepened our understanding of the immunology of key viruses from chikungunya (*pronounced as CHI-KUN-GUN-YA*) to other arboviruses. This knowledge is informing diagnostics and vaccine development in partnership with public-health agencies, biotech firms and international networks.
11. From NUS, **Professor Lim Chwee Teck** is an influential pioneer in mechanobiology, bridging engineering and biology to show how cell mechanics influence diseases such as cancer. Prof Lim has taken these insights further by developing next-generation diagnostics in collaboration with medtech companies and hospitals.
12. The President's Technology Award is conferred on **Professor Ng Geok Ing** from the Nanyang Technological University for making breakthroughs in gallium nitride on silicon technology. Developed with industry consortia and proven on production-relevant lines and testbeds, Prof Ng's innovations enable high-efficiency, high-frequency power electronics for applications from communications to mobility and defence. His work is also building local capabilities and supply chains, and training engineers in key domains.

Visionary Leadership: The President's Science and Technology Medal

13. Our highest honour this evening is the **President's Science and Technology Medal**. This award recognises sustained leadership that has transformed Singapore's research and innovation landscape and created pathways from knowledge to impact. It is awarded to **Professor Tan Eng Chye**, President of NUS.
14. As an educational and academic leader, Prof Tan has helped transform higher education and research in Singapore. He championed interdisciplinary learning across science, engineering, computing and the humanities, so that students gain both breadth and depth. He also advanced research excellence and translation in NUS and the wider Singapore research system, by growing NUS' research strengths, expanding industry partnerships, and nurturing entrepreneurship.
15. Professor Tan has also been active in forging global collaborations that connect our researchers to leading partners worldwide. In a more contested and fragmented global landscape, being able to forge trusted partnership to tackle humanity's common challenges will be an important contribution that Singapore can make.

16. Prof Tan has built a stronger base and pipeline of high-quality talent and contributed to translation of research insights from lab to market, which will benefit Singapore and the world. Prof Tan's many achievements and contributions in this respect, are a powerful testament to the critical role of education and research in driving societal progress and global impact.

Impact of Singapore's RIE Plans

17. The stories of our award recipients today trace the evolution from curiosity to impact. We see rigorous science, purposeful translation and teamwork across disciplines, institutions and borders. Many are exemplary leaders who guide teams, mentor young researchers and build bridges across sectors. We also see the courage to take informed risks, and a community that learns and grows together. This is the vibrant and productive ecosystem of talent and innovation that our **national RIE plans** were designed to encourage, support and drive.

18. In the coming months, we are shaping the next **RIE2030** plan, which will build on the strengths have been nurtured, and to push beyond, to achieve more ambitious impact. We will continue to invest to keep our basic research capabilities, talent and infrastructure at the cutting-edge. At the same time, we will more clearly define the impact that we are seeking to achieve, and bringing different teams of disciplinary excellence together, to undertake major cross-cutting R&D programmes in the form of RIE Flagships and RIE Grand Challenges. Our aim is clear: keep Singapore competitive, resilient and relevant, and ensure that science and technology improve lives here and beyond, and contribute to addressing Singapore's major strategic priorities. You can look forward to the exciting details which will be shared later this year.

19. To all our award recipients, thank you for your many important contributions.

20. I look forward to your participation in the 2026 Global Young Scientists Summit (GYSS), serving as plenary speakers or moderators, and along with invited Nobel laureates, continue to inspire young minds from around the world. On the same note, I would encourage you to explore opportunities to showcase your research at events like the Singapore Week of Innovation and Technology or SWITCH, Singapore's flagship innovation platform. This would exemplify our belief that true tangible impact comes not just from cutting edge research at the frontier, but from innovation and enterprise, and translating scientific discoveries into meaningful solutions that deliver economic benefits or social good for Singapore.

21. I would like to conclude by expressing our deep appreciation to President Tharman for gracing this evening and for his steadfast support of Singapore's RIE journey. The support of the Government, from the highest echelons, is critical in ensuring that our research and talent base, and our innovation ecosystem will continue to flourish and contribute to high impact for Singapore and beyond.

22. I wish you a wonderful evening ahead. Thank you.