**Response by Dr. Janil Puthucheary, Senior Minister of State for Communications and
Information, to the Adjournment Motion on "Global Leadership in Artificial Intelligence"
(5 February 2024)**

1.   Thank you, Mr. Speaker.

2.   I thank Mr. Giam, for raising some very important issues to do with AI. I thank him for reading our National Artificial Intelligence Strategy in some detail. I would encourage him to read the many other documents that we have written, which describe how we are already doing many of the things he has listed in his speech. I thank him in advance for supporting the investments that we plan to make to deliver the various outcomes that he has detailed.

3.   He suggested a number of important outcomes, and we have made some of the same points in the past. I thank him for agreeing with us on a number of key ideas such as that the use of technology and AI should benefit Singapore and Singaporeans. We agree how we approach AI development should result in better jobs for Singaporeans. We agree that our approach should lead to skills development and knowledge transfer for Singaporeans and Singapore.

4.   Ambitious, innovative projects should be attempted to create opportunities. AI can be transformative for healthcare, and our small size as a nation should not deter us from seeking excellence and potentially global leadership in AI. We agree with all this. We have said all this before. And I am glad that he thinks we should do this.

5.   But how we do so and how we proceed matters. How should we achieve these outcomes? Here, perhaps our views differ. I would point out that in talking through the mechanisms and the suggestions that Mr. Giam has made, his speech does have some internal contradictions. Statements that he makes to support one strategy, perhaps in contradiction to another.

6.   Here are three examples.

7.   He talks about the constraints of our local private sector and our small domestic market, but he wants to suggest exactly doing that in restricting the development of an AI system within Singapore.

8.   He talks about how there is no global cross border framework around data sharing, but he wants to worsen that by suggesting data localization and sovereignty strategies.

9.   At one part of his speech, he talks about how there is a level playing field for AI with a highly collaborative open-source community. And then later on, he worries about how this has market dominance and network effects that will make it hard for us to penetrate the market.

10.   So, there are internal contradictions. He has differing views depending on the differing recommendations. And I think the government also has a different view of how we should achieve the outcomes. But I would reiterate, we agree that the outcomes are the same.

11. So, on the outcomes, traditional industrial policy approaches where governments pick winners and centrally plan the way to success are not going to be effective for frontier digital technologies like AI. Our approach should target excellence in key domains and create an environment with solid foundations that maximise our chances of success.

12. We shouldn't seek global leadership just for the sake of it. We advance Singapore's interest by growing our AI ecosystem, partnering internationally, creating good jobs, and benefiting our companies and our citizens. We will be sharing more details on the implementation of the recently launched National Artificial Intelligence Strategy 2.0 at the Committee of Supply debates, but let me just recap on a few ideas.

13. The strategy focuses on harnessing AI for the public good for Singapore and the world. It outlines key enablers and actions that Singapore will take in the coming years to achieve the twin goals of excellence - developing peaks of excellence in AI - including to address the needs and challenges of our time, such as climate change and population health. And secondly, empowerment, where we raise up individuals, businesses, and communities to use AI with confidence, discernment, and trust.

14. Our approach is for AI to have widespread and positive impact on our economy and on our society. That is why we will develop peaks of excellence across domains and across our economy selected on the probability to deliver an outsized impact to Singapore and the lives of Singaporeans. These peaks include leading economic sectors such as manufacturing and financial services, those relevant to Singapore's smart nation priorities, healthcare and education.

15. For healthcare, we have dedicated $35 million dollars through the AI in Health Grand Challenge since 2019, to support innovative projects that use AI to predict risks, tailor treatments and enhance health coaching. We already use data sets across various healthcare registries and databases to train AI models, and these are already being piloted for use in clinics across Singapore.

16. Recently, SingHealth together with MOH, A*STAR and the National Supercomputing Centre organised the AI Health Summit 2023. It featured local and international experts discussing the application of advanced AI in healthcare, and it demonstrated many of the projects that are already in development here in Singapore.

17. Across our society we will address peaks of excellence for AI. We will anchor integrated and transformative AI innovation and value creation activities here, working with companies to base their AI Centres of Excellence, to build new products, and develop intellectual property across the AI stack here in Singapore. We have a new model of sectoral Centres of Excellence - partnering industry champions to identify sectoral use cases, developing a broader base of researchers and companies to intensify sophisticated AI development and deployment here.

18.	We are also working to speed up value discovery, experimentation and innovation, including the AI Trailblazers initiative - working with Google Cloud to help enterprises bring novel generative AI use cases to life in a hundred days.

19.	Creating this environment for many projects, many peaks of excellence have two key benefits. One is that it makes it more likely that we benefit all either through economic opportunity, by being part of the industry, or as a beneficiary of the new service. The second key benefit is that not all projects are successful. With moonshots, Mr. Giam will know that outcomes are inherently uncertain, and the original moonshot certainly did not have a friction-free path to success. Outcomes are inherently uncertain, they are not always clear. And even with the best efforts, we may not get the desired or expected results.

20.	So, as we embark on ambitious and innovative projects, I hope we can count on Mr. Giam's support to still stand in support of us having made the attempt in the spirit of a moonshot, even when it doesn't quite work out in the way we expect. So, trying several different ideas, creating the opportunity for innovation and inventiveness, rather than trying to pick symbolic projects, is far more likely to generate a success.

21.	Anchoring AI activities is only one part of the picture. A strong AI ecosystem also requires skilled AI practitioners. We want to grow a pool of such high-value and skilled jobs here in Singapore.

22.	As discussed extensively in this house, including by Dr. Tan Wu Meng on behalf of his Clementi residents, and I think representing the concerns of residents across Singapore; in successive budget speeches; the 2023 presidential address debate; parliamentary questions; our recent parliamentary motion: None of these will become a reality, if we do not train, upskill, and reskill our labour force. That point has been made, and the government's key focus is on training our people. This will allow Singaporeans to capture new opportunities and shape their future.

23.	For example, the Tech Skills Accelerator and AI apprenticeship programmes have trained many Singaporeans to take on AI related roles, and we will elaborate on additional plans at the Committee of Supply. We have also started work on equipping our students with skills relevant to artificial intelligence, and we develop students' foundational knowledge of AI and promotes its safe and responsible use in schools.

24.	That said, it is important to recognise that global AI talent plays a complementary role. They serve as a bridge to expertise, perspectives, innovative approaches elsewhere, that are crucial for the information exchange and skills transfer to strengthen our ecosystem.

25.	Today, we are already experiencing strong demand for AI talent here in Singapore. Given the fierce competition for this talent globally, it would be quite unwise to limit the pool of skilled practitioners we can draw from and potentially hindering our ecosystem growth.

26.   There are some other essential enablers that we need here. We need to have sufficient compute power, so that industry, academia and the government can innovate, build and deploy high value solutions.

27.   Our strategy on data is important in advancing our AI aspirations. Our approach on data is premised on supporting innovation, serving the public good and making sure that relevant safeguards are in place. We focus on improving the quality of datasets, building up our capability, and ensuring that data used for AI development is aligned with trusted data sharing frameworks.

28.   But domestic data and local AI models are not enough for Singapore to achieve our ambitions. We must maintain our ability to access and use global data and models to deliver good outcomes for Singapore and Singaporeans.

29.   It is important to resist the allure of data localisation narratives - it sounds very seductive. But instead, we need to remain connected, allow for and advocate for cross border data flows, as long as adequate protection is ensured. Recent legislations and large countries avoid this idea of explicit localisation provisions. Even with their large markets and large datasets, they recognise the benefits of being connected to the world. And we benefit from openness and connectivity to the world for our partners to share with us in good faith. They are less likely to do so if we close ourselves off. Singapore has thrived as part of a connected world.

30.   Mr. Giam spoke about industrial policy. It is the nature of the tech and digital space that government cannot pick winners and certainly cannot centrally plan their way to success. There is also the issue of the cost associated with the approach he suggests. He proposes, I believe, that we rely on our own data only, and develop an AI model at scale ourselves. I think that is what he is suggesting. And I would point out that companies have to invest tens of billions of US dollars, for one generative AI model. If we took the approach that he suggests, we may only be able to afford to participate in one or two projects and is that going to be the best approach for Singapore?

31.   AI is a fast moving, inherently borderless technology. For Singapore to succeed, we must remain open – open to innovation, talent, data, and ideas from around the world. We will also need to work with partners from around the world to address the wide-ranging impact that AI can potentially have.

32.   Taking a protectionist stance will do us more harm than good, and it will undermine our hard-won credibility as a serious, constructive, inclusive society and nation.

33.   Thank you, Mr. Speaker.