EMBARGOED UNTIL DELIVERY
PLEASE CHECK AGAINST DELIVERY

SPEECH BY DR KOH POH KOON, SENIOR MINISTER OF STATE, MINISTRY OF TRADE & INDUSTRY AND NATIONAL DEVELOPMENT, AT THE LAUNCH OF A*STAR'S TECH ACCESS INITIATIVE AND OPENING OF THE INDUSTRIAL ADDITIVE MANUFACTURING FACILITY (IAMF), ON FRIDAY, 8 SEPTEMBER 2017, 10.00 AM, AT THE ADVANCED REMANFACTURING AND TECHNOLOGY CENTRE (ARTC)

Mr Lim Chuan Poh, Chairman A*STAR,
Distinguished Guests,
Ladies and Gentlemen,

Introduction

1. Good morning. It is my pleasure to join you today at the launch of the Tech Access Initiative and opening of the Industrial Additive Manufacturing Facility.

Manufacturing is an important pillar of our economy

2. Manufacturing is an important pillar of our economy, contributing about 20 per cent of our GDP and accounting for 14 per cent of our total employment in 2016. It creates good jobs for our people. Between 2009 and 2016, the real median income of resident workers in the sector rose by 2.9% per annum, surpassing the 2.6% real growth in the overall economy[1].

3. Our manufacturing sector has successfully gone through major shifts, from a labour-intensive sector in the 1960s to one that is innovation-driven and productive today. Moving forward, technological trends such as digitalisation, robotics and automation, and additive manufacturing are transforming not just shopfloor operations and supply chains, but also business models. Against this backdrop, the Committee on the Future Economy (CFE) has recommended that we continue to sustain a globally competitive manufacturing sector as an anchor for our economy.

The government is committed to help our companies upgrade their technological capabilities to succeed in the changing manufacturing landscape.

[1] Source: Report of the Committee on the Future Economy, 2017.

4. The government is committed to partnering our companies to upgrade their technological capabilities to ensure that they succeed in the new manufacturing paradigm. Under the Research, Innovation and Enterprise 2020 (RIE2020) plan, we have committed S$3.2 billion from 2016 to 2020, to develop technological capabilities in the Advanced Manufacturing and Engineering (AME) domain.

5. In particular, the AME strategy has identified future of manufacturing (FoM) technologies, including additive manufacturing, digitalisation, and automation, as key enablers that will undergird the competitiveness of our manufacturing companies. We recognise that in partnering our companies to develop and adopt FoM technologies, it is necessary to tailor our approach to their differing needs. For example, R&D and innovation may be uncharted territory for smaller companies who lack the capacity, resources and connections to undertake such activities. There is thus a need to provide more assistance to smaller companies to overcome these barriers.

Public-private partnership platforms such as Tech Access and Industrial Additive Manufacturing Facility are key enablers to help companies develop and adopt FoM technologies

6. We will be creating public-private partnership platforms to enable our manufacturing companies to co-develop, experience, and deploy FoM technologies while minimising potential disruptions to their operations. A*STAR's Tech Access initiative, which is being launched today, supports our local manufacturing enterprises, especially SMEs, to build FoM capabilities by providing them with access to A*STAR's installed base of research equipment and facilities.

7. The new Industrial Additive Manufacturing Facility (IAMF), which opens today at the Advanced Remanufacturing and Technology Centre (ARTC), is one of the facilities under Tech Access. Advances in additive manufacturing technologies now enable the production of high-quality, complex metal components not previously possible with conventional processes. These advances are impacting sectors such as precision engineering, aerospace, and marine and offshore. Through the IAMF, SMEs in these sectors can identify opportunities to leverage additive manufacturing technologies to improve the performance of their products, and to integrate these technologies into their existing operations.

8. Together with the IAMF, A*STAR's Singapore Institute of Manufacturing Technology (SIMTech) and ARTC will make available 19 different types of equipment under Tech Access. These range from inspection tools to robotised 3D scanners and high-pressure cold sprays for additive manufacturing. More importantly, A*STAR will also

provide user training and technical advice to help companies gain the requisite skills to use the equipment. SMEs can experiment with these advanced tools without the need to make costly investments to acquire them upfront. Subsequently, with the experience gained and a better appreciation of the benefits of such tools, SMEs can opt to acquire the equipment to scale up and capture new business opportunities. More details can be found on the Tech Access web portal, which will also be launched today.

9. With Tech Access, we are stepping up on our efforts to help SMEs innovate and adopt advanced manufacturing technologies, enabling them to transform their operations.

10. Take for instance, Moveon Technologies, a home-grown optical solutions firm which designs and manufactures precision polymer optics for applications such as mobile phones, medical diagnostics and communication devices. Moveon has worked with SIMTech since 2006 on several projects to enhance its products as well as its measurement and manufacturing processes. During the course of these projects, Moveon was able to access SIMTech's equipment, including those which it had considered too costly to purchase for research or prototyping. Moveon also tapped on the expertise of SIMTech's researchers to learn how to use and optimise these machines to develop new products. Moveon subsequently established an in-house R&D unit with the skills acquired from its collaborations with SIMTech.

11. Moveon's in-house R&D unit has since pioneered the 'print-on-lens' technique, where optical lens and features can be printed directly on materials like polymer films, glass and crystals. This technique is considered superior to conventional moulding techniques in terms of reflow compatibility and throughput[2], and has enabled Moveon to offer new services and products for applications such as iris recognition in mobile devices, infra-red cameras and distance sensors in autonomous vehicles.

12. With the launch of Tech Access, we look forward to more of such successes. In addition to one-to-one collaborations, A*STAR will also be widening their outreach by partnering Trade Associations and Chambers (TACs) to promote Tech Access to their members and accelerate the adoption of advanced manufacturing technologies.

13. I am heartened that the Singapore Precision Engineering and Technology Association (SPETA) has come on board as Tech Access's pilot TAC partner. Last month, SPETA and A*STAR held an outreach event for over 70 participants to raise the awareness of Tech Access amongst SPETA's members. A*STAR also organised lab

[2] Reflow compatibility refers to thermal resistance during the optical printing process, and throughput refers to productivity in terms of parts per cycle.

visits for SPETA's members to learn about the capabilities of the equipment available through Tech Access.

Conclusion

14. To remain competitive in the changing manufacturing landscape, our SMEs need to deepen their innovation capabilities and tap the opportunities from advanced manufacturing technologies.

15. I encourage all companies here today to explore the suite of resources offered by Tech Access. A*STAR researchers will also be demonstrating the latest additive manufacturing equipment available at the IAMF, which include the metallic laser powder beds and metal cold spray, and illustrating how to achieve the best builds for component parts.

16. I wish you a fruitful session, and all the best in your innovation journeys.

17. Thank you.