

**GUEST-OF-HONOUR ADDRESS BY PETER ONG, CHAIRMAN OF
ENTERPRISE SINGAPORE,
AT SUSTAINABLE INNOVATION ASIA 2023, 29 MAY 2023**

1. It is my pleasure to be invited to Sustainable Innovation Asia to share about “Sustainability in the Current Global Climate”.
2. Sustainability and climate change have taken centerstage in recent years, for several reasons.
 - a. First, the weather has never been hotter. Globally, the hottest eight years ever recorded were the last 8 years. And yet, global temperatures are forecast to rise even further as climate change accelerates. The Intergovernmental Panel on Climate Change warned in March that without concerted action to drastically and immediately cut greenhouse gas emissions, global warming is on course to exceed the 1.5 degrees Celsius threshold by the early 2030s.
 - b. Second, Governments are increasingly laying down strong commitments for sustainability.
 - i. The EU’s Carbon Border Adjustment Mechanism that takes effect in 2026 will set a tariff on carbon intensive products imported into the European Union.
 - ii. The US Inflation Reduction Act would inject nearly USD 370 billion into investments for energy security and climate change programmes over the next 10 years.
 - c. Third, the war in Ukraine. Besides deepening the global energy crisis, the war has forced the US, EU and other countries to reassess their energy security strategies to end reliance on Russian oil and gas, such as by increasing the share of renewables in their energy mix.
3. Singapore is also part of this global sustainability movement. At COP27 last year, Singapore announced our commitment to net-zero emissions by 2050.

- a. Part of this ambition involves the development of the Singapore Green Plan 2030.
 - b. We are also the first country in Southeast Asia to implement a carbon tax, which we are planning to raise to S\$50-80 per tonne by 2030.
4. Global climate change and sustainability commitments are not easy to fulfill and would require the collective effort of entire societies and economies. Today, I will speak on what enterprises, in particular deep tech startups, should do and are doing, to address sustainability.
5. Let me be clear. Sustainability brings both challenges and opportunities for enterprises.
- a. Companies will face increasing pressure from regulators, consumers, and suppliers to incorporate sustainability into their business practices.
 - i. Notably, many SMEs are suppliers to large multinational corporates. As MNCs take steps to decarbonize their supply chains, they will in turn require their suppliers to meet sustainability standards to reduce their Scope 3 emissions. The day will come when suppliers who fail to address sustainability requirements will be cut off from the Supplier Lists of MNCs.
 - b. But many benefits outweigh the challenges.
 - i. Companies that embark on the sustainability journey will be more resilient in an increasingly carbon-constrained world.
 - ii. They will be better able to optimise their resources and increase the cost efficiency of their operations and value chain.
 - iii. They can also capture green economy opportunities by innovating and developing new products, services and solutions.
6. Enterprise Singapore has an elaborate plan under our Enterprise Sustainability Programme to help our local enterprises address both the challenges and the benefits from this Sustainability movement. For today, I want to focus on how deep tech and innovation play a significant part in this movement. Technologies like AI, biotech and

advanced materials are key to disrupting and transforming the realm of possibilities in the sustainability space.

- a. One example is Magorium, a Singapore-based startup that upcycles plastic waste into road construction material through advanced processes. Its product, NEWBitumen, reduces the need for traditional bitumen refined from crude oil, whilst utilising unrecyclable plastics. Since 2019, it has used over 8 tonnes of plastic waste, equivalent to about 400,000 plastic bottles, to pave four green roads in Singapore – including the driveway at DBS Newton Green. Magorium aims to scale its NEWBitumen production from 100 kg a day to over 1 tonne a day in the next few months.
7. To foster a knowledge-based economy with deep tech innovation and startups, Singapore has been making steady and sustained investment into R&D over the last 3 decades. We have built up a rich and diverse research ecosystem and world-class research infrastructure and facilities. Singapore is today recognised as a global innovation and startup node.
- a. Under the latest Research, Innovation and Enterprise (RIE) 2025 plan, the government committed S\$25 billion, or about 1% of our GDP into research, innovation and enterprise from 2021 to 2025.
 - b. One of the strategic domains under RIE2025 is Urban Solutions and Sustainability – with support for Centres of Innovation, A*STAR research institutions and ecosystem enablers to translate the growing pipeline of promising research outputs into solutions that can scale and tackle real-world problems.
 - i. An example of a successful lab-to-startup venture is Vflowtech, which aims to improve the efficiency and lifespan of energy storage solutions through Vanadium redox flow batteries. Vflowtech was founded as a spinoff from the Nanyang Technological University and was incubated at the NTU CleanTech lab. It received seed funding from Singapore-based VC Wavemaker Partners before going on to fundraise from global investors. Recently, it set up a joint venture with SingFuels, a Singapore-headquartered global energy trading company, to enter the fast-growing energy storage solutions market in Africa.

Vflowtech is a good example of how a made-in-Singapore startup is making headways to address global sustainability issues.

8. In addition to a conducive ecosystem, sustainability startups, like all deep tech ventures, require patient capital. I am pleased to note that despite the challenging funding climate, Singapore-based Greentech startups saw close to S\$350 million in investments – almost 9 times more than 2021. We are also seeing strong deal flows in areas like agritech and waste management. We will continue to sow the seeds and grow the pipeline of sustainability startups for our future.
 - a. On this, Enterprise Singapore is happy to work with SDTA as an ecosystem partner. With a strong venture building team led by Luuk and Clara, a network of corporates willing to trial startup solutions, and access to strong research IPs, SDTA provides startups with a viable pathway to fundraising and scaling.
 - i. Loop Refine is one of the startups supported by SDTA who will be pitching later. Loop Refine is working on an end-to-end water filtration and analytics solution for the semiconductor and textile industries. Through its partnership with PUB and the Environmental & Water Technology Centre of Innovation, SDTA was able to help Loop Refine incorporate graphene technologies into its water filtration system, and hence reduce chemical waste cost-effectively.
 - b. Enterprise Singapore is also bridging the gap between minimum viable product and commercialisation through Open Innovation.
 - i. We have been running the Sustainability Open Innovation Challenge (SOIC) for 4 years. In the 2021 edition, over 600 proposals were received from more than 90 countries to tackle challenge statements from large corporates like Changi Airport Group, ExxonMobil, and L’Oreal. 15 startups were awarded opportunities to testbed and pilot their solutions with these corporates, many of whom have a global footprint. Results of the latest 2022 edition of SOIC will be announced very soon.
 - ii. Open innovation also brings together complementary capabilities to solve complex challenges. For example, Singapore-based enterprises ISO-Landscape and Sunseap collaborated to build a floating solar system in

Singapore. The system can withstand harsh marine environments and reduce over 4000 tonnes of greenhouse gas emissions yearly. With this track record, Sunseap has moved on to secure the world's largest floating solar project in Indonesia – capable of 2.2 Gigawatt-peak capacity, or more than 400 times the capacity of its Singapore project.

- c. Last but not least, Enterprise Singapore is co-investing into deep tech startups with private sector investors.
 - i. This is done through our co-investment arm SEEDS Capital, to stimulate private sector investments into innovative, Singapore-based tech startups. Since 2017, SEEDS Capital has been one of the most active local investors, catalysing over S\$800 million in private sector investments.
 - ii. Many of these startups are in sustainability areas like foodtech, biotech and urban solutions.
9. The future for sustainability will continue to be shaped by tech startups and the power of innovation. Let us all play our part in solving global sustainability challenges, collectively.
10. With that, I look forward to hearing the startups that will be sharing about their ideas today. Thank you.