

**Keynote Address by Mrs Josephine Teo, Minister for Communications &
Information and Minister-in-charge of Smart Nation, at the ATxAI Conference
1 June 2022, 2pm**

Distinguished guests
Ladies and gentlemen

1. Good afternoon, I am delighted to welcome you to the ATxAI Conference.

Singapore remains committed to building trust in AI

2. Several of us met at the World Economic Forum Annual Meeting at Davos last week. The meeting was a useful opportunity for world leaders to connect, share and shape the paths forward on issues of concern. These include the opportunities and risks in emerging technologies, how they are being developed and deployed. I am happy to continue those conversations at this platform today.

3. One of my key observations at Davos is that global attention on digitalisation remains high but our emphasis is shifting. For many years, policy makers as well as business executives were focused on ‘transformation’ – how digital developments will create new industries, business models and job opportunities. There was also growing recognition that when economies get re-shaped, industry disruptions and workforce displacements are inevitable. As a result, the weight of the discussion shifted towards digital inclusion, to ensure that all segments of our community can benefit from digitalisation.

4. Another shift that is gaining momentum is “Digital Security”. For example, the US head of the Cybersecurity and Infrastructure Security Agency (CISA) Jen Easterly and our own CSA chief David Koh were at Davos for the first time. Google’s corporate event focussed almost exclusively on cybersecurity.

5. For regulators and businesses, two questions have become prominent: How do we put in place *guardrails* to keep our citizens and users safe? For enhanced cybersecurity, how do we strengthen *resilience* in operations and continued viability of any business, industry or country?

6. In fact, these questions have emerged out of an understanding that digital security connects to the issue of trust. As digitalisation cuts across more aspects of how we work, live and play, a persistent lack of security or resilience will eventually erode trust; ultimately leading to reduced participation by people and businesses. This threatens the health and continued development of digital ecosystems.

7. With this in mind, I had spoken at this platform on the importance of trust in the digital economy, and specifically on building trust in AI. I am glad that we are continuing the conversation as the theme of this event remains 'Building Trusted AI'.

Building trust through AI governance frameworks

8. Trust is an especially important challenge for AI because the inner workings of many AI applications often remain a black-box, even to knowledgeable engineers and scientists. AI-based decision systems are generally quicker. In some cases, by being able to avoid human errors, they are also more accurate or reliable.

9. However, there may also be instances and contexts where undesired outputs are generated. For example, if the AI model is not trained with a representative dataset, we may create an AI application with unintended biases against certain segments of the population. If such biases are not addressed, one can imagine that trust in the technology will erode over time.

10. To manage such risks, we need good AI governance. To be clear, the aim of governance is not to inhibit the use of AI, but rather to facilitate their use in a safe and ethical manner. We also want a balanced approach towards regulations, ensuring adequate safeguards to protect citizens while encouraging AI innovation.

11. Singapore's approach is therefore to provide frameworks and guidelines to educate stakeholders on the risks of AI and how to prevent them. We are also introducing tools to provide assurance to stakeholders on the safety and reliability of AI applications. For example, we have released the second iteration of our Model AI Governance Framework, a reference document for businesses to deploy AI at-scale.

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For employers, we provided guidance on how to redesign jobs and upgrade their workforce, to get them ready for an AI-enabled workplace. In addition, we are publishing sector-specific AI governance guidelines to address the unique challenges of each sector and guide them in the responsible use of AI. So far, we have released guidelines for the Finance and Healthcare sectors.

12. A.I. Verify is our next contribution to building up AI governance for the benefit of people and businesses. I launched A.I. Verify as a minimum viable product last week at Davos to healthy interest from the global community. It is a testing framework as well as toolkit that serves as a practical resource for voluntary self-assessment by AI system owners. They can demonstrate, through objective tests and audits, that their AI applications meet performance benchmarks they have declared. This helps them to be transparent and build trust with stakeholders.

13. To achieve trustworthy AI, we need to collaborate with all stakeholders to develop standards and methods of verification. A.I. Verify provides us with the means of doing so. But rather than being an end in itself, A.I. Verify is also designed to spark further developments. For example, as more companies use this testing framework and toolkit, we can crowd-source and co-develop benchmarks for acceptable levels of attainment.

14. We invite all who are interested to join our international pilot and testing community. Achieving trustworthy AI is a global imperative, as AI applications are used on platforms and e-commerce marketplaces that are accessible globally.

15. We also adopt a global outlook when developing standards for AI governance. We are actively sharing our work with the international community through organisations like the UN, OECD and Global Partnership on AI (GPAI). In doing so, we hope to contribute to the growing international discourse on AI, get feedback for improvements and be relevant to the global community.

Building a trusted ecosystem beyond AI: Data infrastructure

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16. We are mindful that strengthening AI governance alone is not enough to build a trusted digital ecosystem. AI does not work in isolation. We also need to strengthen trust in the digital foundations that these AI systems are built upon.

17. For example, because AI models must run on data, there could be concerns on how personal data is collected, managed and used. For AI to be trusted, our data systems equally need to be trusted.

18. To ensure data privacy, we are investing in frameworks and platforms to help stakeholders exchange data in a secure manner. You may remember SGTraDex, which was announced by Deputy Prime Minister Heng Swee Keat at this event last year. The pilots have been progressing well, and I will be launching the full SGTraDex solution later this afternoon at ATxSG.

19. SGTraDex is a common data infrastructure for the supply chain ecosystem. It facilitates secure, trusted and effortless data sharing between stakeholders. We can think of SGTraDex as a highway, where there are fast lanes for dataflow, pitstops for data to enter or exit, and a service marketplace for exchanges to take place.

20. We invite companies, both local and international, to come on board SGTraDex to digitally transform your business and tap on new opportunities. We hope, eventually, to extend our infrastructure and frameworks to support safe and secure data sharing *across* jurisdictions. We are working closely with the global community to do this.

21. In fact, Singapore has been privileged to lead several regional efforts on this front, including the ASEAN Data Management Framework (DMF) and Model Contractual Clauses for Cross Border Data Flows (MCCs). With support for like-minded partners, there is opportunity to build a trustworthy and a rules-based global ecosystem to support data transmission and interoperability. I am happy to share that these initiatives have just won the World Summit on Information Society 2022 in the category of international and regional cooperation, demonstrating the contribution to the UN Sustainable Development Goals.

Investing in Trust technologies

22. As technology evolves, new risks will emerge. Therefore, in addition to building trusted data infrastructure, we must also invest in trust technologies to keep pace with, if not get ahead of, technological developments. Examples of such technologies include those that preserve data privacy, ensure that transactions can be traced, and help developers build fair and explainable systems. Such capabilities are critical to maintaining trust in our digital systems.

23. Last year, I shared at this platform that Singapore will commit \$50 million to bolster these capabilities. Today, I am pleased to announce the launch of the Digital Trust Centre (DTC). Hosted at the Nanyang Technological University, the DTC will work with the local universities and research institutes to promote research, translation, and talent development in trust technologies. It will focus on trusted data sharing and computation, digital identity, and algorithms to evaluate the trustworthiness of systems. Besides local partners, the centre will also collaborate with international partners from both the public and private sectors.

Importance of partnerships and collaboration

24. Let me make one final point, on the importance of partnerships and collaboration.

25. Singapore participates actively in a tight-knit and passionate international community working to support the use of AI and technology for good. Through multilateral platforms like the UN, OECD, and GPAI, we exchange experiences and ideas, cooperate to advance the development of trusted and responsible AI, and align our governance frameworks to facilitate the flow of capabilities and technologies. Such cooperation is essential for countries to succeed in our AI and digitalisation ambitions.

26. On the bilateral front, Singapore is also working to deepen collaborations with like-minded countries and institutions, to strengthen AI governance as well as exchange and build AI capabilities. We signed an MOU on AI cooperation with Israel in March 2022, which will support the development and deployment of AI to benefit citizens and businesses of both countries. Another example is our recent MOU with

the International Centre of Expertise in Montreal on Artificial Intelligence, or CEIMIA. CEIMIA will be working together with our newly formed DTC to develop privacy enhancing solutions. This is one of Singapore's contributions to the important work in GPAI.

Conclusion

27. In summary, I would like to reaffirm Singapore's commitment to building trust in the responsible use of AI. Together with our friends and partners, Singapore aims to make meaningful contributions to the critical work of enhancing trust in AI. I hope today's conference provides a platform for the exchange of ideas for all our participants, whether you are from government, industry or academia.

28. Thank you, and I wish you a fruitful time at this conference.