# YAB PM Speech on the

# National Semiconductor Strategy (NSS)

## *Bridging Technology for Our Shared Tomorrow*

**At**

**SEMICON Southeast Asia 2024**

**Tuesday, 28 May 2024**

**3.10pm – 3.25pm**

**MITEC, KL**

**[SALUTATIONS]**

Ladies and Gentlemen,

1. In 1972, Intel opened its first overseas production facility in Malaysia, investing USD1.6 million. The plant was built on what used to be a paddy field – a true story where the car of future Intel CEO Andy Grove, was stuck in the mud during a visit to the plant in the monsoon season.

2. Many multinational companies ("MNCs") like AMD, Hitachi, Clarion, Robert Bosch, Litronix (now OSRAM) then followed suit, setting up operations in Malaysia. Over time, Micron and Infineon joined them. More importantly, from Malaysia's perspective, we successfully developed homegrown companies such as Inari, Vitrox, Oppstar, Skyechip, Pentamaster, creating a truly local-global ecosystem.

3. In the fifty years since Intel's arrival, we have built a solid foundation and thriving semiconductor ecosystem. We have end-to-end supply chain, with market access through Free Trade Agreements ("FTAs"), and a skilled, multilingual workforce. The Government has provided numerous incentives to promote industry growth. Our robust industrial

parks in Kulim, Batu Kawan, and Bayan Lepas, as well as our international airports and seaports, showcase our world-class infrastructure.

4. We also have excellent enabling institutions, including centres of excellence, universities, research arms and industry associations to drive innovation, conduct cutting-edge research, and nurture talent for the semiconductor industry.

5. Our strategic position in the global supply chain is well-recognised, and confidence remains strong. In 2023 alone, Penang – where I am from – received USD12.8 billion (RM61 billion) in Foreign Direct Investment (FDI) from semiconductor MNCs, more than the previous seven years combined. Notably, Intel announced a USD7 billion (RM30 billion) investment in a new manufacturing facility there.

6. The past half-century has seen us become the 6th largest exporter for semiconductors and 10th in terms of E&E products, but we remain over-concentrated in the back-end process, the Outsourced Assembly and Testing ("OSAT") part of the supply chain. While we are proud of our

achievements and do have players in Design, Fabrication, and Manufacturing Equipment, we have a strong capacity to diversify and move higher in the value chain.

7. This means building on our existing foundations to move towards even more high-end manufacturing, semiconductor design, enhanced OSAT and Advanced Packaging, as well as sophisticated Semiconductor Manufacturing Equipment.

8. Our **vision is to create an ecosystem driven by dynamic Malaysian firms and world-class talent –** while partnering with global companies – to compete regionally and globally based on innovation and creativity.

Ladies and Gentlemen,

9. In this vein, Malaysia is offering itself as the “Bridge” to connect countries open to tech collaboration, right here on our shores. Malaysia is already a melting pot of local and international tech talent, making it easy for companies rooted here to be regionally and globally competitive.

10. Malaysia is also offering itself as neutral ground that ensures all tech collaborations happening here will serve positive purposes. Our motto, ***"Malaysia: Bridging Technology for Our Shared Tomorrow",*** reflects our commitment to connecting current technological capabilities with future humanity-enhancing innovations, while building a more secure and resilient supply chain for the global semiconductor industry.

Ladies and Gentlemen,

11. Technology is evolving rapidly, with adoption rates speeding up exponentially. For example, **Netflix took 3.5 years to reach a million users, Facebook took 10 months, Instagram took 2.5 months, and ChatGPT took just 5 days**.

12. Hence, we need to be agile and adaptable by strengthen our foundations to different contexts and circumstances. We also recognise that reaching the frontier of chips technology is neither easy, nor cheap. The world's leading chip manufacturer, TSMC in Taiwan, has a capital expenditure budget of USD28 to USD32 billion for 2024.

13. While it will take us time to reach there, we are currently focusing on other parts of the value chain. For instance, **electric vehicles (EVs) contain over 3,000 chips, two to five times that of ICE (Internal Combustion Engine) vehicles**. With the growth of the global EV market, Malaysia could become the key hub to supply power chips to EV cars. These power chips are key in energy transition and decarbonisation technologies and - through Malaysia's New Industrial Master Plan 2030 (NIMP 2030) and National Energy Transition Roadmap (NETR) – we already have the right policy enablers and incentives for companies wishing to manufacture them here.

14. Moreover, the Government **aims to have 40% of Malaysia's primary energy mix from renewable sources by 2035**. This **initiative aims to reduce carbon dioxide emissions by 10 million tonnes annually and achieve 100% renewable energy by 2050**. The Government supports exploring new technologies like green hydrogen, nuclear technology, and large-scale energy storage to reduce dependence on fossil fuels and meet the 2016 Paris Accords' targets.

15. Starting this **September, third-party access (TPA) will be allowed in the national electricity supply industry**, enabling other parties to supply energy using Tenaga Nasional Bhd's transmission lines, reflecting high foreign investor interest in Malaysia.

Ladies and gentlemen,

16. Against this backdrop, **during our National Investment Committee Meeting on 16th April, I requested for a strategic plan for Malaysia's semiconductor industry**. Today, **six weeks later, I am pleased to share with you the salient features of Malaysia's National Semiconductor Strategy (NSS).**

17. Led by MITI, its agencies, and involving various ministries, the NSS is a robust, agile, inclusive and forward-thinking strategy. This plan, structured in three phases, is designed to foster collaboration with companies across ASEAN, Asia, and the global stage.

18. **Phase 1 involves Building on Our Foundations.** In this phase, we will leverage on our industry's existing capacity and capabilities to support the modernisation of OSAT with moves towards Advanced Packaging; grow existing fabs in Malaysia and pursue FDI on expanding capacity in trailing edge chips, particularly Power Chips; as well as develop local chip Design champions.

19. **Phase 2 is all about Moving to the Frontier.** We will pursue cutting edge logic and memory chips design, fabrication, and testing and looking to integrate the purchasers of these chips. Once Phase 1 is implemented, more leading advanced chips manufacturers will be attracted to our shores. This is where our local design champions can be easily integrated into the ecosystem of these advanced fab companies.

20. **Phase 3 is all about Innovating at the Frontier**. The next phase is to continue doubling down by supporting the development of world-class Malaysian Semiconductor Design, Advanced Packaging and Manufacturing Equipment firms, while at the same time attracting the buyers of advanced chips such as Apple, Huawei, Lenovo, and other

such cutting-edge companies to pursue advanced manufacturing in Malaysia.

21. To stay flexible and agile, **the NSS will be a living document,** evolving as needed, but we remain steadfast in our aspiration to make Malaysia a major global player in accessible technology for all, powered by our semiconductor industry.

Ladies and Gentlemen,

22. To stay on track, **these are the five headline targets for the NSS**:

    a. **Firstly, on Investments**: We will court **at least RM500 billion of investments in Phase 1,** with Domestic Direct Investment (DDI) focusing on IC Design, Advanced Packaging and Manufacturing Equipment, and FDI focusing on Wafer Fabs and Manufacturing Equipment.

    b. **Company Growth**: By Phase 2, we want to establish **at least 10 Malaysian companies in Design and**

**Advanced Packaging with revenues between RM1 billion to RM 4.7 billion (USD210 million to USD 1 billion)**, and **at least 100 semiconductor-related companies with revenues close to RM1 billion (USD210 million),** creating higher wages for Malaysian workers

c. **R&D Hub**: Develop **Malaysia as a global R&D Hub for Semiconductors,** featuring world-class universities, corporate R&D, and centres of excellence, blending the very best of Malaysian and international talent.

d. **Training**: Train and Upskill **60,000 High-Skilled Malaysian Engineers.**

e. **Fiscal Support**: Allocate **at least RM25 billion (~USD5.3 billion) in Fiscal Support** to operationalise **the NSS** with targeted incentives, details of which will be announced by MITI soon.

23. In reaffirming Malaysia's commitment to becoming a global leader in the semiconductor industry, the National Semiconductor Strategic Task Force (NSSTF), with CREST

serving as the Secretariat, focuses on fostering innovation, enhancing research and development capabilities, and driving the commercialisation of semiconductor technologies.

Ladies and Gentlemen,

24. Ultimately, **the NSS** is a means for Malaysia to advance and democratise technology for the good of all humanity. To achieve this, we need your support, both from those here today and others beyond this room.

25. Geopolitical dynamics aside, a robust multinational semiconductor production remains vital for humankind's survival, particularly as we are running out of time in our climate action and risk mitigation. Today, I offer **our nation as the most neutral and non-aligned location for semiconductor production, to help build a more secure and resilient global semiconductor supply chain.**

26. On that note, our **key proposition of "*Malaysia: Bridging Technology for Our Shared Tomorrow*",** reflects our sincere aspiration to promote technology for humanity's

greater good, by being your leading partner and collaborator in the global semiconductor industry and beyond.

27. Whether you are sitting here as an investor, sovereign wealth funds, manufacturer, engineer, or policymaker, you are welcome to join us in this transformative journey towards a more inclusive, resilient and impactful semiconductor future for Malaysia and the world.

    Thank you.