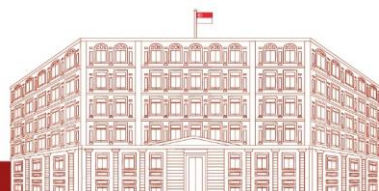


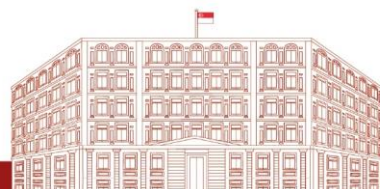
KEY MESSAGES

- (i) **[Announcement]** The launch of IMDA's **\$30 million Green Computing Funding Initiative (GCFI)** to co-develop innovative solutions for the industry, and to push for research to optimise software design and function for energy efficiency. The GCFI will enable researchers from Institutes of Higher Learning (IHLs) to collaborate with the industry to solve problems related to green computing.
- (ii) **[Announcement]** IMDA has also launched the **Green Software Trials**. These trials will test the effectiveness of carbon reduction techniques for software development to better understand how to develop green software and set guidelines for the industry.
- (iii) **[Announcement]** IMDA has curated **nine digital solutions for sustainability under the Advanced Digital Solutions (ADS) programme**. These digital solutions in resource optimisation and carbon management will allow companies to achieve productivity gains and cost savings, and gain access to new markets while reducing emissions.



**OPENING ADDRESS BY SENIOR MINISTER OF STATE,
MINISTRY OF COMMUNICATIONS AND INFORMATION,
JANIL PUTHUCHEARY AT THE SCS SUSTAINABLE TECH FORUM
(24 JAN 2024)**

1. Good morning everyone. It is my pleasure to be here with all of you today.
2. Sustainability is a critical issue that affects us all. But as digital technology continues to advance, there is opportunity for innovation and sustainability to go hand in hand. Today, I would like to share with you the Singapore government's commitment to digital sustainability.
3. What do we mean by digital sustainability? This term captures the dual roles that digital technology plays in building a sustainable environment. First, digital technology itself generates emissions; it is therefore important to make sure that digital technology is adopted in an energy-efficient way. Second, digital technology can be used as an enabler to help the rest of economy go green too. Taken together, we believe that these two roles in which digital technology interacts with sustainability, namely "Green ICT" and "ICT for Green", will strengthen our efforts in building a more sustainable digital future.
4. With the increasing use of energy-intensive technologies such as AI and blockchain, the tech sector is expected to contribute around 15% – 30% of Green House Gas (GHG) emissions by 2050, up from about 1.4% today.
5. Many emerging technologies are powered by foundational digital infrastructure, including data centres (DCs). However, DCs are collectively the biggest indirect GHG emitter of our ICT sector. Therefore, Government has already made efforts to green our DCs. For instance, the Infocomm Media Development Authority (IMDA) launched the world's first Tropical Data Centre standards in June 2023. These standards, developed in consultation with the industry, help DCs to safely raise their operating temperatures in Asia's tropical climate, without affecting performance, thus reducing the energy needed for cooling.
6. Having said that, we recognise that merely improving hardware efficiency is not sufficient to move carbon emissions to a more sustainable level. This is why IMDA is rolling out two programmes targeted at lowering the carbon emissions of software applications, which I am pleased to announce today.
7. First, the Green Computing Funding Initiative, a \$30 million programme to drive research in optimising software design and functions for energy efficiency. Examples include carbon-aware data computation, and leveraging hardware improvements for hardware-software co-optimisation. IMDA welcomes industry partners to collaborate with researchers from Singapore's Institutes of Higher Learning (IHLs) to co-develop such green computing solutions.
8. Second, Green Software Trials. These trials will test the effectiveness of carbon reduction techniques for software development. This will help us better understand how to develop green software, thus reducing energy use and IT costs. The trials will also generate valuable data and insights for IMDA to create green software guidelines for the industry. I invite industry partners to participate in these trials and join us in shaping the future of digital



sustainability. I am glad to hear that partners such as AWS, NCS, ANT Group and the Singapore Institute of Technology are already participating in the trials.

9. Looking ahead, IMDA will work with the industry to chart a Green DC Roadmap for the development of DCs with lower carbon emissions in support of Singapore's net-zero targets.
10. On the public sector front, the Government is also doing our part in managing digital infrastructure sustainably.
11. We are consolidating standalone government server rooms and data centres into centralised Government DCs operated by GovTech, which are Green Mark Platinum certified for energy effectiveness.
12. Beyond data centres, GovTech is also incorporating green requirements into Government ICT procurement to create a sustainable digital value chain. These include requirements for more sustainable product packaging, ensuring the availability of hardware parts for upgrades and replacements rather than purchasing new products, and sustainability-related product certifications. These are important to ensure that our government digital products and services are developed and used in an environmentally sustainable manner.
13. In addition, GovTech will be working more closely with the industry to jointly manage the government's digital carbon footprint. This will be achieved through fostering partnerships to jointly develop best practices and solutions that mitigate the environmental impact of digital technologies deployed by the Singapore Government.
14. Besides greening our ICT sector, digital technology also plays a significant role in enabling sustainability across other sectors in the economy. For instance, the usage of Internet of Things (IoT) devices and applications such as smart buildings, supply chain automation and smart logistics solutions allow resource usage to be optimised, thus improving energy efficiency and operational efficiency.
15. By some estimates, digital solutions can help other sectors reduce global GHG emissions by up to 20%¹. Given global trends that point toward additional reporting requirements for carbon emissions, it is important for our companies to leverage ICT solutions to better monitor, measure and manage carbon emissions, in order to stay competitive, access new markets and unlock more opportunities.
16. To this end, I am pleased to share new initiatives by IMDA and GovTech. IMDA has identified nine digital solutions in resource optimisation and carbon management, which allow companies to achieve productivity gains and cost savings, and gain access to new markets while reducing emissions. Companies may apply for grant support under IMDA's Advanced Digital Solutions (ADS) programme to adopt such digital solutions.
17. One company that has benefited from ADS is Call Lade Enterprise. It has adopted a digital solution under ADS to track and analyse carbon emissions of its trucks in real-time. As a result, it was able to reduce incidence of idling and speeding by drivers, and make informed decisions regarding maintenance and replacement of its ageing fleet to lower both operational costs and carbon emissions.



18. Within the Singapore government, we continue to develop measures to achieve sustainability goals. We have implemented digital workplace solutions to improve productivity and reduce travel-related emissions.
19. GovTech's Open Digital Platform (ODP) aims to integrate multiple systems and datasets to create a unified operating system. The ODP will power smarter district planning at the Punggol Digital District, and is expected to progressively reduce energy and water consumption by as much as 30% compared to estates without optimisation, through deploying AI and machine learning solutions to control building systems such as air-conditioning, mechanical ventilation (ACMV), and elevator systems based on the predicted energy demand and supply.
20. I am happy to note that GovTech is now piloting new data capabilities together with the Ministry of Sustainability and Environment (MSE) to support the whole-of-government in managing its resource consumption and meeting our Green Government Targets.
21. In conclusion, our digital sustainability efforts are a commitment to ensure that innovation and sustainability go hand and hand. We invite all of you to join us on this transformative journey, where digital innovation becomes a driving force for positive change.
22. Together, let us shape a thriving digital future where technology not only enables progress but also safeguards the very foundation of our existence. Thank you very much for inviting me here today, and for arranging this gathering of brilliant minds. I hope this Sustainable Tech Forum will be a catalyst for ideas and partnerships that will propel us towards a greener, more sustainable tomorrow.

