NUS and NTU launch national platform to nurture startups from all autonomous universities and research institutes in Singapore

New $50M programme, National GRIP, to train up to 300 startup teams by 2028 and nurture more than 150 spin-offs by 2030

Singapore, 29 October 2024 – Deputy Prime Minister and Chairman of the National Research Foundation (NRF), Mr Heng Swee Keat, announced the National Graduate Research Innovation Programme (National GRIP) today. The programme, a collaboration between NRF, the National University of Singapore (NUS) and the Nanyang Technological University, Singapore (NTU Singapore) will launch in January 2025, with a commitment of SGD $50 million in financial and in-kind support over five years.

2 National GRIP integrates two existing incubator programmes – NUS's Graduate Research Innovation Programme 2.0 (NUS GRIP 2.0) and NTU's Lean Launchpad (LLP2.0). Both programmes have together successfully incubated over 400 startup teams and close to 160 spin-offs since the respective programmes[1] were launched. The new programme will be a comprehensive incubator programme designed to bridge the gap between scientific research and market application. It will support startup teams by helping them refine their initial ideas, validate market needs, and design robust business models through a structured programme framework.

3 With personalised mentorship from industry leaders and access to a network of experts, National GRIP aims to train up to 300 startup teams by 2028 and nurture more than 150 spin-offs by 2030, propelling innovative solutions from the lab to the global marketplace and enhancing Singapore's position as a leader in technological entrepreneurship.

4 The 12-month programme will accept aspiring founders, innovators and researchers from Singapore's autonomous universities (AUs) and A*STAR research institutes (RIs). Participants will come together to form teams and draw on the distinctive strengths of their respective institutions, e.g. in research, design, business, engineering, for deep tech venture creation. Participants of National GRIP will be able to tap into the extensive pool of intellectual property across AUs and A*STAR RIs and can also join existing teams in NUS GRIP 2.0 and LLP2.0 to launch deep tech startups.

5 As a platform that aggregates a critical mass of deep tech startups, teams can be effectively matched with suitable investors and vice versa. National GRIP will deepen partnerships with deep tech venture capitalists (VCs) and venture builders, such as current

[1] NUS' GRIP 2.0 was launched in 2018, whereas NTU's LLP 2.0 started in 2017.

NUS Grip 2.0 strategic partners Legend Capital, SOSV Investments LLC and Vertex Holdings[2], by involving them early in the programme to provide stronger commercial insights to the teams. These partners help to support startups by increasing their investment readiness and access to specialised markets and deepening their industry expertise. Additionally, there are plans to leverage VCs' networks to attract experienced founders who can team up with the startup teams as co-founders, advisors or collaborators to accelerate the start-ups' growth. To help startups scale and expand internationally, National GRIP will also act as a springboard for startups to go beyond local connections, leveraging the global network of NUS BLOCK71[3].

6 **Associate Professor Benjamin Tee, Vice President (Ecosystem Building), NUS Enterprise** said, "We are pleased to partner with NTU in launching the National GRIP initiative with the support of NRF. This initiative integrates the two leading programmes to further mature our deep tech startup ecosystem in Singapore, equipping teams with essential building blocks from idea validation to market readiness. By integrating the best practices and insights from our individual programmes, we are confident that National GRIP will accelerate growth of globally competitive deep tech startups by providing a well-structured end-to-end support that closely aligns with our nation's RIE strategic plans."

7 **Professor Louis Phee, NTU's Vice President (Innovation and Entrepreneurship)**, added, "Bringing together Singapore's two leading universities to collaborate and lead all local universities in innovation and entrepreneurship presents a tremendous opportunity for the nation. It allows us to combine our strengths and experiences in venture building and entrepreneurial education, to identify and train the best talent in Singapore. Through the National GRIP, we aim to create high-potential teams, pair them with disruptive innovations, and nurture them into ventures that have the promise to become some of Singapore's most investible deep tech spin-offs, which in return bring good economic returns to the country."

8 **Carmen Yuen, General Partner, Vertex Ventures, Southeast Asia & India**, applauded the National GRIP initiative saying, "It's exciting to see patents and intellectual property from our universities addressing real-world problems and creating economic value. Teams will have to refine their propositions to ensure their solutions have both a technological and market moat. National GRIP provides a safe environment for teams to discover, experiment, and refine their propositions while validating them through participation with VC funds. When done right, I believe we'll see more VC funds actively backing university spin-outs. I look forward to seeing more of these start-ups gain global recognition in the years ahead."

9 **Dr Wen Hsieh, Founding Managing Partner, Matter Venture Partners,** another strategic partner of NUS's GRIP 2.0 added, **"**National GRIP is very timely in its launch. Deep tech innovations are playing critical roles in the rapid advancement of semiconductors/electronics, robotics, AI, manufacturing, energy infrastructure, space tech, and life sciences. National GRIP streamlines the creation of deep tech start-ups in Singapore, enabling them to hone their business plans, build founding teams, raise seed financing, and formulate collaboration strategies with industry players. National GRIP offers venture capital firms opportunities to partner and support these startups, thus not only enhancing the success rate of local deep tech start-ups but also attracting deep tech entrepreneurs and talent from beyond Singapore. It's a privilege for my firm and I to be closely associated with the GRIP community."

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[2] Refer to NUS' media release, "S$20 million push from NUS to grow Singapore's deep tech innovation and venture ecosystem"

[3] Refer to https://singapore.block71.co/ for more information about BLOCK71.

10 For more information on how to participate, prospective founders and teams can visit the following weblinks:

NUS: GRIP
NTU: Venture Building Programme

Refer to ANNEX for examples of successful spin-offs from NUS GRIP 2.0 and NTU LLP 2.0.

Note: Representatives from NUS, NTU, Matter Venture Partners, Forte Biotech and Zero-Error Systems will be on-site at RIE Deep Tech Day. For interviews with profiles, please reach out to the media contacts below to facilitate interviews.

NRF will be the point of contact for DPM's embargoed speech.

Media contacts:

For NRF

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About National University of Singapore (NUS)

The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research and entrepreneurship, with a focus on Asian perspectives and expertise. We have 16 colleges, faculties and schools across three campuses in Singapore, with more than 40,000 students from 100 countries enriching our vibrant and diverse campus community. We have also established more than 20 NUS Overseas Colleges entrepreneurial hubs around the world.

Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, research centres of excellence, corporate labs and more than 30 university-level research institutes focus on themes that include energy; environmental and urban sustainability; treatment and prevention of diseases; active ageing; advanced materials; risk management and resilience of financial

systems; Asian studies; and Smart Nation capabilities such as artificial intelligence, data science, operations research and cybersecurity.

For more information on NUS, please visit nus.edu.sg.

About NUS Enterprise

NUS Enterprise, the entrepreneurial arm of the National University of Singapore (NUS), plays a pivotal role in advancing innovation and entrepreneurship at NUS and beyond. We actively promote entrepreneurship and cultivate global mind-sets and talents through the synergies of experiential learning, active industry partnerships, holistic entrepreneurship support and catalytic entrepreneurship outreach. Our initiatives and global connections support a range of entrepreneurial journeys and foster ecosystem building in new markets. We provide expertise and connections to create successful spin-offs and translate innovations into the marketplace through industry collaboration. These initiatives augment and complement the University's academic programmes and act as a unique bridge to industries well beyond Singapore's shores.

For more information on NUS Enterprise, please visit https://enterprise.nus.edu.sg.

About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 35,000 undergraduate and postgraduate students in the Business, Computing & Data Science, Engineering, Humanities, Arts, & Social Sciences, Medicine, Science, and Graduate colleges.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Earth Observatory of Singapore, Nanyang Environment & Water Research Institute and Energy Research Institute @ NTU (ERI@N).

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

Ranked amongst the world's top universities, the University's main campus is also frequently listed among the world's most beautiful. Known for its sustainability, NTU has achieved 100% Green Mark Platinum certification for all its eligible building projects. Apart from its main campus, NTU also has a medical campus in Novena, Singapore's healthcare district.

For more information, visit www.ntu.edu.sg

About the National Research Foundation

The National Research Foundation, Singapore (NRF), set up on 1 January 2006, is a department within the Prime Minister's Office. The NRF sets the national direction for research and development (R&D) by developing policies, plans and strategies for research, innovation and enterprise. It also funds strategic initiatives and builds up R&D capabilities by nurturing research talent. Learn more about the NRF at www.nrf.gov.sg

ANNEX

Success stories from NUS GRIP 2.0 and NTU LLP 2.0

Both the NUS GRIP 2.0 and NTU LLP 2.0 have effectively supported researchers and entrepreneurs in transforming university research into market-ready innovations. Since its inception in 2018, NUS GRIP 2.0 has nurtured nearly 170 startup teams, with around 100 successfully evolving into spin-offs, collectively raising almost SGD $65 million in external funding. Following its launch in 2017, NTU LLP 2.0 has incubated over 250 startup teams, approximately 60 of which have become spin-offs, securing more than SGD $23 million in external funding.

In 2024, **Ailytics**, an AI video analytics startup from NUS GRIP 2.0, successfully closed an oversubscribed Pre-A funding round, raising USD $2.7 million to enhance operational safety and productivity for businesses. Similarly, **E3A Healthcare**, cumulatively secured over USD $6 million in venture capital, reflecting significant investor confidence in its mission.

The impact of these startups extends far beyond funding. E3A Healthcare has delivered innovative medical devices and integrated medical IoT solutions to over 120 hospitals, focusing on newborn and women's healthcare. These advancements have significantly improved care delivery, benefiting more than 500,000 newborns annually.

The entrepreneurial success fostered by GRIP 2.0 is exemplified by founders, Bryan Oh of **NEU Battery Materials** and Kit Yong of **Forte Biotech**, both recognised in the Forbes 30 Under 30 list for 2024. NEU Battery Materials has pioneered the world's first electrochemical lithium-ion battery recycling technology, providing a sustainable alternative to traditional methods. Forte Biotech has developed an innovative RAPID test kit that enables on-site disease detection in under an hour, empowering farmers to improve management practices and ensure healthier harvests.

Zero-Error Systems (ZES), a spin-off from NTU's LLP 2.0, recently raised USD $7.5 million in a Series A funding round in 2023. Investors included Airbus Ventures and the Dart Family Office. The funding is intended to boost ZES's research and development efforts in Singapore, expand its global sales and marketing activities, and accelerate its product development.

Founded in 2019 by a team of NTU alumni and researchers, ZES specialises in developing high-reliability semiconductor solutions that are radiation-hardened for use in space and power management applications. This technology enables commercial off-the-shelf semiconductor devices to withstand the harsh conditions of space, offering improved power reliability and data integrity. Their innovations have already been used by several operating satellites, positioning ZES as a key player in Singapore's deep tech ecosystem.

Another beneficiary of the LLP 2.0 is **Tau Express**, which has developed AI-driven solutions utilised by government agencies in Singapore and international corporations. Their technology includes an AI engine that enables efficient retrieval of legal documents, a centralised platform that integrates multiple data sources for advanced analytics, and an automated content screening system to maintain security standards. These innovations streamline operations by automating data extraction, simplifying complex searches, and providing secure data access, thereby improving decision-making and productivity. To date, Tau Express has raised over

USD $6 million in its Series A funding round and is currently engaging with international investors for its Series B round.

Bios of NTU, NUS and Breakthrough Energy Ventures Representatives
Dr. Eric Toone Chief Technical Officer, Breakthrough Energy and Managing Partner, Breakthrough Energy Ventures. Dr. Eric Toone leads science, technology, and engineering across the entire Breakthrough Energy platform. As Managing Partner at Breakthrough Energy Ventures, Eric serves on the Investment Committee and is responsible for the overall technical direction of the organization, with responsibilities ranging from thesis development to technical diligence. Dr. Toone is responsible for the Fellows Program at Breakthrough Energy and directs technology diligence at Catalyst and other BE components. Prior to BEV Eric was a member of the faculty of Chemistry at Duke University and is the former Director of DOE's Advanced Research Program Agency – Energy (ARPA-E). Dr. Eric Toone will be helming a keynote presentation "**Energy is Prosperity: Innovating for a Sustainable Future"** after DPM Heng Swee Keat delivers his opening speech at the RIE Deep Tech Day.
Professor Louis Phee NTU Vice President (Innovation and Entrepreneurship) Professor Louis Phee is the Vice President (Innovation & Entrepreneurship) and the Tan Chin Tuan Centennial Professor in Mechanical Engineering at Nanyang Technological University, Singapore. Concurrently, he is the Acting Chairman of NTUitive Pte Ltd, the Tech Transfer Office of NTU, and a Fellow of the Academy of Engineering, Singapore. He was Dean of the College of Engineering, NTU, from 2018 till 2024. He graduated from NTU with the B.Eng (Hons) and M.Eng degrees in 1996 and 1999 respectively. He obtained his PhD from Scuola Superiore Sant'Anna, Pisa, Italy in 2002 on a European Union scholarship. His research interests include Medical Robotics and Mechatronics in Medicine. He was a recipient of the prestigious National Research Foundation (NRF) Investigator Award. He is also a co-founder of two NTU start-ups and is an advisor and mentor to entrepreneurial faculty and students.
Associate Professor Benjamin Tee Vice President (Ecosystem Building), NUS Enterprise. As Vice President (Ecosystem Building), Associate Prof Tee will support the Deputy President (Innovation and Enterprise) in overseeing the growth and development of the NUS Innovation and Enterprise ecosystem. Prior to his appointment, Benjamin was Associate Vice President of NUS Enterprise, as well as Vice-Dean (Research) at the College of Design and Engineering. Associate Prof Tee's research focuses on ground-breaking flexible and stretchable electronic sensors for robotics and healthcare by pushing the boundaries of materials science, mechanics, electronics and AI. Associate Prof Tee is also a serial and successful entrepreneur who has co-founded three start-ups: Privi Medical, Hannah Life Technologies and Tacniq.AI.

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