

PRESS RELEASE

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Singapore Government sustains investments in research, innovation and enterprise at about 1% of GDP for next five years

Harnessing science and technology to build a more resilient, sustainable and digital Singapore, create new opportunities for Singaporeans, and emerge stronger together in a COVID world.

1. Mr Heng Swee Keat, Deputy Prime Minister and Chairman of the National Research Foundation (NRF), announced today at the launch of the Research, Innovation and Enterprise (RIE) 2025 Plan that the Singapore Government will sustain investments in RIE activities at about 1% of GDP, or S\$25B, for 2021 – 2025. This was endorsed at the 12th meeting of the Research, Innovation and Enterprise Council (RIEC) last night, chaired by Prime Minister Mr Lee Hsien Loong and comprising Cabinet Ministers and international leaders in science, technology and enterprise.

2. The RIEC noted that sustained investments in RIE over the past 30 years have significantly contributed to Singapore's progress and development as a nation. Today, our universities, research institutes and academic medical centres are well-regarded internationally for scientific excellence. There is growing vibrancy in innovation and enterprise, with more enterprises partnering public research institutions to generate innovative products, services and solutions. Research and development (R&D) has also been critical in meeting Singapore's national needs and overcoming challenges, including the recent response to COVID-19.

3. The RIE2025 plan seeks to build on the progress of previous RIE investments, as science and technology (S&T) will be key to Singapore's ability to meet future challenges and to respond to shifts in the global economy (Please refer to [Annex A](#)). It reflects the Government's continued commitment to investing in R&D in a sustained manner, through economic cycles. This will grow capabilities that will support Singapore's long-term economic, social and security needs. The key focus areas in RIE2025 are outlined below.

Focus Areas in RIE2025

Expand the scope of RIE to address a broader spectrum of national needs

4. Ongoing RIE efforts are coordinated under four domains to achieve better pull-through of S&T to specific industry sectors such as manufacturing and healthcare. With S&T becoming more pervasive across our economy and society, the scope of the four RIE domains will be expanded to include new areas of strategic importance:

- **Manufacturing, Trade and Connectivity**, which will expand beyond the manufacturing sectors to raise capabilities in the trade and connectivity sectors (e.g. aviation, sea transport, logistics and wholesale trade).

- **Human Health and Potential**, which will expand to include Human Potential, with focus on enhancing development during pregnancy and early childhood, augmenting learning outcomes, and fostering healthy and meaningful longevity.
- **Urban Solutions and Sustainability**, which will address new challenges in sustainability and resilience, including climate change, decarbonisation, healthy cities, and transformation of our built environment.
- **Smart Nation and Digital Economy**, which will develop capabilities to prepare our people for opportunities in the digital space and transform our enterprises. We will also further our strengths in strategic technologies to enhance our resilience and anchor Singapore's position as a trusted digital innovation hub.

5. RIE2025 will also be more tightly integrated with the work of the Future Economy Council, to support economic transformation and create more good jobs for Singaporeans. It will also continue to support other national initiatives, such as the Smart Nation initiative to build a digital future for Singapore.

Enrich our scientific base

6. Consistent investment in basic research is important for Singapore to anchor top scientific talent to work on challenging research questions, even though the immediate applications of this knowledge may not be obvious at the outset. Hence, in RIE2025, we will sustain our support for basic research at about one-third of the overall RIE budget.

7. As S&T is evolving rapidly, NRF will also introduce mechanisms to systematically review our basic science capabilities and identify potential peaks of excellence that will differentiate Singapore internationally. The portfolio supporting basic research will be calibrated to (i) increase support for investigator-led grants to encourage bottom-up ideas, and (ii) shift funding from large centres towards medium-sized grants that continue to bring capabilities together with sufficient scale to create impact. RIE2025 will also strengthen inter-disciplinary research needed to address complex challenges such as climate change, and to pursue emerging and novel science.

8. The emphasis on talent has been core to the progress in RIE. We will continue to build a robust base of research scientists and engineers, with strong links to the global community, to support the best ground-up ideas. Our NRF Fellowship and Investigatorship schemes will support both promising young scientists and established experts to pursue ground-breaking research in Singapore. In addition, the Returning Singapore Scientist Scheme will continue to attract overseas-based Singaporean research leaders home to contribute to Singapore's pursuit of scientific excellence.

Scale up Innovation and Enterprise (I&E) platforms to drive technology translation, and accelerate enterprise innovation

9. I&E platforms have been effective in supporting industries to translate R&D into new products, services and solutions for the market. For example, the Diagnostics Development Hub at the Agency for Science, Technology and Research accelerated the development and regulatory approval of novel diagnostics solutions for global market adoption, such as the Resolute series test-kits for COVID-19. The National Additive Manufacturing Innovation Cluster has also engaged over 1,800 organisations, and catalysed over 230 projects, to accelerate additive manufacturing applications across many industry sectors, including aerospace, maritime and logistics.

10. We will scale up I&E platforms in RIE2025, and support existing platforms to move into adjacent areas with high growth potential (e.g. from supporting diagnostics development to medtech). We will also establish new platforms to tap on Singapore's deep R&D strengths and bridge ecosystem gaps (e.g. to deploy robotics in the built environment sector).

11. These platforms will complement other initiatives, such as technology consortia and corporate laboratories, to increase the base of enterprises engaging in RIE, and strengthen their innovation capabilities. We will also forge stronger connections with global innovation hubs, such as through the Global Innovation Alliance, to strengthen the access of our enterprises to key technology solutions, talent and demand markets.

12. To build up the pool of local inventors and entrepreneurs with both technology and business development expertise, we are also launching the I&E Fellowship Programme (IFP). 11 partners have been engaged for the IFP pilot – this includes SGInnovate, which has launched the Power X (Robotics) programme to train individuals for in-demand robotics engineering and technology translation roles. In RIE2025, the full-fledged IFP will provide individuals with mentorship and on-the-job training in tech commercialisation via attachments with more public and private sector I&E platforms, including corporate laboratories, private sector incubators and accelerators.

Emerging Stronger Together through RIE

13. Our sustained investment in RIE will be the springboard for our enterprises, people and community to emerge stronger together in a COVID world and a changing global economy. We must harness S&T to strengthen the competitiveness and resilience of our industries, create good jobs and new opportunities for Singaporeans, and enhance Singapore's liveability and sustainability to improve the lives of our people. RIE will continue to drive our development as a knowledge-based, innovation-driven economy and society, and anchor Singapore as a Global-Asia node of technology, innovation and enterprise.

About the National Research Foundation Singapore

The National Research Foundation (NRF) is a department within the Prime Minister's Office. The NRF sets the national direction for research, innovation and enterprise (RIE) in Singapore. It seeks to invest in science, technology and engineering, build up the technological capacity of our companies, encourage innovation by industry to

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exploit new opportunities that drive economic growth, and facilitate public-private partnerships to address national challenges.

KEY SHIFTS RESHAPING THE GLOBAL ECONOMY

1. Changing global order. There is emerging consensus that the direction of change for geopolitics and international trade will accelerate due to COVID-19. Intra-regional trade flows are likely to grow even further, including in Asia. This will change and create new trade flows, with greater focus on R&D, services, data, and innovation.
2. Rebalance between 'efficiency' and 'resilience' in supply chains and production. COVID-19 has revealed that pursuit of supply chain efficiency in the past has left companies and countries without buffers to absorb disruptions at a global scale. Supply chains have started to solve for more than just efficiency, with a shift towards greater resilience, which may be manifested in simpler and shorter supply chains, location of production bases closer to end consumer markets, and stockpiling of essential production inputs.
3. Accelerating digital transformation and innovation. COVID-19 has compelled consumers and businesses to leap barriers in digitalisation by accelerating the adoption of Industry 4.0 and digital platforms. As more shift towards the virtualisation of their business models and recognise the benefits of such changes, this will alter the way business is conducted. The pandemic has also catalysed innovation that is needed to overcome the challenges of COVID-19, and these could themselves become new growth areas.
4. Changes in consumer preferences. Consumer behaviours have changed due to COVID-19 and have not returned to pre-pandemic norms. Demand for e-commerce, e-services, and digital channels will increase, and there will be a growing emphasis on quality in goods and services that affect individual health and wellness. In the near term, there will also be dampened demand for travel, especially to destinations perceived to be unsafe.
5. Increased focus on sustainability. COVID-19 has accelerated the focus on sustainability, in terms of the environment, economy, and society. Environmental, social, governmental, and corporate agendas will expand as the case for better returns and resilience to economic shocks achieve greater clarity. There will be new business opportunities in the green economy, especially due to growing needs for sustainable development. Economic growth must also be sustainable and inclusive, with growth that uplifts all Singaporeans.
6. Accelerating industry consolidation and churn. COVID-19 will lead to significant corporate stresses, and companies will have to rethink capital allocation and liquidity. Large private companies will reinforce their market dominance, and those with available capital can acquire distressed assets, leading to industry consolidation. There may also be more caution in investments due to higher debts and greater uncertainty.