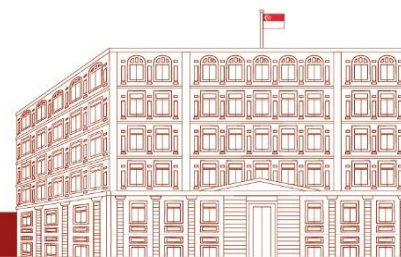


**Transcript of Opening Address delivered by Mrs Josephine Teo,
Minister for Communications and Information,
at 5G Learning Festival (13 Oct 2022)**

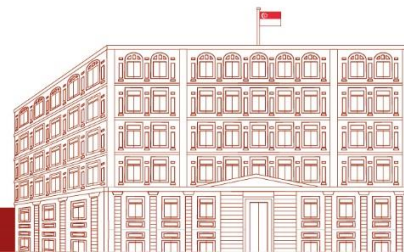
Esteemed Committee Members and Partners of the 5G Academy
Professor Susanna Leong
Colleagues and Friends

1. Thank you for inviting me to join you for the 5G Learning Festival.
2. I have just returned from the Tallinn Digital Summit. At the Summit, we discussed both the opportunities and challenges of the digital age. Against the backdrop of the war in Ukraine, risks that were previously just talked about suddenly became very real. For example, spillover effects where even non-targets can become collateral damage or hacktivist groups complicating an already complex situation.
3. In this context, shaping “trusted connectivity” has become more important than ever. We need to trust that our digital infrastructure is secure and resilient. This was also an emphasis when we put up the Call-for-Proposal for 5G standalone networks around 2019. We had said that apart from performance, security and resilience were of critical importance as well. We also need to manage the cyber risks and recover from unwanted incidents that may happen. We must put in place the building blocks of comprehensive digital security because they are essential to our ambitions to grow a vibrant digital economy.
4. For today, let me focus on two other aspects that the Government is working on that are also very important for growing a vibrant digital economy. First is on capabilities, particularly in 5G, to enable digital innovation; and secondly and equally importantly, a digitally ready workforce.
5. First, let me deal with capabilities in 5G. The experts in this room or who are joining us online already know why it has potential to transform industries. 5G is significantly faster than 4G, with a near-zero latency. It has a higher device density than 4G. Can you imagine in an area like Punggol Digital District, up to half a million robots or devices simultaneously connected through 5G and talking to each other?¹
6. With these features, 5G will enable the widespread adoption of emerging technologies and unlock innovative business models that leverage high-speed connectivity.

¹ 5G can provide simultaneously connectivity of up to 1 million connections per square kilometer. ([accenture.com/ae-en/insights/5g-index](https://www.accenture.com/ae-en/insights/5g-index))

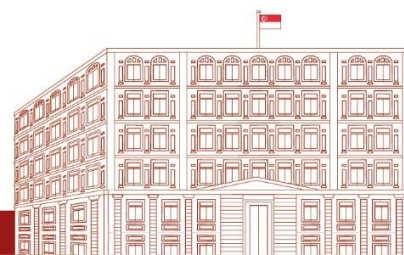


7. As an expression of the Government's commitment, IMDA had set aside \$40 million to support the development of use-cases even before 5G services were launched. By now, most of you know that Singapore is on track to provide nationwide outdoor coverage by 2025, likely earlier.
8. The stage is therefore now set for adoption and commercialisation of 5G solutions. To accelerate the process, IMDA has dedicated another \$30 million to a 5G Innovation programme.
9. IMDA is also partnering with the Maritime Port Authority of Singapore to reimagine the future of Singapore maritime as we extend 5G coverage over our port waters. This testbed that we are working on may well be a world-first. The secure and high-performance network provided by Maritime 5G enables use-cases which will enhance safety and efficiency. For example, harbour pilots can now use real-time video imagery to support ship captains as they navigate our busy waterways. It saves time and is also safer for the harbour pilots.
10. We are also building up future capabilities in cutting-edge communications and connectivity research. We are investing close to \$70 million as part of Singapore's Research, Innovation and Enterprise efforts and recently launched the Future Communications Connectivity Lab.
11. Our investments in 5G infrastructure and use-cases aim to strengthen Singapore's role as a 5G innovation hub that is home to many first 5G use-cases within the region.
12. Many of you will be familiar with the fact that in June this year, Deputy Prime Minister Lawrence Wong launched a movement that was intended to try and help Singaporeans rethink our social compact, and what we need to move Singapore forward. Six pillars had been identified, of which one is relevant to today's conversation. This is the Equip pillar, the idea of lifelong learning and the idea of helping our citizens find ways to stay relevant in the future economy. This is relevant to us because we know that to explore the new frontiers of 5G and other emerging digital technologies, a skilled workforce is essential. In this regard, we have three key priorities.
13. First, upskilling our overall workforce with in-demand digital skills and when I say the overall workforce, we are talking about around 2.5 million people who are part of the local workforce as they are our primary responsibility.
14. Second, within this overall workforce, there is a group who we call our Information and Communications (I&C) workforce. Broadly speaking, they are our tech workforce, although in today's context, almost everyone needs some tech in order

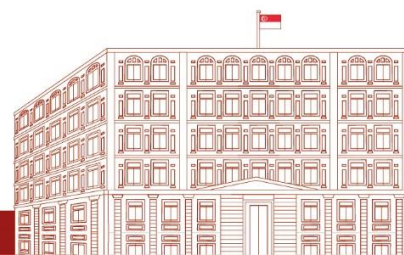


to be effective at work, but those who are probably steeper in tech skills – the tech workforce – they are a very important group that we want to help upgrade skills to stay relevant.

15. Thirdly, another very important priority is partnering with industry to boost the reskilling efforts. Many of these interventions are what could be described as supply side interventions, making programmes available, curating the training capacities, as well as the curriculum. But all of these good efforts on the supply side do not materialise into useful applications, unless on the part of the companies, there is also uptake of the programmes and there is also intentional training of the workforce in order to be ready for the future.
16. Let me touch on the first priority in upskilling our overall workforce. The Government is making an effort to support our professionals to acquire new digital skills and domain knowledge.
17. IMDA's TechSkills Accelerator (TeSA) initiative has trained more than 160,000 individuals with in-demand skills such as AI, IoT, or Cloud Engineering.
18. The 5G & Telecoms Academy (5G Academy) – which is supported by IMDA in partnership with Institutes of Higher Learning and industry – has also trained more than 7,000 professionals within two years since its launch in 2020.
19. This has, in fact, exceeded the initial target of training 5,000 professionals within three years, and was made possible by the close collaboration with our partners.
20. Take for example, Ng Yen Ling and Mohamed Najib from Singtel.
21. They are responsible for developing consumer products and they previously focused on making these products attractive to us. However, the trend towards 5G means that the kind of products that they typically deal with will change.
22. The 5G Academy's Career Conversion Programme for Infocomm Professionals – managed by the National University of Singapore and Singapore Polytechnic, and supported by Workforce Singapore – equipped them with 5G skills and allowed them to explore the latest technologies that leverage on 5G capabilities such as Augmented Reality and Extended Reality. These are the kinds of things that they need to know about in order to be able to engage their industrial customers meaningfully and help them design products that will be useful to them.
23. It will therefore help to empower them as individuals, as well as the company to create innovative products for the 5G economy.



24. Let me now turn to the second part of our efforts to create this digitally enabled workforce. As our Digital Economy transforms with the adoption of emerging technologies, we will help our tech workforce stay resilient and competitive. This is especially so as the tech workforce in our I&C sector has grown by nearly 30% from 2017 to 2021, and there is every likelihood that it will continue to expand.
25. I am very pleased to announce the launch of the Information & Communications (I&C) Jobs Transformation Map in partnership with the Ministry of Manpower and Workforce Singapore.
26. The I&C Jobs Transformation Map will build on the foundations laid by TeSA to deepen the reskilling and resilience of our I&C workers. How is this done? In fact, we conceptualised this several years ago when I was still with the Ministry of Manpower, because for industry transformation, we lay them out in the form of an industry transformation roadmap. If you have some sense of where the industry is going and how enterprises should be transformed in accordance with the industry developments, then it stands to reason that equally you must define how the jobs will change and how the skills requirements will change. That is what the Jobs Transformation Map (JTM) is supposed to do.
27. First, we have to identify the emerging technological trends that are specific and relevant to that particular sector. In the case of the I&C sector, we are talking about 5G & IoT, Blockchain, or Cloud Computing. What this JTM then does is to guide employers in redesigning jobs for impacted workers and providing the necessary training or reskilling for them to take an evolved or emerging job role.
28. What we have seen with the Jobs Transformation Map would help people like Peh Yu Fen, a lead systems engineer at StarHub.
29. It illustrates how the trend towards AI and DevOps will have a high impact on systems support engineers like her.
30. It then identifies other roles that have an overlapping skillset that they can transition into such as a DevOps or SysOps Engineer, as well as the necessary skills top-ups.
31. In Yu Fen's case, StarHub had nominated her to undergo a 5G Career Conversion Programme, deepening her expertise and opening up her career options.
32. Third, we will need partners who can drive new programmes and scale up efforts to reskill and improve the competitiveness of our workforce.



33. IMDA will therefore be conducting a Call-for-Proposal exercise to set up multiple Training Partner Consortia, where appointed Training Partners will assist employers in identifying at-risk I&C professionals and reskilling them. In other words, the training partners will help companies to think of workforce planning in a more systematic way.
34. Led by Institutions of Higher Learning, Training Partners will collaborate with companies to develop flagship reskilling programmes on basic and intermediate skills in three in-demand areas namely: 1) Software Engineering; 2) Cloud & Mobility; and 3) AI & Analytics.
35. Training partners will provide additional support to heavily impacted employees, such as redeployment and customised on-the-job training.
36. We will need the partnership of companies to truly scale up our efforts. I sincerely urge employers to consider how they can tap on these initiatives to proactively upskill and reskill their workforce; and redesign impacted jobs or redeploy impacted workers to newly created or higher-level job roles.
37. Let me conclude. For businesses, 5G will open up new possibilities to adopt other emerging technologies such as AI or IoT. Equally for our workforce, 5G will open up new exciting career opportunities.
38. This is the way we can all move forward together, seizing new opportunities and working in partnership to overcome the challenges.
39. Thank you.

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