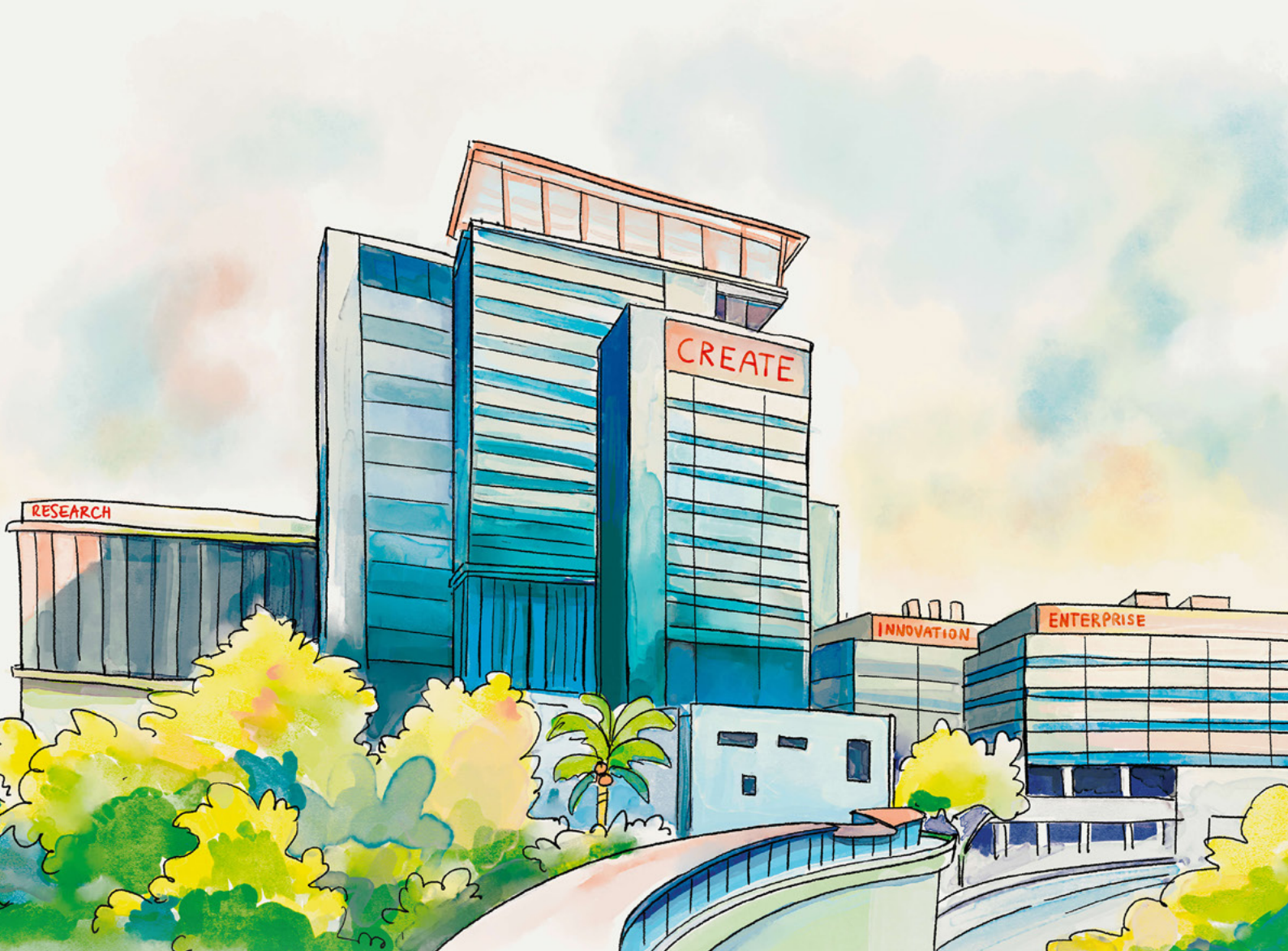


Research, Innovation and Enterprise 2030 Plan

“Realising Value, Positioning for the Long Term”



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RIE2030 is Singapore’s latest five-year plan for research, innovation and enterprise. It builds on RIE2025 and on the successive RIE and Science and Technology plans that came before it.

These sustained investments and many years of steady effort have enabled Singapore to build a strong base of scientific talent, deep research capabilities, and robust partnerships between our research institutions, enterprises and government agencies.

As our economy matures, research and innovation will become even more important. It can help us raise productivity, create new sources of growth, transform existing industries, and address national challenges such as ageing, climate change, and resource constraints.

The Government takes a long view of investments in research and development. We believe in investing consistently, through good times and bad. Under RIE2030, over the next five years we will invest \$37 billion, or approximately 1% of GDP — a level we have maintained for nearly two decades.

RIE2030 will support key economic and national priorities, strengthen capabilities in artificial intelligence, data and computing, and deepen our talent base and grounding in basic research. Through these efforts, we will build on our strong foundations and equip Singapore to remain competitive and resilient in a rapidly changing world.

Chairman
Research, Innovation and Enterprise Council
Senior Minister Lee Hsien Loong



With RIE2030, we are charting the next phase of Singapore’s research and innovation journey — not just for the coming five years, but for the longer term.

At the heart of every strong research and innovation ecosystem is talent. Our sustained investments have enabled us to build a high-calibre research community. Under RIE2030, we will continue to deepen this base and broaden our talent mix — nurturing not only excellent scientists and researchers, but also innovators, entrepreneurs, and engineers who can translate ideas into solutions and impact.

Singapore’s investment in RIE is substantial, but remains a small part of the global effort. As a small and open country, we must therefore connect with the best minds, institutions and companies, both in Singapore and around the world. We will deepen our partnerships with leading research and industry partners, and strengthen country-to-country collaborations in areas of shared interest — so that together, we can advance knowledge, create value and improve lives.

Chairman
National Research Foundation
Mr Heng Swee Keat



Background

The Research, Innovation and Enterprise (RIE) 2030 Plan was announced on 5 Dec 2025 with a budget of \$37 billion. RIE2030, which covers 2026 to 2030, builds on our investments in RIE2025.

RIE2025 was organised along four Research Innovation Enterprise (RIE) Domains, supported by three cross-cutting Horizontals. The Domains comprised **Manufacturing, Trade and Connectivity** (MTC), **Human Health and Potential** (HHP), **Urban Solutions and Sustainability** (USS), and **Smart Nation and Digital Economy** (SNDE). The RIE2025 Horizontals were **Manpower**, **Academic Research** (AR) and **Innovation and Enterprise** (I&E).

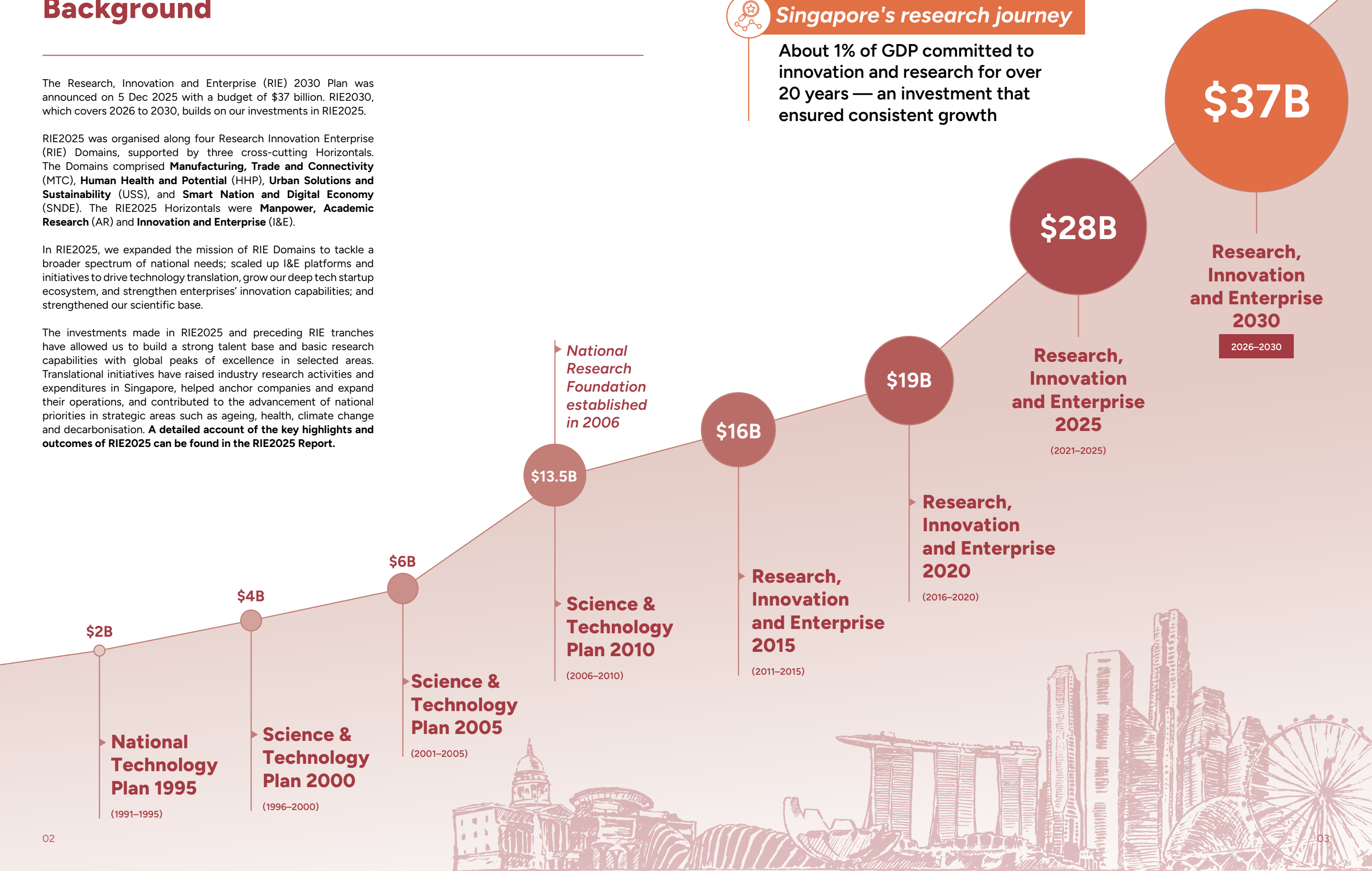
In RIE2025, we expanded the mission of RIE Domains to tackle a broader spectrum of national needs; scaled up I&E platforms and initiatives to drive technology translation, grow our deep tech startup ecosystem, and strengthen enterprises' innovation capabilities; and strengthened our scientific base.

The investments made in RIE2025 and preceding RIE tranches have allowed us to build a strong talent base and basic research capabilities with global peaks of excellence in selected areas. Translational initiatives have raised industry research activities and expenditures in Singapore, helped anchor companies and expand their operations, and contributed to the advancement of national priorities in strategic areas such as ageing, health, climate change and decarbonisation. **A detailed account of the key highlights and outcomes of RIE2025 can be found in the RIE2025 Report.**

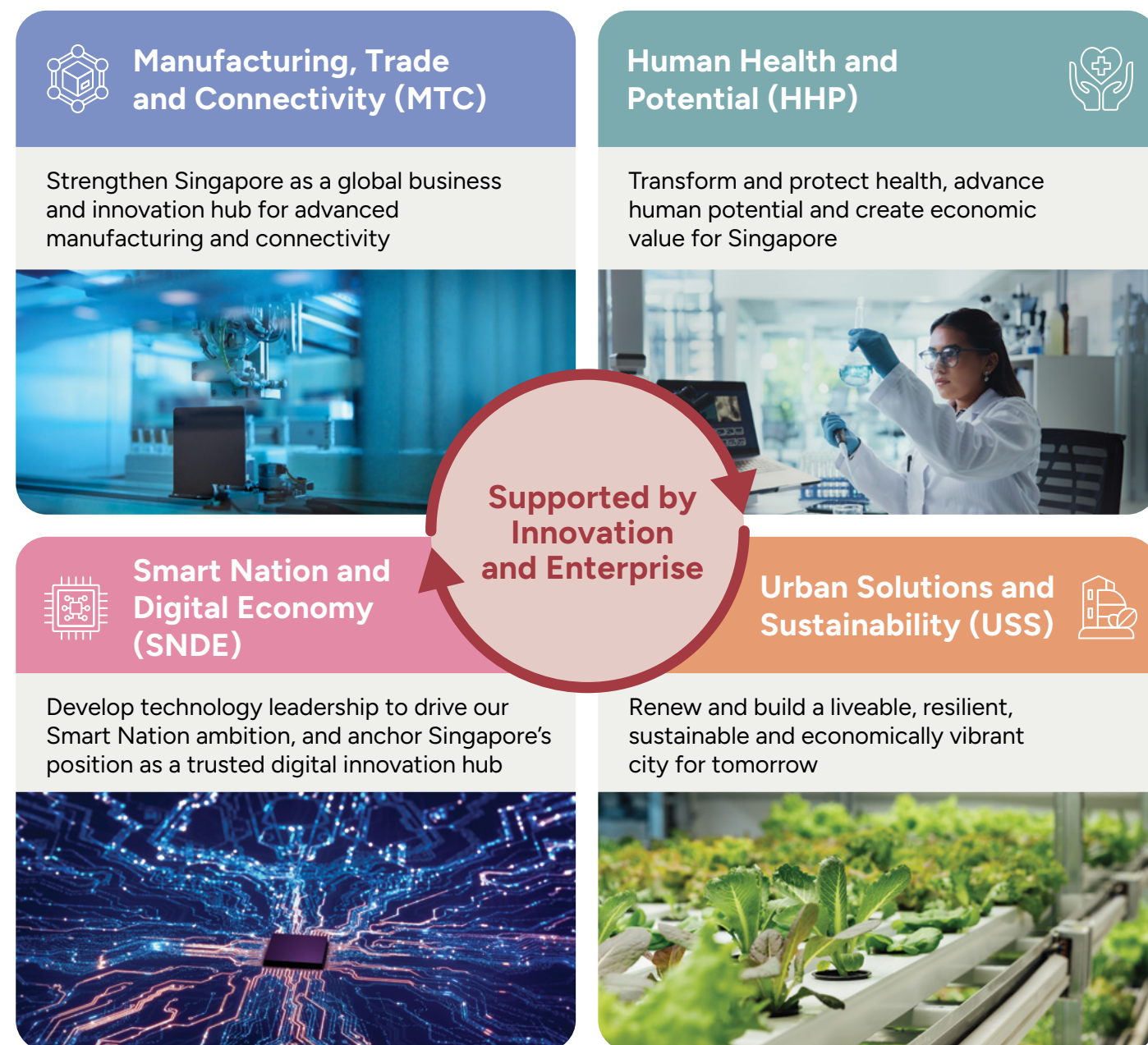


Singapore's research journey

About 1% of GDP committed to innovation and research for over 20 years — an investment that ensured consistent growth



RIE2030 Domain and Horizontal Structure



Looking ahead, the rapidly changing global environment is creating major new challenges for Singapore, exacerbated by our inherent limitations in land, energy, and emissions envelope. Climate change, supply shocks, and the energy transition will have a profound impact on Singapore and the world. Geopolitical factors are driving trends, such as re-shoring of economic activities and fragmentation of supply chains, that add complexity and disrupt existing economic arrangements.

Globally, Research and Development (R&D) is becoming more competitive, driven by big science initiatives as part of

industrial policy, dramatic advances in research technologies, growing use of data and Artificial Intelligence (AI) to transform research and innovation, and outsized private sector investments in key fields.

These new challenges also bring important new opportunities for Singapore. We must grow our RIE strengths, and apply them purposefully to critical economic and strategic areas where research translation is crucial, to enable Singapore to be a credible global player and enhance our relevance and competitiveness.

RIE2030 will seek to drive stronger outcomes in priority areas in the near and long term, through three key thrusts:



Note: The statistics and data presented in this report reflect the most recent information available at the time of compilation. Due to data collection cycles, some figures may not represent the most current period as certain datasets, including survey results, may have inherent reporting lags. Where applicable, indicators are compared with a reference point five years prior to the latest available data.

Thrust 1 *Contribute significantly to selected national economic and strategic priorities*

In RIE2030, we will launch new large-scale, interdisciplinary initiatives — RIE Flagships to advance critical national economic sectors, and RIE Grand Challenges to address national strategic priorities.

The RIE Flagships and RIE Grand Challenges will employ a systematic approach to define desired economic and strategic goals and outcomes, identify major bottlenecks where R&D is needed, and develop coordinated portfolios of research programmes. These will be actively managed to enable the desired value creation, with specific vehicles and pathways defined for value realisation. The initiatives will add major new research and innovation programmes, while bringing together capabilities developed in earlier RIE tranches for greater synergy and more ambitious impact.

The **Semiconductor RIE Flagship** aims to build on our world-class semiconductor research capabilities, to advance Singapore's position as a key node in the semiconductor supply chain. It will anchor high-value R&D and manufacturing in Singapore, while opening new pathways for the development of deep tech enterprises.

The **Transport and Connectivity RIE Flagship** aspires to further Singapore's status as a leading global connectivity

innovation hub through R&D. It seeks to create an integrated system-of-systems across land, sea, and air, facilitating the efficient and seamless flow of goods and passengers through and within Singapore. The R&D efforts will include the development of new methods, technologies and solutions — such as autonomy, embodied AI, and systems integration solutions — to significantly increase handling capacity and efficiency within current and future manpower constraints.

The **RIE Grand Challenge on Maximising Healthy and Successful Longevity** seeks to address major gaps in scientific knowledge so as to advance Singapore's ability to maintain brain health and physical function as people age, through research-driven health and socio-environmental interventions, as well as evidence-based policies and practices.

The **Decarbonisation RIE Grand Challenge** will catalyse advancements in low-carbon technologies that can address Singapore's unique requirements and be deployed to meet our climate commitments. The focus will be on technologies that have the potential to decarbonise the industry and power sectors at scale, as industrial processes and power generation account for more than 80% of Singapore's greenhouse gas emissions.

Thrust 2 *Sustain investments to grow key sectors*

Each of the four RIE Domains will develop or strengthen major translational initiatives in RIE2030, to grow key sectors and drive economic or strategic outcomes. These include: Aerospace, Space, and Advanced Manufacturing in the MTC Domain; Medtech, Biotech and Cell and RNA Therapies in the HHP Domain; Heat Resilience and Nuclear Safety in the USS Domain; and AI and Quantum in the SNDE Domain.

A key organisational change in RIE2030 is that instead of the dedicated RIE2025 Innovation and Enterprise (I&E) Horizontal, RIE Domains will lead and drive I&E efforts. This will allow Domains to develop and implement end-to-end sector-specific I&E strategies and initiatives, while drawing on I&E schemes which will continue to be run by the economic agencies. In addition, the new Research Translation Grant set up by NRF will support early research translation efforts across all fields and sectors.

Thrust 3 *Keep our basic research capabilities and talent at the cutting edge*

Given the long-term nature of the RIE endeavour and intensifying global R&D competition, it is critical to keep our basic research capabilities and talent at the leading edge. The suite of competitive research grant funding will be enhanced to strengthen the “step-ladder” of funding support for talent across the research continuum from PhD to senior investigators, and to further grow the pipeline of high-calibre research talent for the RIE ecosystem.

RIE2030 will place a strong emphasis on building well-coordinated, cutting-edge Data, AI, and Compute capabilities and platforms, to accelerate and boost research and innovation:

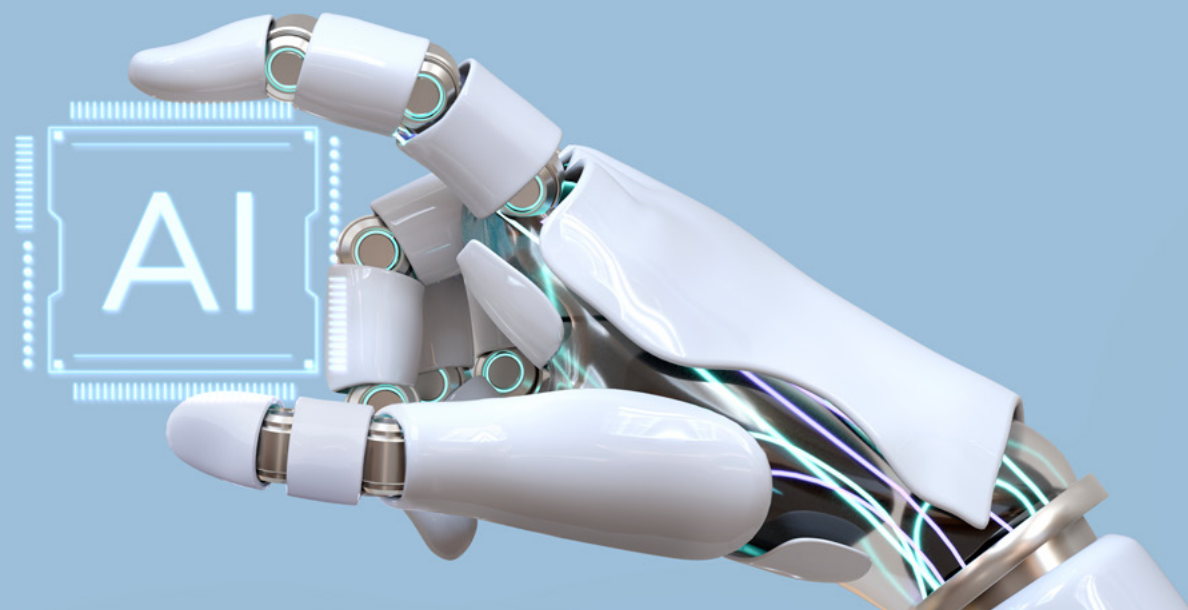
- ▶ Through the National Research Data Strategy, we will enable expeditious and safe access to de-identified government and publicly funded strategic research datasets. We will enhance and scale the existing health data exchange system (TRUST¹), and expand it to support non-health research data.
- ▶ The National AI Research and Development (NAIRD) Plan has three key thrusts, namely: establishing AI Research Centres of Excellence that will attract and nurture top-tier AI researchers; using AI to accelerate and boost research and innovation (see next page for box story on AI for Science²); and applying AI to drive sectoral transformation.
- ▶ A framework is also being established to develop advanced computational capabilities that synergistically leverage capabilities in classical high-performance computing (HPC), hybrid computing and quantum computing.

Taken altogether, the coordinated development of our Data, AI, and Compute capabilities will strongly enable and transform both our national-level initiatives, as well as Domain-level programmes in RIE2030 and beyond.

¹TRUST — Trusted Research and Real-world data Utilisation and Sharing Tech — is a national data exchange platform and data sharing framework that catalyses data research and innovation between public institutions, and between the public and private sectors. It enables anonymised research and real-world data to be brought together, accessed and used in an expeditious and secure manner.

²The \$120M AI for Science initiative was announced in Oct 2024. It focuses on the development and adoption of AI methods and tools that are transferable across multiple domains of science, to enhance research productivity and advance scientific discovery.

Harnessing AI to Accelerate Scientific Discovery – AI-for-Science



AI is disrupting how and how fast scientific discovery can be achieved. AI is now increasingly being used to automate labour-intensive research tasks (e.g. literature reviews and data analyses), explore far more complex hypotheses than previously possible, and analyse vast multidimensional datasets that would otherwise have been difficult or impossible for researchers to accomplish.

NRF's AI-for-Science (AI4S) Initiative aims to harness AI to accelerate scientific discovery across key thematic areas. The Initiative brings together teams of AI researchers and scientific domain experts from Singapore and top overseas institutions to develop AI methods and tools that can raise research quality and productivity. The goal is to nurture a new generation

of researchers who are able to effectively bridge AI and domain sciences. The research teams will be co-located on the Campus for Research Excellence and Technological Enterprise (CREATE) to promote the cross-fertilisation of ideas and support the diffusion of AI applications into new research areas.

The AI4S Initiative supports two modalities: a Challenge grant for larger-scale projects to advance the development of AI methods and tools for specific use areas and a Catalytic grant for smaller-scale exploratory projects using AI methods and tools for frontier science. This Initiative is part of the National AI Strategy 2.0 to foster a vibrant and innovative AI research ecosystem in Singapore.

RIE Flagships and RIE Grand Challenges

The RIE Flagships and RIE Grand Challenges are new RIE2030 initiatives to drive significant impact in selected national economic and strategic priorities. Each will involve the development of major new research and innovation programmes while integrating existing capabilities and managing them synergistically.

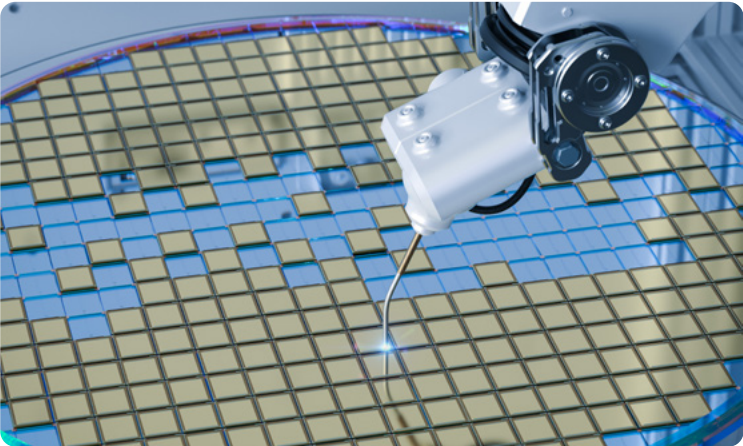


Semiconductor RIE Flagship

Advancing Singapore as a Key Node in the Global Semiconductor Supply Chain

Background

Singapore is an integral part of the global semiconductor supply chain, accounting for approximately 10% of worldwide chip production and 20% of global semiconductor manufacturing equipment production. Singapore has built strong semiconductor research capabilities through sustained RIE investments over more than three decades and collaborations with major industry players.



Building on this foundation, national platforms such as the National Semiconductor Translation and Innovation Centres (NSTICs) and academic research centres such as the Singapore Hybrid-Integrated Next-Generation micro-Electronics (SHINE) Centre and the National Centre for Advanced Integrated Photonics (NCAIP) are conducting cutting-edge research in areas such as advanced packaging to enable faster, more cost-effective and energy-efficient semiconductor technologies. The strong and sustained global demand for semiconductors, driven by AI and computing, creates major new opportunities for Singapore to strengthen our position as a key node through advanced industry-relevant basic research and translation.

Key Shifts

The Semiconductor RIE Flagship represents a significantly higher level of national ambition and coordination. It has adopted a coordinated, portfolio-based approach to bring together Singapore's key publicly funded semiconductor R&D efforts — including NSTIC (GaN), NSTIC (Advanced Photonics), NSTIC (R&D Fab) and NSTIC (Power Electronics), SHINE, and NCAIP — under a unified governance structure, to ensure that our efforts across research and translation are aligned and mutually reinforcing. The Flagship will also:

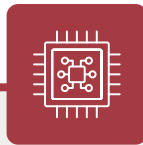


Develop new programmes targeted at priority areas and emerging opportunities.



Coordinate industry engagement by:

- Deepening the R&D commitment of existing multinational companies;
- Cultivating partnerships with new companies where there is strategic alignment and potential for growth; and
- Helping local enterprises and deep tech startups upgrade their capabilities to become qualified suppliers and technology partners to global players.

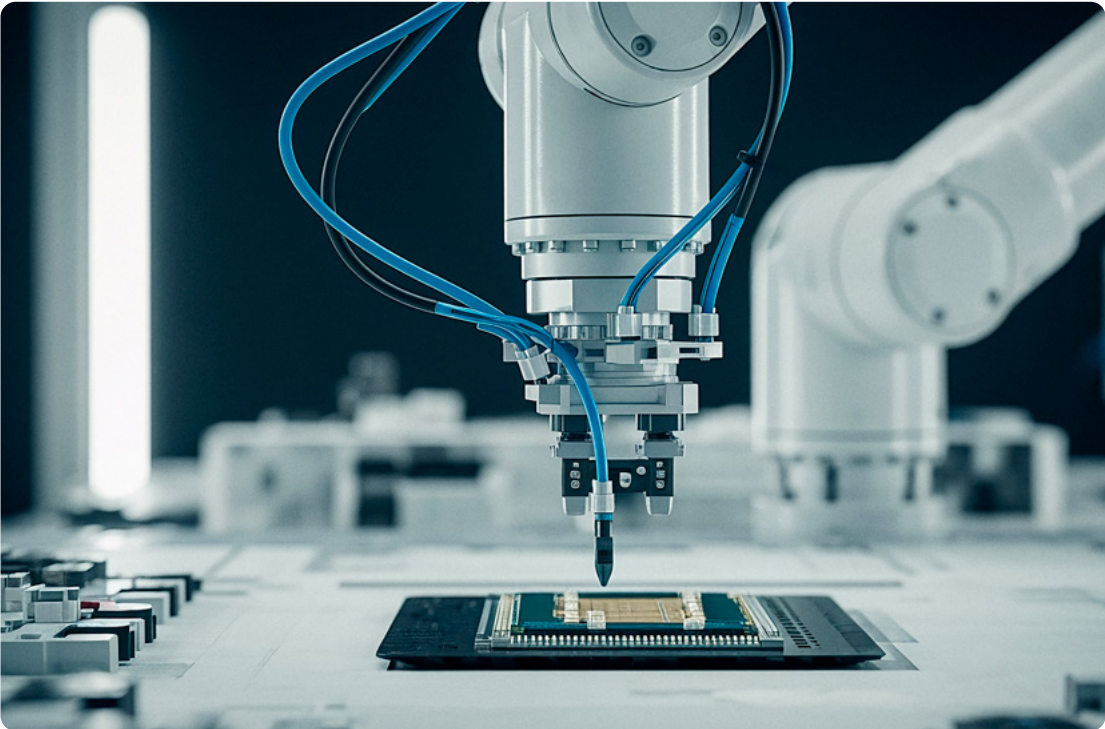


Deliver significant operational improvements, including the centralised management of shared semiconductor R&D infrastructure and equipment, such as the NSTIC platforms, to maximise the value and utilisation of these strategic assets.

Impact

The Flagship will enable Singapore to move faster and more strategically to advance its position as a key node in the global semiconductor supply chain. The Flagship aims to create deep, highly differentiated local R&D capabilities in strategic, high-impact technology areas, and strengthen the talent pipeline for industry. It will also support the continued growth of semiconductor players in Singapore including globally competitive local companies and deep tech startups.

By accelerating innovation and technology translation, it can also create spillover effects across adjacent sectors that depend on advances in semiconductor technologies, including AI, quantum, and other emerging technology domains.



Transport and Connectivity RIE Flagship

Grow Singapore's Competitiveness as a Global Transport and Connectivity Node and Supply Chain Hub

Background

Transport and connectivity are key drivers of Singapore's economy. The transportation and storage sector collectively contributes 7.6% of our GDP³, and transport services accounted for over 30% of Total Service Exports in 2025. Our port and airport connect us to more than 600 seaports and 170 cities, making Singapore a critical node in global supply chains and a trusted partner for complex cargo operations. The construction of Tuas Port and Changi Airport Terminal Five are laying the foundations for future capacity growth.

In RIE2025, the Civil Aviation Authority of Singapore (CAAS) and the Maritime and Port Authority of Singapore (MPA) launched two major research programmes to support transformation in their respective sectors, namely the Aviation Transformation Programme (ATP) and Maritime Transformation Programme (MTP). These seek to ensure Singapore's continued competitiveness as a supply chain hub amidst increased global competition and geopolitical uncertainties.

- ▶ ATP focuses on R&D in next-generation air navigation services, automated and smart airports, unmanned aviation systems, and the integration between manned and unmanned airspace.
- ▶ MTP focuses on next-generation port operations, maritime traffic management, smart and autonomous vessels, maritime safety and security, and sustainable maritime environment and energy.



³ Annual Economic Survey of Singapore, 2025.

Key Shifts

In RIE2030, the Ministry of Transport (MOT) will deepen R&D efforts across maritime, aviation, and land transport through the Transport and Connectivity RIE Flagship. The Flagship will:



Bring together MPA's and CAAS's sector-specific research under MTP and ATP as well as LTA's land transport research previously supported under the Urban Mobility Innovation (UMI) in RIE2025, with the aim of progressively enabling an integrated system-of-systems facilitating the efficient and seamless flow of goods and passengers through and within Singapore.



Provide an opportunity to rethink Singapore's concept of operations as a supply chain hub, through R&D in areas such as autonomy, embodied AI and systems integration, so as to advance Singapore as a leading international connectivity innovation hub.

Impact

The Flagship aims for step-change enhancements that maximise the potential of our existing connectivity hub through two strategic thrusts.

The first is **R&D in autonomy and embodied AI** that will enable our supply chain and transport system to operate with markedly less human intervention and downtime, freeing up our limited manpower to manage more complex activities. The goal is to significantly increase cargo and passenger handling capacity, efficiency and resilience.

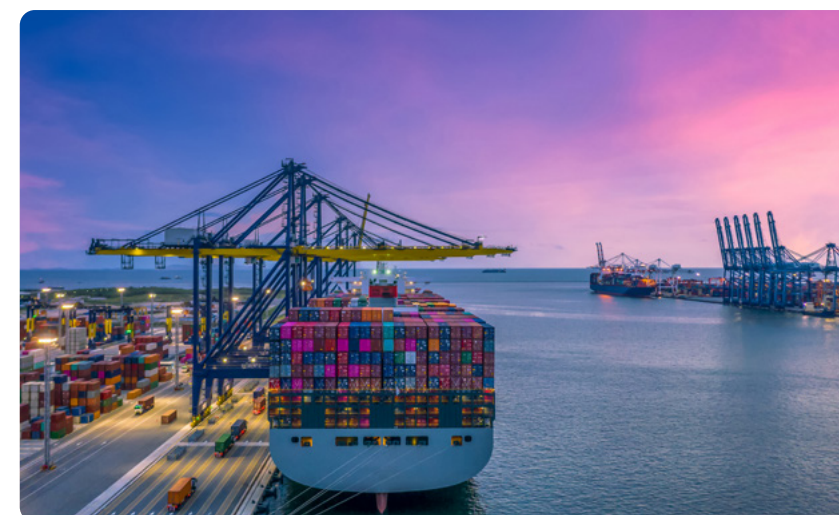
The second is **digital systems integration**. We will leverage digital twins and AI orchestration capabilities to undertake a system-of-systems approach to synergise and optimise land, sea and air transport planning and operations, and enable the seamless flow of goods and passengers through and within Singapore.

Both thrusts will be underpinned by the progressive development of a robust innovation ecosystem. MOT will work with the Institutes of Higher Learning (IHLs) and Research Institutes to grow talent and research capabilities particularly for cross-cutting technology enablers such as modelling and simulation, digital twins, AI, robotics, satellites, cybersecurity, and autonomous vehicles.

In parallel, MOT will work with economic agencies to support technology development roadmaps for key local enterprises in transport and adjacent industries such as marine and offshore, and logistics, and attract global companies and talent seeking to develop transport and supply chain

applications with AI and embodied AI. These efforts will leverage Singapore's track record in experimenting, deploying, and scaling solutions in real-world environments, as well as Singapore's role as a distinctive testbed where innovators can validate and operationalise solutions across our transport and supply chain ecosystem.

The capabilities and solutions developed through this Flagship will address Singapore's needs and aspirations. Proven solutions could also be relevant to other global hubs, generating commercial and internationalisation opportunities for our local enterprises and strengthening Singapore's standing as a connectivity innovation hub.



RIE Grand Challenge on Maximising Healthy and Successful Longevity

Advancing Research and Innovation to Help Singaporeans Live Healthier for Longer



Background

By 2030, around 1 in 4 Singaporeans will be aged 65 and above, with a gap of about 11 years between life expectancy and health-adjusted life expectancy (HALE). Chronic diseases are more common with ageing, and this will increase demand for healthcare and long-term care services.

While the Ministry of Health (MOH) and the healthcare clusters are addressing this by implementing measures for which there is already evidence of benefits, there remain important gaps in our scientific knowledge of ageing in our population. For example, we need to better understand the development and progression of conditions like vascular dementia, which accounts for nearly half of all dementia cases in Singapore at roughly twice the proportion seen in Western populations. Vascular and Alzheimer's disease mechanisms can also coexist and interact to cause dementia. By addressing these knowledge gaps, we can develop new tests for vascular dementia, and devise novel interventions that may delay its onset and progression or improve outcomes.

Key Shifts

The long-term aim of the Grand Challenge is to maintain brain health and reduce the incidence of cognitive impairment and progression to dementia, as well as to maintain physical health and reduce the prevalence and progression of physical frailty among older adults. The Grand Challenge will develop a portfolio of research that addresses key knowledge gaps and translates these discoveries into novel, evidence-based solutions or interventions contextualised for our population. Solutions that are developed and proven in Singapore can be scaled to improve our national programmes, and can be adopted by other healthcare systems in Asia facing similar challenges.

Specifically, the Grand Challenge will:



Bring together cross-institutional, multi-disciplinary capabilities to address critical knowledge gaps in healthy longevity, across two pillars — Brain Health and Physical Function



Drive translational research to develop and validate biomarkers, screening and monitoring tools for research and clinical use



Advance Socio-Environmental Innovations and leverage Singapore's unique advantages as a testbed for healthy ageing solutions, including our built environment and integrated systems



Translate research insights into actionable recommendations or interventions, targeting guidelines, policies or practices across health, social, and urban planning domains

Impact

This Grand Challenge directly supports MOH's overarching goal of Enhanced Population Health and Strengthened Health System Resilience, strongly complementing ongoing national initiatives like Healthier SG and Age Well SG. Singapore's research and innovations in this area will be relevant not only locally but across Asia — the world's fastest-ageing region — positioning us to develop insights and exportable solutions that could benefit the broader region and beyond.



Decarbonisation RIE Grand Challenge

Singapore's Decarbonisation, Enabled and Accelerated by R&D

Background

Singapore faces significant decarbonisation challenges as a small alternative-energy-disadvantaged city-state, with the power and industry sectors accounting for more than 80% of Singapore's greenhouse-gas emissions.

Key Shifts

In RIE2030, the Ministry of Trade and Industry (MTI) will lead the Decarbonisation RIE Grand Challenge (DGC) to develop strategies and plans for research, innovation and translation efforts for low-carbon energy generation and industrial process decarbonisation technologies for the power and industry sectors respectively. The DGC will:



Build on Singapore's existing efforts in decarbonisation research and innovation, including the upcoming Low-Carbon Technology Translational Testbed (LCT3) on Jurong Island, which will offer cost-effective, modular testbedding.



Support both laboratory-based research to advance the scientific development of emerging low-carbon technologies, as well as the test-bedding and piloting of near-commercial solutions, managing the full pipeline from development to deployment.

Impact

The DGC will aim to advance Singapore's decarbonisation by creating more viable and cost-competitive options, directly supporting national climate commitments. It will also help build up local scientific and engineering knowledge in critical low-carbon technology areas, and position Singapore as a node for global decarbonisation innovation, with spillovers into adjacent sectors.

Singapore Pilots for Energy & Enterprise Decarbonisation (SPEED) Programme

The DGC will comprise several initiatives, the first of which will be the SPEED Programme.

Today, promising low-carbon technologies exist globally but face significant barriers in scaling up and reaching commercial deployment, particularly in contexts like Singapore's. At the same time, Singapore needs cost-competitive decarbonisation options for its power and industry sectors, and stands to benefit from being an early mover in piloting and deploying these solutions.

SPEED aims to bridge the gap between promising technologies and market-ready deployment by accelerating the scaling up of near-commercial low-carbon technologies through targeted translational Research, Development and Demonstration (RD&D) in the power and industry sectors. It supports technology providers in translating and commercialising emerging decarbonisation solutions that are tailored to Singapore's specific needs and context. To do this sustainably, SPEED also facilitates partnerships between Singapore-based companies and global technology providers to co-develop solutions and build local deep tech capabilities, ensuring that the benefits of this work are anchored in Singapore.

SPEED will expand Singapore's menu of viable, cost-competitive decarbonisation options available for future deployment at scale. Beyond the immediate climate benefits, it will also strengthen Singapore's reputation as a destination for low-carbon-related RD&D, attracting technology providers and investment to our shores.



Sustaining Investments to Grow Key Sectors, by RIE Domains



Manufacturing, Trade and Connectivity (MTC)



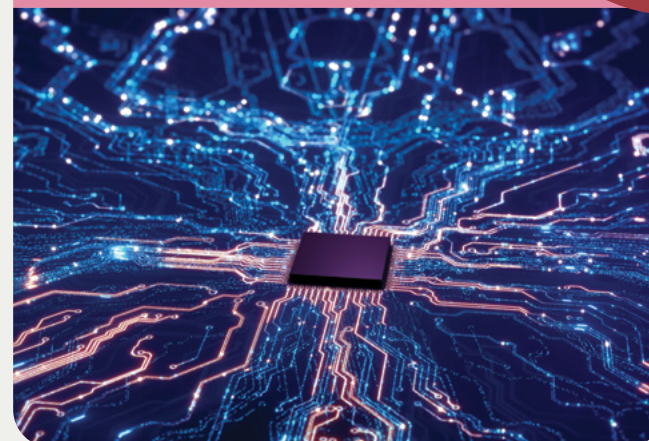
Human Health and Potential (HHP)



Supported by
Innovation
and Enterprise



Smart Nation and Digital Economy (SNDE)



Urban Solutions and Sustainability (USS)



Manufacturing, Trade and Connectivity (MTC)



Why it matters

The profound shifts in the global economy and supply chains, and the rapid pace of technological advancements, are creating major challenges for established industries and firms, as well as many new opportunities. To strengthen Singapore's resilience and further increase our relevance as an advanced manufacturing, trade and connectivity node, it is important to sustain strategic investments in research and innovation.

- ▶ Anchoring and Extending High-Value Innovation and Related Economic Activities of Businesses in Singapore
- ▶ Capturing Market Opportunities in High-Growth Sectors through R&D
- ▶ Opening New Pathways for Deep Tech Enterprises



Intensify R&D investment and raise ambition for high-impact sectors with significant national economic and/or strategic value to Singapore

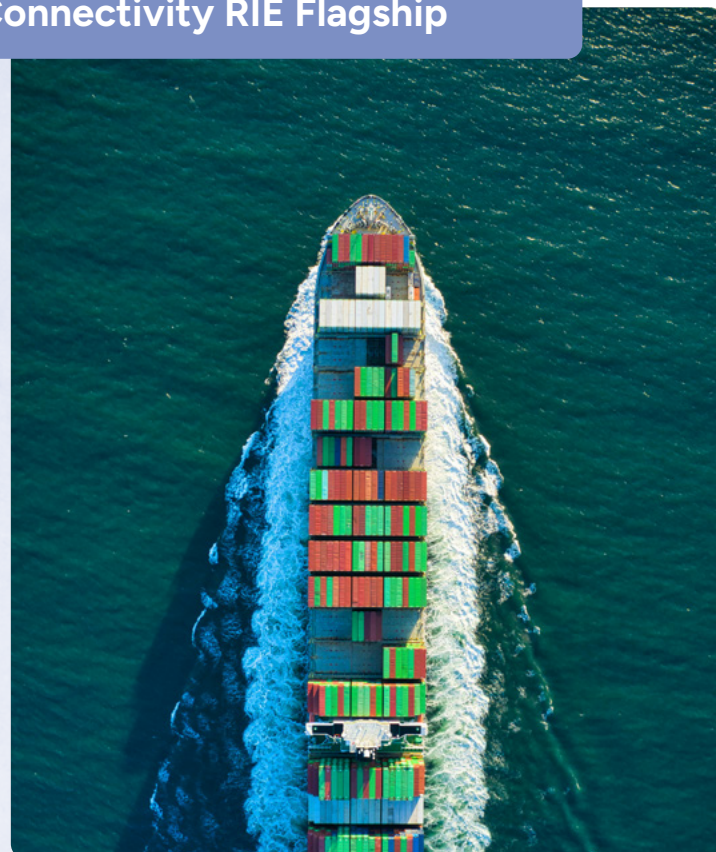
In RIE2030, there will be a sharpened focus on priority sectors with economic and strategic value to Singapore. Key initiatives include the RIE Flagships in Semiconductor and Transport and Connectivity, described earlier in this document.

Maritime and Aviation Transformation Programmes (MTP and ATP) under the Transport and Connectivity RIE Flagship

In RIE2025, R&D investments through the MTP and the ATP delivered meaningful outcomes.

Under the MTP, R&D investments have contributed to Singapore's position as a future-ready maritime hub across multiple fronts. For instance, research into the modelling and simulation of alternative fuel dispersion has led to the development of planning tools for bunkering operations that were demonstrated during MPA's Chemical Spill Exercise in July 2025, improving situational awareness and supporting decisions on mitigation measures.

The MTP also supported the development of AI-powered tools to automate near-miss collision detection and optimise harbour tug fuel consumption, and the world's first industrial-grade cyber-physical maritime testbed, the Maritime Testbed of Shipboard Operational Technology (MariOT), which was commissioned in March 2025 to strengthen shipboard cybersecurity training and testing, while reducing reliance on physical shipboard infrastructure.



Under the ATP, R&D investments have contributed to Singapore's position as a leading aviation hub through advances in air traffic management technology. One initiative is the Regional Collaboration Platform (RCP) which enables exploration of new air traffic management concepts involving several Air Navigation Services Providers from Singapore's neighbouring countries.

In July 2025, the first joint regional laboratory demonstration of Trajectory-Based Operations (TBO) was successfully conducted using the RCP. By enabling more efficient end to end optimisation of aircraft trajectories across multiple Flight Information Regions, TBO delivers meaningful benefits to airlines, passengers,

and the environment through improved operational efficiency, fewer delays and disruptions, and reduced fuel burn and emissions.

In RIE2030, research initiated under the MTP and ATP will be carried forward under the Transport and Connectivity RIE Flagship, deepening R&D efforts to sustain and strengthen Singapore's position as a world-class aviation and maritime hub. Building on the foundations laid by previous RIE investments, these programmes will advance capabilities in key strategic areas, such as autonomy and digital systems integration, enabling aviation and maritime systems to operate with greater efficiency and resilience, as well as minimal downtime.



Direct R&D investment to capture growth opportunities in key sectors and catalyse emerging sectors that could become key contributors to Singapore's economy

Beyond R&D investments in high-impact sectors, there will be continued efforts to strengthen sectors with strong growth potential, such as aerospace. In addition, emerging opportunities will be identified where R&D could significantly strengthen Singapore's global competitiveness, for example, in Space and Bioeconomy.



Global Leadership in Aerospace Maintenance, Repair and Overhaul (MRO) and Manufacturing

The aerospace sector is a strong contributor to Singapore's economy, accounting for close to 1% of Singapore's GDP and more than 5% of manufacturing value-added in 2024. There is an established ecosystem of more than 130 international and local aerospace companies across the value chain, accounting for approximately 10% of global MRO output and 19% of global engine MRO output.

In RIE2030, R&D priorities will include using AI and robotics to greatly speed up MRO processes such as defect detection, and increase productivity and throughput. Next-generation MRO and manufacturing processes will also be developed to anchor new companies in Singapore and allow existing companies to expand their range of products and services. R&D into emerging areas such as sustainable materials and future aircraft technology platforms will pre-position Singapore for future opportunities.

2



Space

Investments will be made to capture some of the immense potential of space technologies and open new opportunities for Singapore to participate in the global space economy. The R&D will seek to strengthen Singapore's capabilities in next-generation space technologies and applications, including advanced Earth observation and communications satellite technologies, geospatial applications, and emerging areas such as climate-related and space sustainability technologies, creating new opportunities for innovation, industry growth, and good jobs for Singaporeans.

3



Bioeconomy

There are early signs of an emerging market for sustainable products. To capture the accompanying growth opportunities in the developing bioeconomy, efforts will be made to transform Singapore's existing base and to anchor new high-value industrial activities in the energy and chemicals sector. Alternative feedstocks and bioprocess development, which will leverage existing capabilities developed for the energy and chemicals sector and in biotechnology, are examples of areas which will be relevant.



Strengthen cross-cutting capabilities

There will be continued investments in technologies with applications across the MTC sectors and with a focus on those with significant potential for impact. These include AI, Additive Manufacturing (AM), and Robotics.

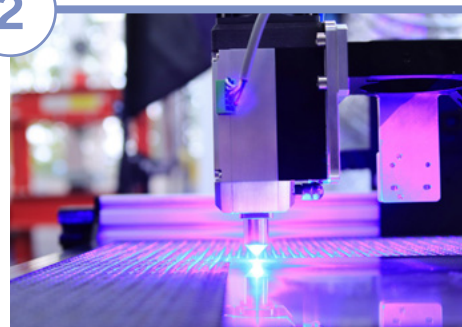
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Artificial Intelligence

R&D in areas such as Agentic AI, Sustainable AI as well as ready-to-go AI models will be part of our national efforts to scale up adoption of AI solutions in Singapore's industries, to increase their competitiveness.

2



Additive Manufacturing

R&D in areas such as AM technologies for energy-efficient processes, and high-performance and sustainable materials will support efforts to anchor and scale capabilities in applications where precision, performance and Intellectual Property (IP) creation drive value.

3



Robotics

Developments in AI have unlocked new opportunities in robotics. Embodied AI (EAI), starting with the Manufacturing, Maritime and Aviation sectors, will be a priority area. The approach brings industry end-users, robotics solution providers and the RIE ecosystem together to co-develop robotics solutions with economic potential. The aim is to develop EAI R&D capabilities and AI-enabled robot prototypes that can learn and adapt, to perform complex tasks in dynamic and unstructured environments. It will include an EAI data flywheel to accelerate training of domain-specific AI brains together with a shared physical infrastructure. The EAI investment, in partnership with translation centres, will help move research from the laboratory into real-world impact.

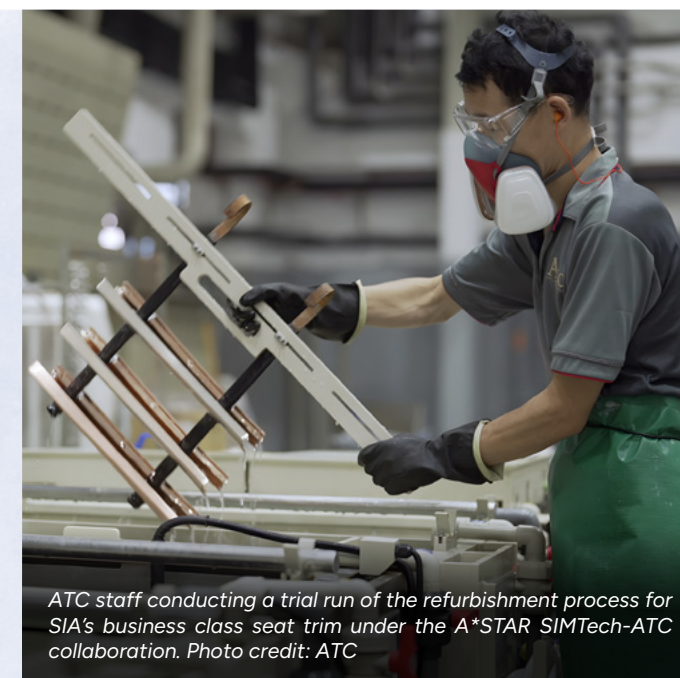
Supporting SMEs

RIE investments have helped local small and medium enterprises (SMEs) adopt advanced manufacturing technologies, strengthening their competitiveness in global supply chains. The National Additive Manufacturing Innovation Cluster (NAMIC) serves as the national orchestrator for AM adoption, driving industrial transformation across large enterprises, SMEs, and startups.

Central to this effort is NAMIC's role in facilitating partnerships between global demand drivers and local AM service providers. For instance, with EDB's support, NAMIC facilitated a collaboration between GlobalFoundries and homegrown SME, Forefront AM, to commercialise advanced 3D printing for semiconductor tool repair, which enabled Forefront AM to capture new growth opportunities.

In RIE2030, NAMIC will deepen these efforts by prioritising partnerships with leading industry players in strategic sectors such as Aerospace, Semiconductors, and the Transport and Connectivity RIE Flagship, accelerating the industrial deployment of AM for innovation, and strengthening the capabilities of local SMEs through technology validation, supplier qualification, and co-development opportunities.

RIE investments have also helped SMEs such as Applied Total Control Treatment Pte Ltd (ATC) to develop new solutions in advanced surface treatments, high-performance coatings and sustainability enhancements. These are expected to generate multiple technology transfers, broadening ATC's customer base across



ATC staff conducting a trial run of the refurbishment process for SIA's business class seat trim under the A*STAR SIMTech-ATC collaboration. Photo credit: ATC

various industries including Semiconductors, Oil and Gas, Aerospace, Medtech and Precision Engineering. This is projected to drive up to 20% business growth alongside cost savings in wastewater treatment and energy consumption — ensuring ATC remains competitive as one of Singapore's few but critical local surface treatment specialists.

In RIE2030, there are plans to continue the partnership with ATC to strengthen its capabilities and business competitiveness in surface treatment and coating. This is expected to create new jobs and help ATC achieve cost savings.

Human Health and Potential (HHP)

- ▶ Enabling Singapore's Next Bound in Healthcare with Genomics and AI
- ▶ Keeping Singaporeans Healthier for Longer
- ▶ Strengthening Singapore as a Global Hub in Biomedtech and Biomanufacturing



Why it matters

Singapore's rapidly ageing population and rising chronic disease burden is reshaping how we live, work and thrive as a society. As human capital is our greatest asset, optimising our people's health, capabilities, and potential is critical.

Our distinctive research strengths in Asian biology and precision health, coupled with our multi-ethnic population, position us to advance knowledge and pioneer health solutions that will not only benefit our own citizens, but would also be relevant to countries around the world.



Harness precision health approaches to enhance population health

From 2021 to 2024, 251 research findings from HHP-related centres, programmes, or projects resulted in new or updated clinical guidelines, clinical practices and healthcare/health policies, contributing to improved healthcare services and outcomes.

In RIE2030, we will harness precision health approaches to improve health at the population level, strongly complementing broad-based public health measures. Precision health interventions targeted at high-risk groups, will be tailored to their specific characteristics and requirements.

Phase III of the National Precision Medicine (NPM) Programme will expand to 450,000 participants by 2031. New genomic use cases will be used to assess promising precision health approaches, in close partnership with MOH.

To amplify the translational impact of NPM and clinical research, we will enhance TRUST — the data governance framework and analytics platform established in 2022 to facilitate safe and secure health-related data access and analysis. TRUST provides access to anonymised datasets spanning health, social, population, and lifestyle domains, enabling large-scale research of public benefit previously constrained by data silos and the absence of a centralised, secure analytical platform.

National Precision Medicine (NPM) Phase III / Genomic Innovation Hub

Launched in 2017, Singapore's NPM programme has built one of the world's largest and most deeply phenotyped databases for multi-ancestry Asian cohorts, containing whole genome sequences of more than 100,000 Singaporean residents.

In Phase III, NPM will expand to sequence the whole genomes of 450,000 participants across all three Healthcare Clusters by 2031, establishing a statistically robust, population-representative cohort. Research findings are already being translated into clinical practice: the national Familial Hypercholesterolaemia genetic testing programme, rolled out by MOH in June 2025, builds on NPM's clinical implementation pilots to identify individuals at risk of premature heart disease before a cardiac event occurs.

The Genomic Innovation Hub will systematically identify and evaluate new genomic use-cases for clinical translation, including recommendations on gene-drug interactions that alert clinicians to adjust prescriptions

or dosages based on a patient's genetic profile — for example, flagging that a patient may metabolise a blood thinner poorly and recommending an alternative. It is envisioned that this will be integrated into the electronic health record (EHR) systems for 50,000 patients by 2031.



Singapore launched Phase III of National Precision Medicine (NPM) programme, forming strategic partnerships for better health on 14 November 2025. Photo credit: CRIS and PRECISE

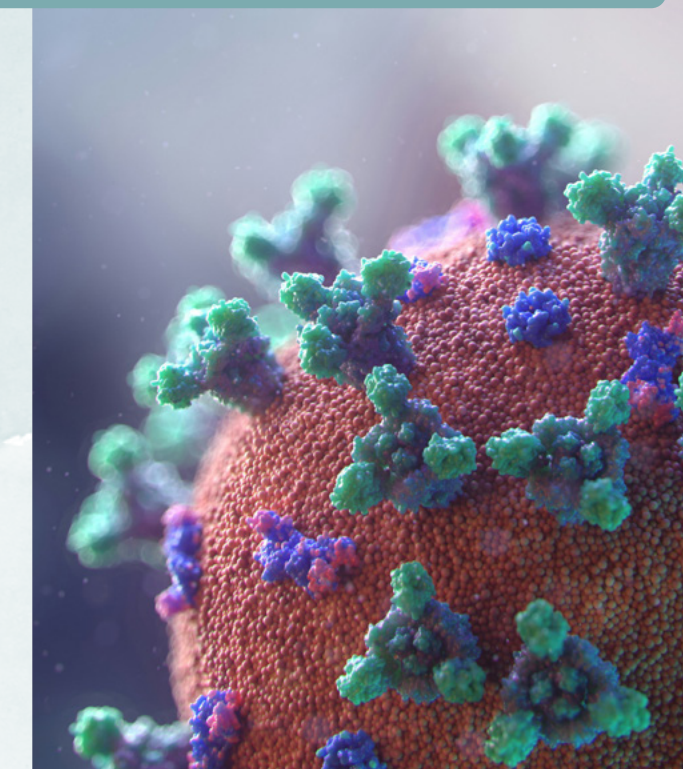
Programme for Research in Epidemic Preparedness And REsponse (PREPARE) and the Pathogen/Pathway to Vaccine Development to Enhance Singapore's Pandemic Resilience (PrepVax)

Two national research programmes established in previous RIE tranches continue R&D to strengthen Singapore's preparedness for and response to future epidemics.

PREPARE builds and coordinates integrated research capabilities, expertise, and networks for epidemic preparedness and response across Singapore and the region; supporting improved surveillance, early detection, rapid response, and informed decision-making.

PrepVax grows local capabilities that support the development of vaccines against infectious diseases such as influenza that may pose epidemic threats, increasing Singapore's resilience and ability to respond to a future epidemic and facilitating active participation in global vaccine efforts.

Both programmes work in close alignment with MOH and the Communicable Diseases Agency (CDA) to support overall public health preparedness and response.



Trusted Research and Real-world Data Utilisation and Sharing Tech (TRUST)

Since its launch in late 2022, TRUST has enabled more than 80 projects and supported more than 500 researchers, including NPM and PREPARE's investigation into COVID-19 genomic risk factors. In RIE2030, TRUST will be enhanced to further support high-impact research and amplify the translational impact of NPM and population health programmes. Concurrently, TRUST will be extended beyond the health domain to the rest of the RIE ecosystem, beginning with the USS Domain.



Strengthen Singapore's position as a global biomedtech and biomanufacturing hub

In RIE2025, the number of local biomedtech companies in Singapore grew by approximately 54%, from 320 to around 500, with a 40% increase in medtech companies, and a doubling of the number of therapeutic biotechs. These companies raised more than US\$3.2 billion from local and international investors. However, the biomedtech startup sector is facing headwinds from reduced availability of venture capital, particularly for growth stage startups, and persisting shortages of experienced entrepreneurial and business talent.

- ▶ In RIE2030, Singapore will enhance research translational efforts to significantly increase the pipeline and quality of our commercialisable assets in therapeutics and medtech.
- ▶ The newly launched HHP MISSION funding initiative will drive industry-aligned, thematically defined research to address key bottlenecks in selected biotech and medtech fields. Programmes such as the Singapore Therapeutics Development Review (STDR) and the Medtech Innovation Development and Acceleration Scheme (MIDAS) will support the development of early-stage biotech and medtech innovations respectively, helping to advance promising assets and projects towards productisation and commercial readiness.
- ▶ Further commercialisation of assets can tap on later-stage translational platforms such as the Diagnostics Development Hub (DxD) for clinical diagnostics, the Experimental Drug Development Centre (EDDC) and the Nucleic Acid Therapeutics Initiative (NATI) for therapeutics, the Advanced Cell Therapy and Research Institute, Singapore (ACTRIS) for cell therapies, and MedTech Catapult for general medical devices.

New public-private partnership initiatives being conceptualised for introduction in RIE2030 will engage experienced and globally successful venture builders. They will actively participate in creating high-quality biotech startups anchored on Singapore IP and advancing therapeutic assets, as well as provide capital and support to bring clinical development-stage assets to the point of value inflection. These initiatives will also seek to attract, develop and retain startup, clinical and business development talent.

MISSION

A new RIE2030 initiative, HHP MISSION takes a mission-oriented, actively managed approach to developing strategic biomedtech innovations, addressing high-potential translational problem statements shaped with early industry input. MISSION will complement traditional ground-up translational initiatives by empowering Programme Directors to steer execution, with milestone-based funding and active programme management to accelerate the development of commercialisable IP aligned with real-world demand. MISSION targets critical translational bottlenecks across biotech and medtech development, with a 5- to 10-year horizon to commercial outcomes.



Diagnostics Development Hub (DxD Hub)/MedTech Catapult



A DxD Hub scientist at work. Photo credit: DxD Hub

DxD Hub (established 2014) and MedTech Catapult (established 2024) are national medtech commercialisation engines supporting the research-to-productisation-to-commercialisation pathway. In RIE2030, both will administer the new MIDAS programme to build a pipeline of early-stage innovations towards commercial uptake. DxD Hub will focus on accelerating diagnostics product development and navigating regulatory and reimbursement pathways, while MedTech Catapult will advance high-value medical devices and life science instruments towards venture financing and manufacturing.

Beyond venture-backed companies, both will also enable "build-to-buy" partnerships and co-development opportunities with industry to accelerate the translation and global adoption of medtech innovations, anchored on national priorities.



Optimise human potential across the life-course

In RIE2030, the Human Potential (HP) Programme will continue research and translation efforts to improve individuals' holistic health, wellness, learning and economic productivity over the life-course through deep scientific understanding of human learning and development across critical life stages. These efforts will be supported by programme-wide knowledge mobilisation and translation, data harmonisation and integration, and cross-disciplinary research training efforts. HP focus areas include health and development, adolescent development, and cognition and skills acquisition.

Growing Up in Singapore Towards healthy Outcomes (GUSTO) & Integrative Adolescence Research Programme (IARP)

GUSTO's findings — spanning gestational diabetes screening, children's screen use, eating habits and healthy development — have directly contributed to Grow Well SG, the national public health initiative launched in 2025, which draws on GUSTO's evidence across nutrition, physical activity, screen use and sleep to support families in building healthy habits for children.

Building on over 15 years of longitudinal data from the GUSTO birth cohort, and now tracking participants into adolescence, IARP brings together six longitudinal cohorts to study the biological, psychosocial, digital, and environmental factors that shape adolescent health and development. Priority areas include adolescent mental health and wellbeing, resilience, and the impact of digital media and AI on development and academic performance.

The programme will assess how societal shifts affect development trajectories, develop evidence-based interventions, and translate findings into actionable recommendations. These will inform practice, programmes, and policy for addressing pressing adolescent health and developmental challenges.



Urban Solutions and Sustainability (USS)

- ▶ Advancing Decarbonisation
- ▶ Strengthening Climate Resilience
- ▶ Building a Sustainable and Liveable Singapore



Why it matters

Singapore faces unique and existential sustainability challenges arising from our small size, limited natural resources, increasing urban density, and vulnerability to climate change. By deploying research-based solutions, USS programmes aim to enhance Singapore's liveability and economic competitiveness, while positioning the nation as a leading Global Asia hub for urban sustainability solutions.

Stepping up R&D



Industrial Water Solutions Programme



Singapore Green Plan 2030



RIE2030 Heat Resilience R&D Programme

Driving deployment



USS Translation Fund



Built Environment Technology Alliance

Strengthening talent



National Institute for Marine and Ocean Sciences CoE



Built Environment Artificial Intelligence CoE



Coastal Protection and Flood Resilience Institute CoE



Climate and Weather Research Alliance Singapore



Step up R&D to address climate change and sustainability challenges

An integrated research approach will be taken and pursued across sustainable urban systems, as well as climate adaptation and mitigation to inform solutions for a liveable, climate-resilient, and competitive Singapore. Investments in climate science and adaptation will be deepened, with key research priorities focused on weather science, coastal protection and flood management, and heat resilience to address climate challenges.

Through RIE2025, novel technologies have moved from laboratory research to deployment and commercialisation, including carbon-capturing concrete and innovative coastal protection. We will build on this momentum and accelerate impact in RIE2030:

1



The Industrial Water Solutions Programme aims to develop technologies and capabilities for industrial wastewater treatment, recycling and reuse in Singapore's Wafer Fabrication and Data Centre sectors which are among the highest consumers of industrial water and are expected to see continued growth in water demand. It will build upon prior RIE investments in municipal water solutions and expand their application to industrial sectors.

2



Buildings account for over 20% of Singapore's emissions. Hence, greening of buildings is key to achieving Singapore's emissions reduction targets. Under the Singapore Green Plan 2030, the built environment sector will focus on addressing whole-life carbon — the total emissions produced by a building throughout its entire lifecycle, encompassing both embodied carbon and operational carbon. In RIE2030, there will be continued focus on (i) energy-efficient green buildings and (ii) low-carbon materials and technologies.

3



The integrated RIE2030 Heat Resilience R&D Programme coordinated by the Heat Resilience Policy Office will focus on two key pillars: (i) developing infrastructural interventions to mitigate urban heat, and (ii) improving our understanding and management of the impacts of heat on different segments of society. We aim to achieve research outcomes that deepen our scientific understanding of the impacts of rising temperatures on Singapore, develop innovative and effective solutions to manage these impacts, and strengthen the community's resilience to heat.



Drive real-world deployment of sustainability solutions

There will be a continued focus on advancing promising research into innovations that are deployed in the real world and deliver tangible impact.

The USS Translation Fund is a new RIE2030 funding programme by the Ministry of National Development (MND) and Ministry of Sustainability and Environment (MSE) to support local companies to develop, pilot, and commercialise promising urban and sustainability solutions. Administered by the USS I&E Office, a national platform hosted by A*STAR, the fund helps companies translate high-potential USS research prototypes into cost-effective market-ready solutions. By supporting the commercialisation of innovative solutions, the fund will create potential business opportunities across key USS sectors including the built environment, water, environmental services, and agri-food industries.

The Built Environment Technology Alliance (BETA) initiative is designed to catalyse industry-led Research & Innovation (R&I) projects in the Built Environment sector, by bringing together alliances of BE firms and IHLs to develop competitive capabilities through R&I investments. It serves as the focal point for industry stakeholders to collaborate with like-minded peers and co-create ideas, drive R&I, tap the knowledge of domain experts, and translate knowledge to economic value. Across BETA Phases I and II, there was a significant increase in private sector R&I investment, alongside a rise in related activities — including the establishment of the Construction Technology Innovation Laboratory, a partnership between SIT and Woh Hup Pte Ltd. Riding on its success, BETA Phase III will be launched under RIE2030.



Strengthen talent development and attraction

We will strengthen talent development to attract and retain expertise in critical sustainability fields. This includes establishing new Centres of Excellence (CoE) and leveraging Singapore's position as a trusted global research hub to draw international talent while deepening local capabilities. USS agencies will also build specialist research and engineering talent, including expert programme managers able to integrate novel solutions into urban systems.

1



The National Parks Board (NParks), in partnership with the National University of Singapore (NUS) as the Host Institution, has established the National Institute for Marine and Ocean Sciences (NIMOS), a new marine science Research Centre of Excellence (CoE) under RIE2030. The CoE will consolidate capabilities to better leverage expertise across research institutes, universities and the industry to accelerate the growth of the marine science ecosystem.

To ensure that Singapore has local capabilities familiar with the specialised local marine science context and environment, the CoE will develop a robust pipeline of local talent that can help build capabilities across academia, industry, and government. The CoE will also serve as a conduit for regional collaboration, facilitating data sharing and comparative assessments of marine health across Southeast Asia, and collective understanding of our connected waters.

2



MND, in partnership with the Singapore University of Technology and Design (SUTD), has launched a new Built Environment AI Centre of Excellence (BE AI CoE). This centre will foster collaboration between government agencies, academia and industry to develop AI-driven solutions that address key challenges in the BE sector, such as manpower shortages in the labour-intensive construction and facilities management sectors. The CoE aims to transform work processes to enhance productivity, sustainability, and liveability while nurturing “AI bilinguals” — professionals who possess both technical AI expertise and practical understanding of BE sector challenges.

3



Under the Coastal Protection and Flood Management Research Programme (CFRP), the Coastal Protection and Flood Resilience Institute (CFI) Singapore CoE was set up to lead research on coastal science and monitoring, prediction, and digitalisation of the coastal environment, innovative engineering and integrated nature-based solutions. CFI Singapore will also groom a sustained pipeline of local professionals for coastal protection and flood management.

4



The National Environment Agency (NEA), in partnership with NUS, NTU, and A*STAR, has established the Climate and Weather Research Alliance Singapore (CAWRAS) to address the critical gap in tropical urban weather and climate research through the Weather and Climate Science Research Programme (WCSRP), spanning weather prediction, regional reanalysis, and long-term climate change projections. The alliance nurtures a sustained pipeline of local talent through PhD training, while building a strong research ecosystem to develop deep expertise and draw top-tier scientists to Singapore.

Singapore Nuclear Research and Safety Institute (SNRSI)



Nuclear safety remains a key priority for RIE2030, given its strategic imperative for Singapore and the region. SNRSI aims to double its pool of experts to 100 by 2030, as well as develop stronger relationships and collaborations with regional and international counterparts.

Smart Nation and Digital Economy (SNDE)

- ▶ A Trusted Smart Nation underpinned by AI, Quantum, and Digital Trust and Security



Why it matters

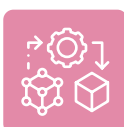
AI and emergent technologies such as quantum have the potential to drive economic transformation by creating new opportunities across industries, boosting productivity, and strengthening Singapore's competitive edge in the global digital economy. At the same time, misuse of these technologies can undermine digital trust and amplify security challenges.

Our RIE investments in AI, quantum, and digital trust and security will contribute to building a Smart Nation that is safe and secure — one where innovation thrives, businesses can grow confidently, and citizens benefit while potential harms to them are mitigated.



Develop deep capabilities in AI, Quantum, and Digital Trust and Security to ensure Singapore remains trusted, innovative and competitive

- ▶ **AI:** The central focus will be on attracting and nurturing talent and developing differentiated expertise in basic AI research, and translating research discoveries and inventions into applications that can uplift and transform sectors.
 - In RIE2030, AI Research Centres of Excellence (RCEs) will be established in priority areas such as responsible and resource-efficient AI, helmed by globally leading AI researchers who can attract and nurture a broad base of high-calibre AI talent.
 - The AI for Science (AI4S) programme launched in 2025 will be scaled up to promote the use of AI to accelerate breakthrough discoveries — from vaccine development and early cancer detection to food security and clean energy materials.
- ▶ **Quantum:** In RIE2030, we will continue to build up our quantum capabilities, including investing in the Centre for Quantum Technologies (CQT), to keep it as a leading quantum research institution globally, building on its strong international reputation in many high-impact areas of quantum research and the key role it plays in anchoring top quantum expertise from around the world.
- ▶ **Digital Trust and Security:** The National Cybersecurity R&D Programme will prioritise developing world-class research talent and expertise in domains of national need and where Singapore has existing strengths, such as AI security, Operational Technology (OT) security, and quantum-safe capabilities.



Facilitate research translation and real-world deployment of these technologies

1

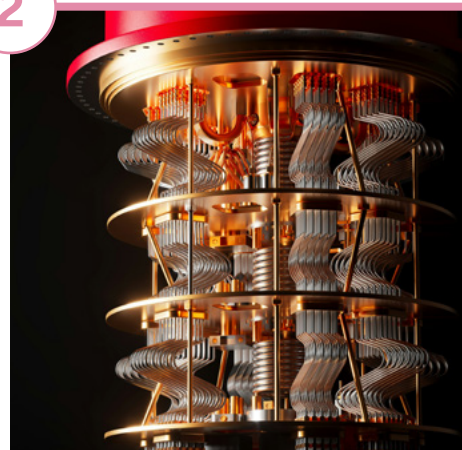


Artificial Intelligence

Beyond driving scientific excellence, we are building the interdisciplinary capabilities and technological translation capacity needed to support Singapore's AI Hub ambitions – advancing the National AI Council's push for AI-led sectoral transformation under the National AI Missions⁴. This includes tapping on relevant strengths and support from RIE Domains, Data and Compute capabilities, as well as upstream expertise in AI4S.

Active efforts will be made to boost collaborations with local enterprises and corporate laboratories which have leading R&D and engineering capabilities. This will be bolstered by two Applied AI programmes that will build core AI engineering capabilities to translate and deploy AI solutions at speed and scale, nurture “bilingual” talent proficient in AI and with domain expertise, and identify good use-cases and accelerate testing, deployment, and scaling of AI products and services.

2



Quantum

We will further strengthen the emphasis on industry value capture and strong use-case drivers. These will be achieved through the national-level quantum programmes — namely the National Quantum Computing Hub (NQCH), National Quantum-Safe Network (NQS), National Quantum Sensor Programme (NQSP), National Quantum Federated Foundry (NQFF), and National Quantum Processor Initiative (NQPI) — serving as focal points to anchor company and user-agency partnerships and build up the quantum ecosystem.

3



Digital Trust and Security

To facilitate the translation of good science into real-world cybersecurity capabilities and impact, two signature programmes will be launched in AI security and OT security respectively. These programmes will actively work across the research-to-deployment lifecycle to systematically build world-class capabilities that will enhance our national security and resilience.

⁴ The four key sectors are: Advanced Manufacturing, Connectivity, Finance, and Healthcare.



Cultivate strong talent pipelines and deepen global partnerships

To further strengthen our talent base in quantum science and technology, the National Quantum Scholarship Scheme will continue to actively identify and attract top-tier quantum talent at all levels. We will also expand on the early success of the National Quantum Scholarship Scheme to develop dedicated new quantum-specific schemes to attract high-potential postdocs and strategic hires.

In AI, we will grow the research talent base across the full spectrum, from nurturing early interest at the pre-university level to anchoring world-class faculty — through the AI RCEs and targeted talent programmes. We will also deepen global partnerships by leveraging schemes such as the AI Visiting Professorship to integrate world-class researchers into Singapore's AI ecosystem through sustained collaboration, strengthening the concentration of talent and capabilities.

Anchoring Deep Capabilities in AI



The AI landscape has evolved considerably since the National AI Strategy 2.0 (NAIS 2.0) was launched in 2023. In particular, the establishment of the National AI Council (NAIC), chaired by Prime Minister Lawrence Wong, will sharpen Singapore's strategic direction and drive our AI agenda with greater ambition. NAIS 2.0 has since been updated with 10 refreshed priorities, incorporating lessons learned and reflecting the NAIC's elevated goals: to (i) deepen sectoral and public sector transformation, (ii) mainstream AI adoption across the economy and workforce, and (iii) build Singapore into an AI hub.

The National AI R&D (NAIRD) Plan underpins the refreshed NAIS 2.0 priorities in AI research, building on the progress made in RIE2025. Updated in Jan 2026 with over \$1 billion committed under RIE2030, the Plan will further strengthen Singapore's position as an AI research hub by scaling up ongoing research efforts and tackling important AI research challenges.

The NAIRD Plan will focus on three key areas:

- **Fundamental AI Research:** Establish world-class RCEs to attract top-tier AI talent and advance research in priority areas such as responsible AI, resource-efficient AI, emerging AI methodologies, and general-purpose AI.
- **Applied AI Research:** Building capabilities to support the adoption and application of AI in industry, public agencies, and initiatives driven by RIE Domains.
- **Talent:** Growing our talent pipeline from pre-university through to globally established researchers, while strengthening partnerships with world-class researchers and institutions.

Signature Programmes for AI and Operational Technology Security

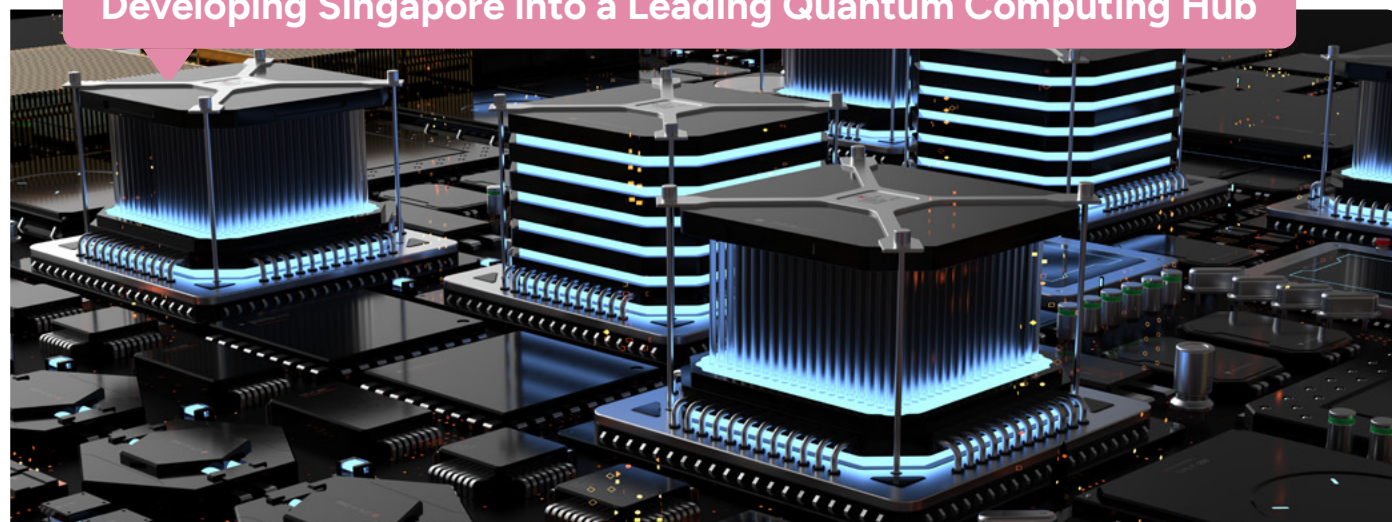
Under RIE2030, we will move from broad-based support to more focused, high-impact investments. Two Signature Programmes in AI security and OT security will be launched.

The AI Security Programme supports the development of secure systems underpinning Smart Nation initiatives. There are both opportunities and challenges that should be addressed at the intersection of AI and cybersecurity, and the programme will address issues around AI as a target, tool and threat. AI is crucial to cybersecurity as it enables faster threat detection, automated response, and adapts to evolving attacks. It reduces human workload and strengthens defences across complex digital environments.



OT makes up a significant component of our critical infrastructure. As the threat landscape grows more complex, we need new methods and solutions to secure OT. The OT Security Programme will focus on sectors where Singapore can lead globally (e.g. maritime, water and energy), as well as in areas where we can develop new methods and solutions to secure OT systems for our critical infrastructure.

Developing Singapore into a Leading Quantum Computing Hub



In RIE2030, there will be dedicated efforts to advance Singapore as a leading Quantum Computing Hub, with state-of-the-art quantum compute infrastructure and talent, and a vibrant ecosystem of end-users, quantum computing startups, and companies.

On-premise and cloud access to state-of-the-art quantum computing hardware and related software platforms will be secured through strategic industry partnerships. This will provide local dedicated quantum computing access for research, industry and public sector users.

There will also be a focus on attracting global quantum software and algorithm leaders through dedicated initiatives in quantum algorithms and solutions, and anchoring them through partnerships with leading international institutions and industry pioneers. This will help establish Singapore as a premier hub for research at the frontier of fault-tolerant quantum computing (FTQC), spanning quantum algorithms and error correction.

Basic Research and Talent

Strengthening Singapore's Foundations for World-Class Science and Innovation





Why it matters

A strong and diverse research talent base underpins Singapore's global competitiveness and ability to generate high-impact scientific discoveries and translate them into real-world impact. Sustained investment in academic research and talent development has helped us build a vibrant, agile, and internationally connected ecosystem that develops local talent, attracts and supports top researchers, and enables frontier science with long-term strategic and economic potential.

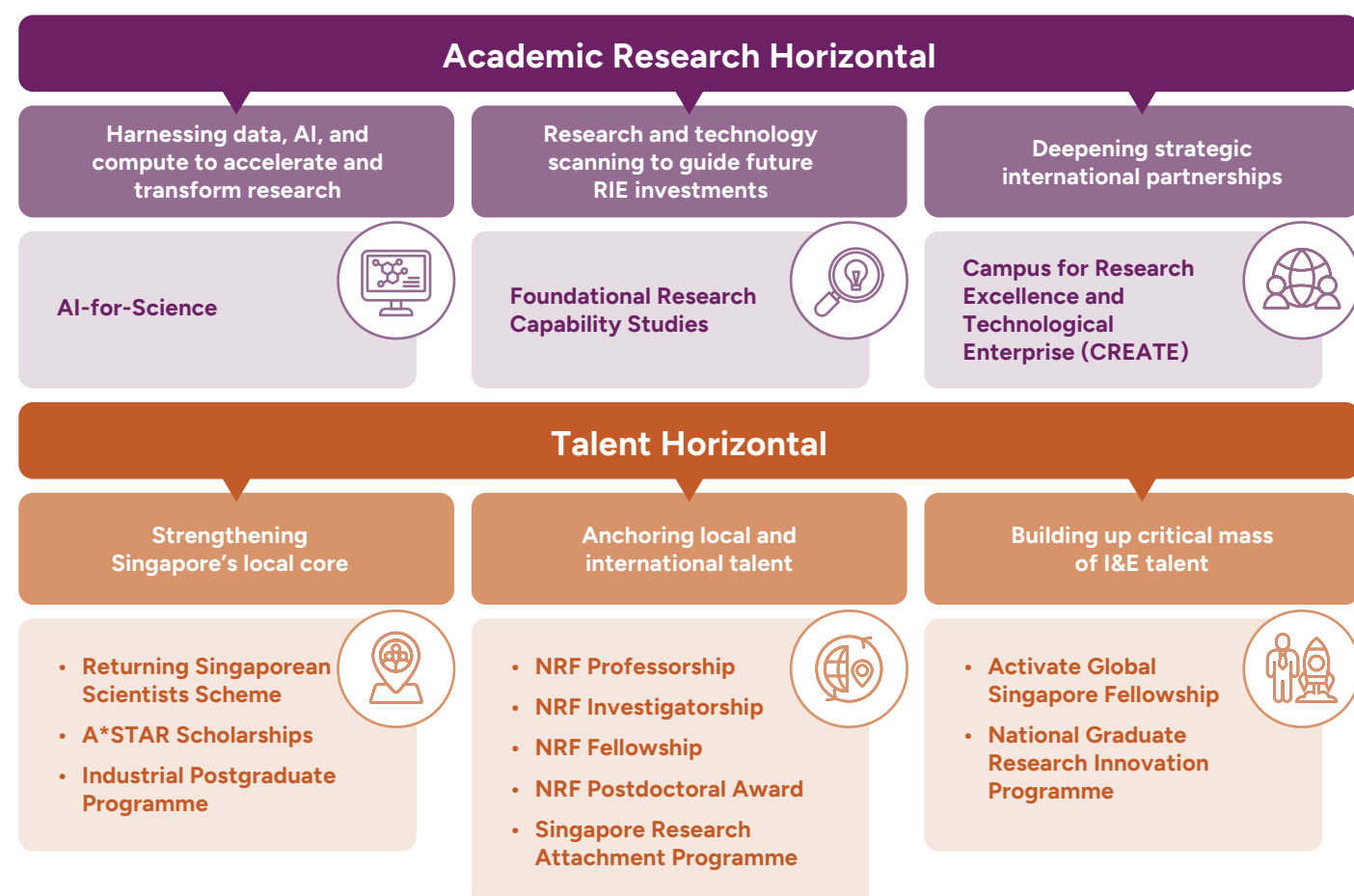


Driving Singapore's next phase of scientific and talent leadership

Singapore's long-term competitiveness depends on a strong foundation of scientific excellence and a multidisciplinary, high-calibre research talent base.

- ▶ The **Academic Research** Horizontal promotes and sustains broad-based cutting-edge research capabilities and builds distinctive peaks of excellence within a vibrant and globally connected research ecosystem.
- ▶ The **Talent** Horizontal grows and sustains a diverse pool of high-quality research, engineering, and translational talent. It nurtures local talent and enhances Singapore's attractiveness to top and promising global researchers.

Investing in strong foundations



Academic Research

In RIE2030, we will continue to support high-quality research through the availability of funding opportunities at each stage of a researcher's career and across different types of research. This would include enhanced support for early-career faculty to help them establish good research foundations, continued funding for established researchers to deepen expertise, and targeted programmes to grow emerging scientific areas with long-term potential. Singapore will also invest in large-scale research centres to develop peaks of excellence.

In line with this, the portfolio of research funding schemes spans from investigator-led grants to sustain the critical mass of researchers and a broad base of research capabilities, to team-led programmatic grants that establish larger-scale capabilities in key areas — some of which could grow into international peaks of excellence. In RIE2030, the approach will be augmented by additional mechanisms to fund frontier research.



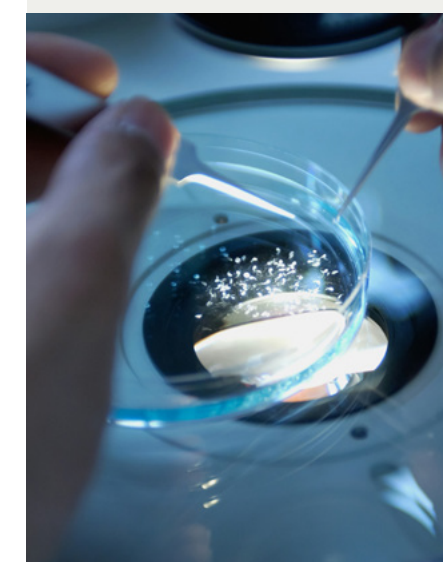
Harnessing data, AI, and compute to accelerate and transform research

We will redouble our focus on developing leading capabilities in data, AI, and compute, and using these to accelerate and transform research and innovation. The AI4S funding initiative aims to harness AI to increase the speed, effectiveness, and outputs of research and scientific discovery, and to develop a base of "bilingual" experts who straddle AI and domain expertise.



Research and technology scanning to guide future RIE investments

NRF will focus its Foundational Research Capability (FRC) studies on identifying high-potential emerging scientific areas and technologies, as well as significant gaps in basic research capabilities in Singapore. These will inform future RIE funding investments, to keep our foundational research capabilities in Singapore at the cutting edge.



Deepening strategic international partnerships

NRF will further deepen research partnerships with leading global institutions through the CREATE initiative to pursue research aimed at addressing challenging global problems of strategic importance to Singapore and the world. We will also continue to pursue research collaborations with top researchers and institutions through other joint initiatives and engagements.



Singapore-Horizon Europe Complementary Fund

In RIE2030, Singapore will strengthen and expand collaborations with leading researchers and institutions from around the world, particularly in areas of strategic priority. As part of these efforts, NRF has established the Singapore-Horizon Europe Complementary Fund to promote collaborations with Horizon Europe, the European Union's flagship funding programme for research and innovation.

The fund supports research or activities conducted in Singapore by eligible Singapore entities that participate in Horizon Europe Pillar II projects under thematic clusters aligned with Singapore's priority areas. These thematic clusters include "Health" and "Digital, Industry and Space".

NRF has established National Contact Points to encourage and support local researchers' participation in Horizon Europe grant calls.



Talent

A strong and diverse research talent base underpins Singapore's global competitiveness and ability to generate and translate high-impact scientific breakthroughs. In RIE2030, there will be redoubled efforts to nurture top and upcoming local talent, while continuing to attract and retain top researchers, across research and innovation domains. Such talent will contribute towards establishing global peaks of research and translational excellence.



Strengthening Singapore's local core

Singapore has attracted top talent, including Singaporean researchers who have grown successful professional careers overseas, through schemes such as the Returning Singaporean Scientists Scheme, to take up leadership positions and drive research impact in our public research institutions. There are also programmes, such as the Industrial Postgraduate Programme (IPP) and A*STAR Scholarships, that support young Singaporean talent in pursuing PhD studies, helping to build a strong local core. Broad-based efforts targeted at local students – such as lab attachments and other activities – will also be enhanced to more effectively encourage them to consider STEM postgraduate education and research careers.



DxD Hub researchers working on Resolute, a direct PCR test kit developed in Singapore to enhance COVID-19 testing capabilities. Photo credit: DxD Hub



Anchoring local and international talent

Grow the critical mass of top talent

The NRF Professorship was introduced in RIE2025 to attract top international talent, complementing institutional efforts to support and grow top and promising local talent. These efforts will be redoubled in RIE2030 with the goal of growing the critical mass of such top talent to helm peaks of excellence across priority research areas, as well as promising emerging ones. This will also contribute to a flywheel of attracting and nurturing additional talent.

Enhancements are being implemented to enable institutions to be more internationally competitive in engaging top talent, and to move with greater speed and flexibility. In parallel, NRF is also strengthening its approaches to direct resources and interventions to where they are needed most, with greater agility.

Increase the pipeline of future top talent

The NRF Fellowship (NRFF) and NRF Investigatorship (NRFI) attracted local and international researchers who produced scientific impact two to three times higher than that of their peers, delivering breakthroughs in areas such as AI, robotics, materials, energy, and biomedical sciences. These schemes will be scaled in RIE2030 to keep pace with increases in the number of high-potential applicants.

More will be done in RIE2030 to attract and develop promising local and international young researchers through the NRF Postdoctoral Award (NRF-PA). This is a grant for postdoctoral independent research, providing salary support for up to 4 years. Those who perform well are expected to be in good standing for tenure-track or equivalent positions in our local institutions.

The Ministry of Education (MOE)'s funding will be increased in RIE2030 to support more PhD students studying in local institutions, which would also allow them to increase their research intensity.

Continue to enhance the diversity of talent sources

Diversifying the sources of talent is important – it will enrich our local ecosystem and add resilience to disruptions, such as those experienced during COVID-19. There are also untapped opportunities in attracting talent beyond traditional regions.

Local institutions are being resourced to enhance their networks and increase interactions with promising talent in a wider range of countries. Plans are also being developed to scale up opportunities for international young talent to spend time in Singapore and become more aware of the opportunities available. One example is the recently enhanced Singapore Research Attachment Programme (SRAP), which supports high-quality young researchers to undertake two-year research attachments in Singapore through centre-to-centre collaborations between Singapore's research centres and leading international institutions.



Build up a critical mass of I&E talent

Our local institutions have done well in building up research capabilities over the years. However, more needs to be done to unlock value creation through translation of their research discoveries and inventions. This includes shifting the mindset and culture of the research community and equipping researchers with new entrepreneurial skillsets. The limited availability of C-suite talent to nurture startup growth has also been identified as a bottleneck.

To strengthen the emphasis on such talent, new top-talent schemes will be introduced to attract translational research talent at various career stages. This talent can help to strengthen the wider ecosystem through knowledge transfer, access to networks, mentorship of young talent, and demonstrations of how successful research translation is done.

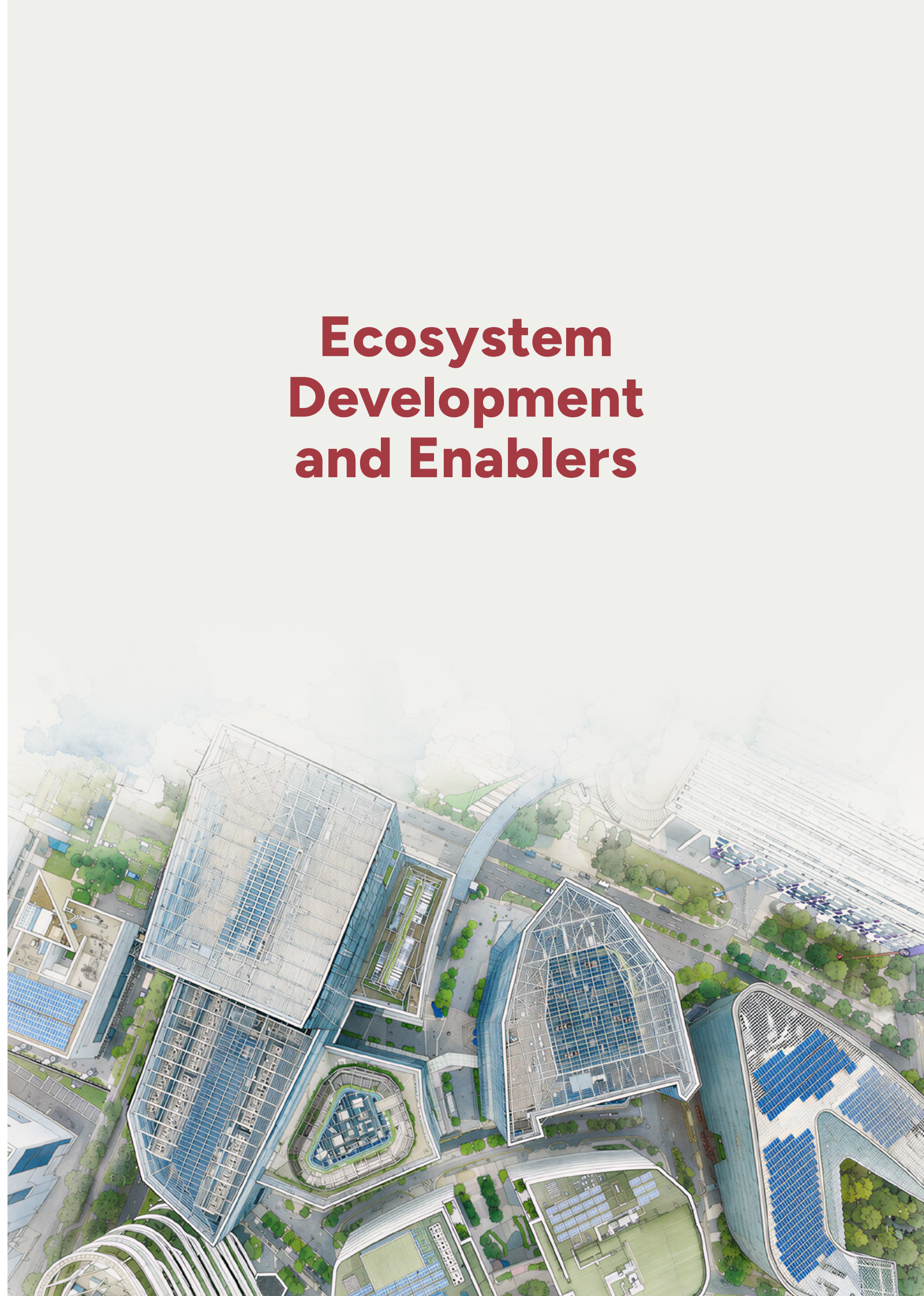
At the same time, programmes such as the Activate Global Singapore Fellowship and National GRIP (Graduate Research Innovation Programme) will continue to support the wider community of Singapore-based scientists and engineers through entrepreneurship training, mentoring, funding and access to investors.

Several key moves are being made by the economic agencies and NRF to raise private sector innovation activity, build deep tech clusters and enhance ecosystem enablers. Additional strategies are being studied to grow the C-Suite talent available for local startups.



National GRIP Run 4 cohort at Day Zero Bootcamp.
Photo credit: National GRIP

Ecosystem Development and Enablers



Deep Tech Startup Ecosystem Building

Singapore's startup ecosystem has grown in vibrancy and gained global recognition. Our startup ecosystem ranks 4th in the 2026 Global Startup Ecosystem Index by StartupBlink, and Singapore is home to more than 4,500 tech startups, 500 Venture Capital (VC) firms and 220 incubators and accelerators. In the past four years, deep tech startups have attracted at least \$1 billion annually.

Building on this momentum, RIE2030 will take a more targeted and holistic approach to nurture deep tech startups, from building a stronger pipeline of commercially viable technologies, to increasing promising startups' access to capital and expertise at every stage of their growth journey.

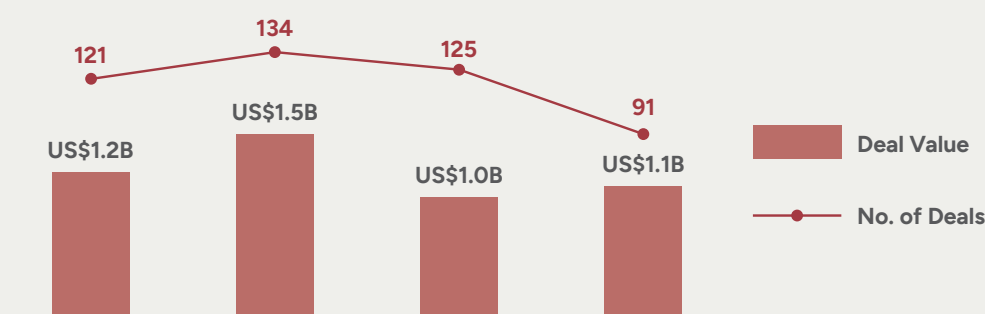
Building deep tech startup clusters

Unlike conventional or "general" technology sectors, deep tech companies are grounded in advances from R&D, and are characterised by higher technological complexity, longer development timelines, more complex regulatory and market-entry pathways, and consequently, greater capital intensity. It is also because of these higher entry barriers that these companies are more defensible against global competition and can disrupt existing sectors.

In RIE2025, concerted efforts were made to build a pipeline of deep tech startups and catalyse private investment into them, such as through the Central Gap Fund and the Startup SG Equity (SSGE) scheme.

RIE2030 will deepen and expand these efforts to build a critical mass of deep tech startups. While good progress was made in RIE2025, significant challenges remain, in particularly the availability of experienced I&E and business talent, and venture capital.

Deep Tech Startup⁵ Ecosystem



Note: Methodologically consistent venture funding data is not available before 2022. (Singapore Venture Funding Landscape Report 2025).

In the past four years, Singapore's deep tech startups have attracted at least \$1 billion of venture funding annually, but there has been a decline in the number of deals since 2023. This mirrored broader global trends driven by macroeconomic uncertainty, higher borrowing costs and tighter financial conditions. As reported in the 2025 Singapore Venture Funding Landscape Report, this has led to the contraction of deal value across many startup ecosystems including Singapore. Amidst this prolonged funding challenge, additional steps will be taken in RIE2030 to enhance access to capital for deep tech startups in Singapore. More public-private funding partnerships will be forged to ensure adequate capital for our pipeline of deep tech startups, particularly at the growth stage.

⁵ Deep tech startups own, or hold exclusive rights to, research-based Intellectual Property (such as patents, know-how, or trade secrets) in an advanced/specialised scientific or engineering field, where that IP is differentiated or proprietary and can be translated into new products, processes, or technologies.



Expanding support for startup financing

Key initiatives in RIE2030 include the enhanced SSGE scheme and the new Research Translation Grant, and expanded efforts to attract and grow the I&E talent pool (refer to earlier section on Talent).

In RIE2030, \$1 billion will be added to the Startup SG Equity scheme, to continue investing into early-stage startups, as well as expand into growth-stage deep tech startups. The enhanced scheme will support deep tech startups in three ways:

- 1 Direct investment into selected growth-stage deep tech startups to catalyse private capital and enable these startups to scale their operations, strengthen their teams, and enter new markets while keeping Singapore as their home base
- 2 Investment in global deep tech VC funds across the early to growth stages, to attract top-tier growth investors to Singapore, who would bring capital, global networks, expertise, and experience in scaling frontier tech, and would help our deep tech startups grow and expand globally
- 3 Co-investment with independent, qualified third-party investors into early-stage deep tech startups to catalyse private capital and strengthen market discipline for our early-stage startups



Strengthening the translation of promising IP into globally competitive startups

To increase the pipeline of commercially viable technologies, we will intensify efforts in RIE2030 to drive the translation of research in public institutions into commercial assets and globally investible startups.

NRF will establish the Research Translation Grant (RTG) to provide funding to develop early-stage technologies from our public research ecosystem to a stage where the private sector is willing to invest and bring them to market through spin-offs or licensing to enterprise. The RTG will involve established deep tech venture builders (VBs) who will guide researchers throughout the technology development process, providing business development advice and connections to increase the chances of commercial success.



Data, AI, and Compute Capabilities

There will be a concerted focus in RIE2030 to build well-coordinated, cutting-edge data, AI, and compute capabilities and platforms to accelerate and boost research and innovation.



Data and data infrastructure to facilitate trusted and safe access to government and strategic publicly funded research datasets

Through the National Research Data Plan, we will leverage data as a key enabler to elevate our competitiveness in research and innovation in RIE2030, building on the learnings and capabilities developed through establishing the research data system in the HHP Domain over the past 5 years.

Expeditious access to quality data in priority areas is important to enable RIE efforts, especially in data-intensive research areas such as population health, climate change, and urban sustainability. This is increasingly critical in AI development where high-quality data that is voluminous, well-labelled, and diverse is essential to building accurate, reliable, and generalisable models. Data on Singapore's multi-ethnic population can be a key differentiator in building AI models that are robust and representative across different communities.

In RIE2025, there were significant investments in strategic research data generation and its use in the HHP Domain. Strategic initiatives included the NPM Programme, which established a multi-ethnic cohort of 100,000 Singaporeans with whole genome sequences and rich research phenotyping, which are critical for research in areas like precision health in Asian populations. Good progress has also been made in developing and implementing robust data governance frameworks (TRUST⁶ framework) and infrastructure (enTRUST⁷) to facilitate safe and secure access to de-identified data for health-related research.

In RIE2030, there will be continued efforts to strengthen the TRUST data system for the HHP Domain. In particular, TRUST will enrich existing datasets and accelerate its ongoing work to harness AI for cleaning and preparing data, and for better analysing complex datasets. At the same time, TRUST will be extended to support other RIE Domains, starting with the USS Domain. In the near term, the focus will be on (i) establishing a harmonised, risk-tiered framework for research data governance across RIE Domains; (ii) developing a secure and interoperable technical (enTRUST) infrastructure for these Domains; and (iii) expanding and curating reusable research data assets centred on driver use cases.



The TRUST team at work. Photo credit: TRUST Office

⁶ TRUST — Trusted Research and Real-world data Utilisation and Sharing Tech — is a national data exchange platform and data sharing framework that catalyses data research and innovation between public institutions, and between the public and private sectors. It enables anonymised research and real-world data to be brought together, accessed and used in an expeditious and secure manner.

⁷ Developed by Government Technology Agency (GovTech), enTRUST provides modularised solutions to enable secure data analytics, e.g. data anonymisation, user authentication, and a Virtual Desktop Interface (VDI) data analytics workbench.



AI to accelerate discovery, translation, and sectoral transformation

Two key thrusts in the NAIRD Plan will be extended in RIE2030, to build basic and translational research expertise and talent in support of the application of AI to advance and transform selected sectors. The AI4S and Applied AI thrusts will accelerate and boost research and innovation, driving breakthrough discoveries and their application across disciplines and key sectors.

AI will be a foundational capability in RIE2030, both as a frontier area of scientific research and as a general-purpose technology to accelerate discovery, translation, and impact across the RIE ecosystem. Building on capabilities developed in RIE2025, RIE2030 will place stronger emphasis on AI as a horizontal enabler across the wider RIE ecosystem.

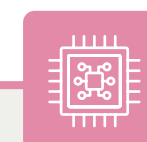
These efforts will build on AI capabilities established or built under major RIE2025 initiatives, including AI models, datasets, and translational platforms that can support multiple use cases within and across sectors.



Under MTC, the development of Embodied AI will build on prior investments made in robotics to enable robots to sense, reason, and act in complex environments while the Transport and Connectivity RIE Flagship will build on RIE2025's connectivity programmes⁸, bringing together AI-enabled autonomy and systems integration across aviation, maritime, and land transport to facilitate the efficient and seamless flow of goods and passengers.



Under HHP, these include AI foundation models adapted and contextualised using local clinical data and guidelines through the Singapore Medical Foundation AI Model (SIMFONI); AI models to identify novel targets, and develop targeted therapeutics through the AI in Drug Discovery programme; and the expansion of high-quality genomic datasets under the NPM programme to support AI-enabled precision medicine at scale.



Under SNDE, the Digital Trust Centre will provide a common platform to develop, test, and translate technologies for safe and trustworthy AI, while the National Cybersecurity R&D Programme will advance AI-enabled cybersecurity and strengthen the security and resilience of AI systems.



Under USS, the BE AI CoE will bring together government, industry and research partners to translate and scale AI solutions that enhance productivity, sustainability and liveability across the built-environment lifecycle; the CFRP will apply AI to strengthen the assessment, design, operation and maintenance of coastal protection and flood-resilience solutions; and the Weather and Climate Science Research Programme will advance AI-enabled weather and climate modelling and prediction.

Trusted data systems and advanced compute will provide the quality data, governance, and computational power needed to develop and deploy AI effectively, while AI will in turn help curate and analyse complex datasets, optimise research workflows, and enhance the use of advanced computing resources.

Taken together, RIE2030 will build on the AI capabilities developed through RIE2025 and strengthen the links between high-quality data, advanced compute, frontier research, interdisciplinary talent, and real-world translation.

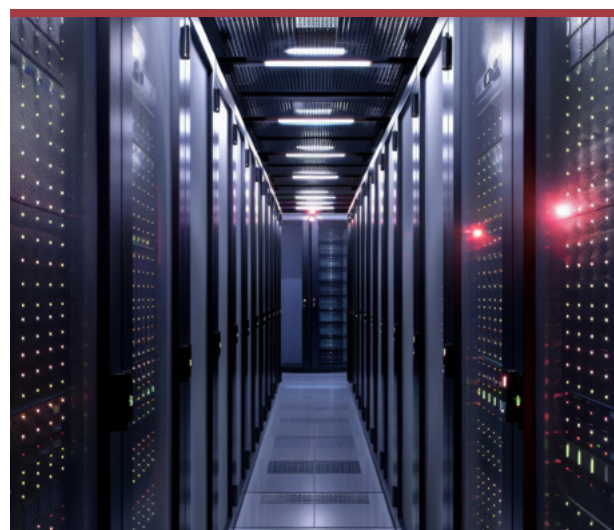
⁸ RIE2025 connectivity programmes include: Maritime Transformation Programme (MTP), Aviation Transformation Programme (ATP) and Urban Mobility Innovation (UMI) Programme.



Compute to build leading-edge compute capabilities leveraging classical, quantum and hybrid computing, as well as AI

Advanced computing has become indispensable to frontier science, particularly for complex research problems such as simulating novel materials at atomic scales or modelling climate systems at fine resolution. The rapid technological advances in AI and quantum computing underscore the importance of combining these synergistically with classical and hybrid HPC to create cutting-edge advanced computational capabilities.

Singapore has made significant investments in building up these capabilities.



The National Supercomputing Centre (NSCC) Singapore, set up in 2015, manages Singapore's national petascale facilities and HPC resources — currently exceeding 30 PFLOPS⁹ of compute power — in service of the broader RIE ecosystem.



The National Quantum Computing Hub, established in 2021 as a joint initiative between A*STAR Institute of Advanced Intelligence and Computing (A*STAR IAIC), NSCC Singapore, and the Centre for Quantum Technologies, has been developing a full quantum computing stack spanning hardware, middleware, and applications.

NRF is developing a framework that builds on existing infrastructure and expertise to create a leading-edge advanced computing capability that synergistically combines classical, quantum, and hybrid computing, as well as AI. In parallel, there will be increased support to strengthen local compute research expertise by building a pool of computational scientists, data engineers, and application engineers with cross-disciplinary expertise, including experts fluent in both HPC and quantum computing. The goal is to enable researchers with highly complex computational problems to access, and be guided and supported in leveraging, the appropriate mix of computing modalities and AI for their research.

⁹ Peta floating point operations per second (PFLOPS) are a measure of compute performance — it indicates how many floating point operations a computer can perform in one second. Floating point operations are essential for complex mathematical and scientific calculations, such as those in scientific simulations and AI models.

RIE2030 Budget

The Government is sustaining its investments in research, innovation and enterprise at about 1% of Singapore's GDP for RIE2030 (FY2026 – FY2030). The RIE2030 budget of \$37 billion¹⁰, which represents a 32% increase from the RIE2025 budget of \$28 billion, will be progressively committed over time as key initiatives are developed and implemented, and when new opportunities or needs arise.

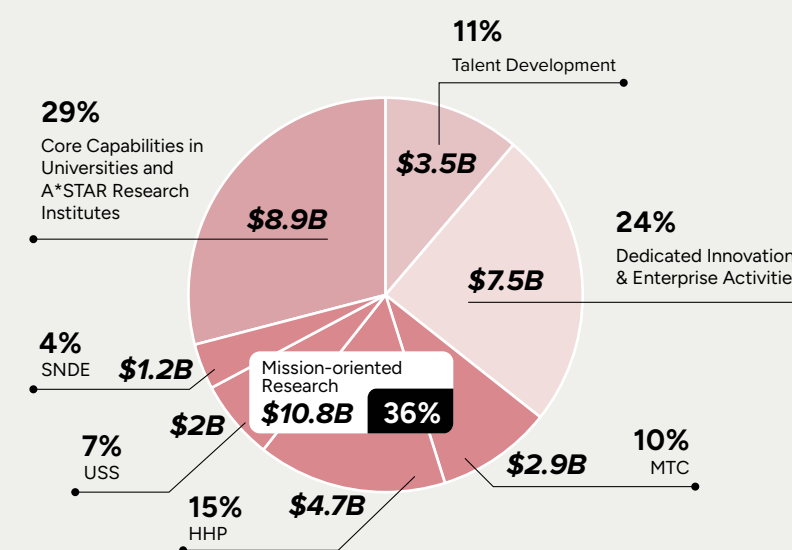
Key features of budget allocation in RIE2030 include the following:

- ▶ \$3 billion has been allocated for the introduction of RIE Flagships and Grand Challenges to advance selected national economic and strategic priorities;
- ▶ RIE Domains have been allocated additional budget in RIE2030 to further support mission-oriented research, building on ongoing RIE2025 investments;
- ▶ Besides the dedicated funding for AI under the SNDE Domain, AI is also embedded within RIE programmes and projects across all the RIE Domains and Horizontals¹¹. Additional budget will also be allocated as needed to support the National AI Missions;
- ▶ Increased investments are being made to strengthen core capabilities, including talent and basic research strengths and maintaining state-of-the-art infrastructure.

A significant proportion of RIE2030 funds has not been allocated at the start of the tranche but kept in reserve as White Space funding, to support new, exploratory, cross-domain, or urgent initiatives that may emerge over the course of RIE2030.

Start-Tranche Allocation (\$37 billion)

Comprising \$31 billion of funds allocated to sectors and \$6 billion of RIE White Space and RIE infrastructure^{12, 13}



Note:

- Budget pie chart illustrates budget allocation across the sectors.
- Cross-cutting enablers like AI, talent and infrastructure, are also embedded within individual domains, in addition to being represented within the dedicated sector-agnostic categories (e.g., Core Capabilities in Universities and A*STAR Research Institutes and Talent Development).
- RIE White Space and RIE Infrastructure allocations will be committed over course of the tranche, and are not included in this budget pie chart.

¹⁰ This amount is subject to further changes over the course of RIE2030 in response to national priorities and emergent challenges.

¹¹ In RIE2025, we funded key AI initiatives, such as the National AI R&D Plan under SNDE, the AI4S initiative under Core Capabilities in Universities and A*STAR Research Institutes, and the SIMFONI Programme under HHP, for which the deployment of the allocated funding will continue during the RIE2030 five-year period. In total, an estimated 7% of the overall RIE2025 budget was spent on initiatives explicitly linked to AI.

¹² \$5B of White Space provides agility for Singapore to respond decisively to new and emerging national priorities as they arise. \$1B was also set aside to upgrade our public research infrastructure.

¹³ Mission-oriented research includes \$1.6B to MTC for the Semiconductor RIE Flagship and the Transport and Connectivity RIE Flagship at \$800M respectively, \$350M to HHP for the RIE Grand Challenge on Maximising Healthy and Successful Longevity, and \$800M to USS for the Decarbonisation RIE Grand Challenge.



Glossary of Acronyms

Glossary of Acronyms/Abbreviations			
A*STAR	Agency for Science, Technology and Research	NAIRD	National AI Research and Development
ACTRIS	Advanced Cell Therapy and Research Institute, Singapore	NAIS	National AI Strategy
AI	Artificial Intelligence	NAMIC	National Additive Manufacturing Innovation Cluster
AI4S	AI for Science	NATi	Nucleic Acid Therapeutics Initiative
AM	Additive Manufacturing	NCAIP	National Centre for Advanced Integrated Photonics
ATP	Aviation Transformation Programme	NEA	National Environment Agency
BE AI CoE	Built Environment AI Centre of Excellence	NIMOS	National Institute for Marine and Ocean Sciences
BETA	Built Environment Technology Alliance	NParks	National Parks Board
CAAS	Civil Aviation Authority of Singapore	NPM	National Precision Medicine
CDA	Communicable Diseases Agency	NQCH	National Quantum Computing Hub
CFI	Coastal Protection and Flood Resilience Institute	NQFF	National Quantum Federated Foundry
CFRP	Coastal Protection and Flood Management Research Programme	NQO	National Quantum Office
CoE	Centre of Excellence	NQPI	National Quantum Processor Initiative
CREATE	Campus for Research Excellence and Technological Enterprise	NQSN	National Quantum-Safe Network
CRIS	Consortium for Clinical Research and Innovation, Singapore	NQSP	National Quantum Sensor Programme
CQT	Centre for Quantum Technologies	NRF	National Research Foundation
DGC	Decarbonisation RIE Grand Challenge	NRF-PA	NRF Postdoctoral Award
DxD Hub	Diagnostics Development Hub	NRFF	NRF Fellowship
EAI	Embodied AI	NRFI	NRF Investigatorship
EDB	Economic Development Board	NSCC	National Supercomputing Centre
EDDC	Experimental Drug Development Centre	NSTIC	National Semiconductor Translation and Innovation Centre
EHR	Electronic Health Record	NTU	Nanyang Technological University
enTRUST	enabling Trusted Research and real-world data Utilisation and Sharing Tech	NUS	National University of Singapore
FRC	Foundational Research Capability	OT	Operational Technology
FTQC	Fault-Tolerant Quantum Computing	PRECISE	Precision Health Research, Singapore
GDP	Gross Domestic Product	PREPARE	Programme for Research in Epidemic Preparedness And REsponse
GRIP	Graduate Research Innovation Programme	PrepVax	Pathogen/Pathway to Vaccine Development to Enhance Singapore's Pandemic Resilience
GovTech	Government Technology Agency	R&D	Research and Development
GUSTO	Growing Up in Singapore Towards healthy Outcomes	RCE	Research Centre of Excellence
HALE	Health-Adjusted Life Expectancy	RCP	Regional Collaboration Platform
HHP	Human Health and Potential	RD&D	Research, Development and Demonstration
HP	Human Potential	RIE	Research, Innovation and Enterprise
HPC	High-Performance Computing	RIE2025	Research, Innovation and Enterprise 2025
IAIC	A*STAR Institute of Advanced Intelligence and Computing	RIE2030	Research, Innovation and Enterprise 2030
IARP	Integrative Adolescence Research Programme	RIEC	Research, Innovation and Enterprise Council
I&E	Innovation and Enterprise	RTG	Research Translation Grant
IHL	Institutes of Higher Learning	S&T	Science & Technology
IP	Intellectual Property	SHINE	Singapore Hybrid-Integrated Next-Generation micro-Electronics
LCT3	Low-Carbon Technology Translational Testbed	SME	Small and Medium Enterprise
LTA	Land Transport Authority	SNDE	Smart Nation and Digital Economy
MariOT	Maritime Testbed of Shipboard Operational Technology	SNRSI	Singapore Nuclear Research and Safety Institute
MC	MedTech Catapult	SPEED	Singapore Pilots for Energy & Enterprise Decarbonisation
MIDAS	MedTech Innovation Development and Acceleration Scheme	SRAP	Singapore Research Attachment Programme
MND	Ministry of National Development	SSGE	Startup SG Equity
MOE	Ministry of Education	STDR	Singapore Therapeutics Development Review
MOH	Ministry of Health	SUTD	Singapore University of Technology and Design
MOT	Ministry of Transport	TBO	Trajectory-Based Operations
MPA	Maritime and Port Authority of Singapore	TRUST	Trusted Research and Real-world Data Utilisation and Sharing Tech
MRO	Maintenance, Repair and Overhaul	UMI	Urban Mobility Innovation
MSE	Ministry of Sustainability and the Environment	USS	Urban Solutions and Sustainability
MTC	Manufacturing, Trade and Connectivity	VB	Venture Builder
MTI	Ministry of Trade and Industry	VC	Venture Capital
MTP	Maritime Transformation Programme	VDI	Virtual Desktop Interface
NAIC	National AI Council		

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