Transcript of Speech by Senior Minister of State for Communications and Information Tan Kiat How, at the Committee of Supply Debate on 1 March 2024

1. Mr Chairman, we have made good progress in digitalising our economy. Singapore's digital economy generated value-added of $106 billion dollars in 2022 or about 17 % of our nominal GDP, up from $58 billion or 13% of our GDP in 2017. More enterprises are going digital. For example, more than 9 in 10 enterprises are using e-payment today compared to just 6 in 10 in 2018. Enterprises are also deploying more advanced digital solutions, such as cloud computing and data analytics.

2. Importantly, I am heartened that our SMEs are doing so too. 95% of SMEs adopted digital solutions in 2023 compared to 74% in 2018. Even hawkers are coming on board. As of November last year, 60% of our hawkers accept SGQR digital payments. The platform has facilitated an average of 5.1 million transactions, or $42 million per month.

3. IMDA's programmes like SMEs Go Digital and Hawkers Go Digital have moved the needle.

4. At the same time, the pace of technological advancements especially in AI is picking up pace. We want to equip our enterprises and workers with the capabilities to ride this new wave.

5. We are developing a Digital Enterprise Blueprint (DEB) to chart the next bound of our effort, which Mr Xie Yao Quan asked about.

6. We have been consulting extensively with sector partners and industry.

7. We are refining the Blueprint based on their feedback and will put out a consultation paper in the coming months to seek views from the wider industry and from the public.

8. But let me take the opportunity to outline the broad contours of the Blueprint.

9. The Digital Enterprise Blueprint aims to 'Uplift our enterprises and workers in the Age of AI'.

10. We will do this through 3 thrusts: First, we will empower enterprises to **Be Smarter** through using AI-powered digital solutions. Second, we will support our enterprises to **Scale Faster** through adoption of integrated digital solutions. Third, we will equip enterprises to **Be Safer** by improving their cyber resilience.

11. So Smarter, Scale faster and Safer.

12. The Digital Enterprise Blueprint is a live document which will be continually updated. Hence, we have started to implement some ‘no regrets’ moves that received broad support.

13. Ms Jessica Tan, Ms Tin Pei Ling, Mr Sharael Taha and Mr Mark Lee and others asked how we are supporting SMEs to benefit from AI.

14. We will help enterprises and workers access benefits from AI capabilities through IMDA’s SMEs Go Digital programme.

15. First, for the vast majority of SMEs, IMDA curates a list of pre-approved digital solutions suitable for broad based adoption.

16. We have started working with tech industry to incorporate AI capabilities in their digital solutions. I am glad to share that as of today, around 20% of these pre-approved solutions are already AI-enabled.

17. For example, AI capabilities are integrated seamlessly into customer relationship management solutions, which can help enterprises analyse customer interactions and data to suggest constrained marketing campaigns for customers.

18. In 2023, over 3,000 SMEs have adopted and benefitted from these AI-enabled pre-approved solutions. So that’s for the broad base of SMEs.

19. Second, at the sector-level, IMDA has worked with sector leads to co-develop Industry Digital Plans (IDPs) which serve as roadmaps for enterprises, highlighting solutions which meet specific needs of the sector.

20. We started with 5 IDPs in 2018. Today we have 22 IDPs for various sectors, including sectors like wholesale, construction, retail and food services. These IDPs cover a broad swathe of our economy.

21. IMDA will refresh the IDPs to incorporate AI-enabled solutions that would be relevant to meet the needs of the enterprises in that sector.

22. We have started doing so in the 4 IDPs that we either launched or refreshed, namely Legal, Tourism (Attractions), Retail and Security sectors.

23. One good example is Ghows LLC is a law firm that has been using an AI-enabled proofreading tool to help check their draft contracts for conflicts and inconsistencies. I understand from the lawyers that this process used to be done manually and was tedious, time-consuming and error prone. After adopting this tool, Ghows saw a 50% productivity improvement and less errors.

24. We will progressively refresh all IDPs to include sector-specific AI solutions, so that enterprises can benefit from these useful solutions.

25. Ms Tin asked about CTO-as-a-Service (CTOaaS) platform. Over 92,000 users have accessed resources from the CTO-as-a-Service platform and over 1,600 SMEs have benefited from the digital consultancy services.

26. One example is food services company, Xi Men Jie (西门街). The company was overwhelmed by the numerous tech solutions in the market. The team turned to a digital consultant under the CTO-as-a-Service scheme for help to integrate their digital systems. The company achieved 15% in both manpower savings and sales growth.

27. I encourage all SMEs to tap on these schemes.

28. For enterprises who want to do more, we are supporting them through our Advanced Digital Solutions scheme, which brings together the technology ecosystem to curate solutions for key problems identified by sector leads.

29. We also launched two new schemes for enterprises to gain experience using GenAI.

30. The first is a programme by IMDA and EnterpriseSG to provide a pilot group of SMEs with access to 13 specially curated generative AI solutions for common business functions like Marketing and Sales.

31. If these Gen AI solutions prove useful, we will include them in the SMEs Go Digital pre-approved list of digital solutions to benefit others.

32. Now for the second scheme. For larger and more digitally mature enterprises looking to develop and deploy their own Gen AI digital solutions in their businesses.

33. [Announcement] IMDA is launching a new initiative called Generative AI X (pronounced 'for') Digital Leaders where tech partners, including tech giants, will work with participating enterprises to help them develop and implement innovative generative AI solutions.

34. We have already seen early interest from enterprises, and we welcome more to sign up for this initiative.

35. Let me move on to the second thrust – supporting our enterprises to scale faster.

36. In our consultations, SMEs shared that as they started to grow, they realised that they were constrained by lack of interoperability and scalability of their digital solutions.

37. For example, Bread Createur, a food services SME had adopted various sales channels and delivery platforms over time. However, they found themselves unable to collate orders automatically and track sales figures across their third-

party delivery platforms and sales channels. What was an inconvenience for a small operation quickly turned into a showstopper when they grew.

38. Such stove-piped solutions also prevent enterprises from harnessing the full potential of digital, including deriving business insights from data analytics.

39. We will step up our effort to (a) include more integrated digital solutions under the SMEs Go Digital programme, (b) stipulate inter-operability requirements where possible for these solutions, and (c) encourage more of these solutions to be cloud native for greater scalability.

40. Where integrated solutions are not available in the market, we will curate such solutions through the Advanced Digital Solutions scheme.

41. An example is the Connected Business Suite solution available to Food Services SMEs. It enabled these SMEs to operate their frontend and backend functions in an integrated manner.

42. With this integrated solution, Bread Createur can easily track all their sales and transactions across different sales channels, including from third party orders that are routed directly to the kitchen.

43. At this juncture, I must stress that technology is not the silver bullet, and integrated and scalable digital solutions would also require the sectors and enterprises to redesign processes and operations.

44. Going forward, we will work closely with sector leads and associations to introduce more pre-approved integrated and cloud-based digital solutions to support our enterprises to scale quickly as they grow.

45. Let me move to the third thrust - Be Safer.

46. I am heartened to see that in CSA's latest Cybersecurity Survey findings, 75% of organisations were aware of the importance of cybersecurity.

47. However, while enterprises are taking steps to improve their cyber hygiene, there is still much room for improvement.

48. The same survey found that over 8 in 10 enterprises in Singapore encountered at least one cybersecurity incident in a year, almost all of them suffered negative business impacts.

49. CSA also found that only 1 in 3 organisations implemented more than half of the 5 categories of cybersecurity measures under CSA's Cyber Essentials certification scheme. Lack of knowledge on how to implement cybersecurity solutions was commonly cited as a challenge.

50. Ms Tin Pei Ling and Mr Xie Yao Quan asked how we will help SMEs improve their cyber resilience. We will flesh this out in the Digital Enterprise Blueprint. Let me give a broad sense of our three-tier approach.

51. First, we will support SMEs in taking steps to improve their cyber hygiene.

52. We will launch a cybersecurity health check tool for enterprises to assess their cyber hygiene, benchmark themselves against their industry peers and access resources for them to plug the gaps.

53. Those who require more support can tap on the Chief Information Security Officer (CISO)-as-a-Service scheme to engage cybersecurity consultants to develop tailored cybersecurity health plans.

54. Enterprises that are eligible can receive co-funding support to defray the cost for this service. 55 SMEs have benefitted from this scheme thus far.

55. Second, we will go upstream and raise the cybersecurity standards of the digital systems used by our enterprises. This will especially benefit SMEs with no in-house cybersecurity resources. We will start with the pre-approved digital solutions under IMDA's SMEs Go Digital programme.

56. Thirdly, we will also work with sector-leads to develop industry-specific guidelines for cybersecurity. In healthcare, for example, CSA worked with MOH to develop cybersecurity guidelines to improve the security posture amongst healthcare providers.

57. We will share more details in the DEB.

58. Mr Chairman, I spoke briefly about the three thrusts of the Digital Enterprise Blueprint to uplift enterprises and workers in the Age of AI by Being Smarter, Scale Faster and Becoming Safer.

59. Let me turn to how we are developing tech capabilities within our workforce.

60. At the broader workforce level, more of us will need to be equipped with the right skills to effectively use digital tools in our work. With more rapid technological changes, we need to see reskilling and upskilling as part of our workplace culture and see this as a continual investment in ourselves.

61. Employers must also view the reskilling and upskilling of their employees as investments so as to fully harness the capabilities of and benefit from their digital systems. An analogy would be like having a very powerful car but not being able to go beyond first gear, we need to upskill our employees so we can make full use of that powerful engine. That is why each Industry Digital Plan does not only include a suite of curated digital solutions for enterprises, but also comes with a comprehensive list of relevant training courses for these digital tools.

62. For example, the retail IDP includes courses for employees to learn how to fully use social commerce solutions to generate more sales, including how to sell items on livestreams.

63. IMDA has also worked with SkillsFuture Singapore to provide funding support for many of these courses. I encourage employers and workers to make full use of these schemes.

64. Sufficient quality and quantity of tech talent is also crucial to realizing our ambitions.

65. Understandably, there have been concerns about prospects in the tech sector, given the layoffs by major technology companies, as raised by Ms Tin Pei Ling.

66. Companies across the world have been right siting and right sizing their operations to prioritise new areas of growth, amid a more challenging economic climate. Unfortunately, this sometimes results in layoffs which can be very painful and distressing for those involved.

67. Singapore is no exception and has similarly seen some layoffs by tech companies, which have largely impacted those in non-tech roles.

68. Fortunately, Singapore remains as a key node in many of these tech company's global strategies. As they deepen and expand their involvement in the region, we expect that demand for tech talent in Singapore will continue to grow.

69. Currently, the demand for tech talent remains strong, with tech jobs across the economy accounting for a rising share of total employment, from 4.5% in 2018 to 5.2% in 2023.

70. This was driven by demand from both the I&C sector and non-I&C sectors, with the latter accounting for around 57% of tech jobs in 2023.

71. As more companies adopt digital, including using more advanced digital solutions like AI, we expect this will also fuel demand for tech talent.

72. And these are good jobs for Singaporeans – university graduates of information and digital technologies courses continue to take home the highest median monthly starting pay at $5,500 per month.

73. Ms Jessica Tan, Ms Tin Pei Ling, Mr Alex Yam and Mr Sharael Taha have asked about how we will ensure a steady pipeline of tech talent.

74. Minister Josephine spoke earlier about efforts to develop a pipeline of AI talent and AI-equipped workers, including efforts to enhance the existing TechSkills Accelerator (TeSA) initiative, which to date has placed more than 17,000 locals into tech jobs and upskilled and reskilled more than 231,000 professionals.

75. We are also working hard to strengthen ITE and Polytechnic graduates' employment outcomes in tech, and provide more development pathways for them throughout their careers.

76. IMDA set up the TeSA for ITE and Polytechnics Alliance (TIP Alliance) in 2022 to bring together like-minded partners – school leadership, tech industry associations and leading employers of tech manpower like NCS, Accenture, and ST Engineering, to come together to drive change.

77. I am heartened that employers are changing their mindset and HR practices. Instead of just looking at academic qualifications, employers are giving sufficient weight to the applicants' skills and capabilities to assess their suitability.

78. To push for change across the industry, IMDA and the TIP Alliance launched the Skills-Based Hiring Movement, together with a handbook providing practical guidance for firms to attract, assess and develop tech talent based on competencies.

79. Within three months, the number of companies pledging their support for skills-based hiring doubled from 100 to 200.

80. Oracle is an example of a company that has pledged its support for the skills-based hiring movement and has been recruiting based on skills for their openings. As part of their commitment to this approach, their recruitment team has chosen not to highlight the education requirement in their job postings for all technical roles in Singapore.

81. Accenture is another company that has adopted skills-based hiring. They adopted a rigorous multi-stage assessment focusing on skills, competencies, and growth potential, which proved to reduce Time-to-Hire by 75%, and increased quality talent pipelines by 40%.

82. The skills-based hiring approach aligns with the shifts that we are making as part of Forward SG to embrace learning beyond grades and create diverse pathways.

83. Schools are working to ensure students in tech gain more industry-relevant experience. For instance, the Information and Digital Technologies (IDT) schools in our ITE and Polytechnics have lengthened internship durations from 6 to 12 months.

84. In 2023, more than 400 Polytechnic and ITE students undertook year-long internships to gain greater industry experience. We support companies who provide these year-long internships, by providing co-funding to cover the cost of training.

85. Ms Queenie Ng is a beneficiary of this programme. While at Ngee Ann Polytechnic, she embarked on a year-long internship with OCBC as a full stack developer, working on dashboards and architecture projects to improve

operational efficiency. Queenie found the scale of the projects to be eye-opening. In contrast to the smaller scale school projects, the internship exposed her to more complex systems and their interconnections. This experience expanded her understanding of the dynamic tech industry and the many exciting career paths it offers.

86. 人工智能让我们在现有的数码基础上更上一层楼。除了为我们的企业带来新的竞争优势，也能提高员工的生产力 – 如虎添翼。因此，政府将协助企业，尤其是中小企业和员工，让他们掌握人工智能，从中获益。

87. 到目前为止，资媒局已经推出了 22 个产业数码化蓝图。该局接下来在更新蓝图时，也会加入人工智能的部分。此外，在中小企业数码化计划下，资媒局也会在当局预先批准的数码解决方案中，纳入人工智能技术。如今，有两成的数码解决方案是由人工智能推动的，超过 3000 家中小企业已经从中受益。更重要的是，我们将会和各界合作，策划相关的培训课程，协助工友掌握技能，与时俱进，把握人工智能所带来的新机遇。

88. Sir, Singapore does not have the natural advantages of many other economies. We do not have a sizable domestic market, a large local workforce to tap on, natural resources but we can well punch above our weight by being agile and making full use of technological enablers like digital and now AI.

89. To continue enlarging opportunities for enterprises and creating good and exciting jobs for Singaporeans, we are building on a very strong foundation and the government will be a steadfast partner for enterprises and workers in the next phase of our digitalisation journey to uplift enterprises and workers in an age of AI. It will be an exciting journey, so I welcome more likeminded partners to work together with us and invite all enterprises and workers to join us on this exciting journey ahead. Thank you.