The 3 Key Components to Building Malaysia's Future-Ready Network

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- *What key transformational steps must Malaysia make to be truly competitive in the global arena?*

The COVID-19 era has upended much of how we work and live. The pandemic has powerfully highlighted the critical importance of digital tools and connectivity in almost every aspect of our lives. A reliable internet connection at home has become an essential daily utility. Our experience locally reflects the global picture: for example, Pew Research Centre released a US study a few months ago, which showed 90% of adults confirmed the importance of technology and internet access.

In Malaysia, network infrastructure service providers faced up to the challenge with TM rapidly moving to resiliently support the sudden spike in data traffic. Data consumption levels peaked at almost 500GB per household, 2.5 times pre-pandemic levels.

Part of our efforts to meet this sudden demand led to us significantly increasing our CAPEX spend on improving our network. It was a necessary move, which helped us acclimatise to the overnight change of "the home becoming the centre of everything".

Looking ahead, we expect data consumption to double by 2025, driven by increased consumption of video and other new applications. Consumer IoT in particular is set to offer life-changing experiences. With IoT, consumers will soon control all their smart devices or appliances in their homes via their smartphones.

Our investments are motivated by our mission to provide a more inclusive network experience by making equitable fibre deployments in both urban and rural areas for the long term.

In the coming years, Malaysia's 'network of tomorrow' will need to cater to the substantial increase in consumer data consumption. We believe there are three key initiatives to help realise this goal for the nation:

1. TRANSFORM ALL COPPER-BASED INFRASTRUCTURES TO FIBRE
Under JENDELA (the national digital infrastructure initiative), the government entrusted TM with the fiberisation of 6 million households (out of 7.5 million). As of 2021, we have covered 5.7 million households with fibre-to-the-home (FTTH) broadband networks.

Despite the challenges posed by the pandemic, we achieved our targets. Some of the hurdles in this endeavour included: a lack of materials due to supply chain disruption; limited workforce capabilities; and permission to work only during specific hours. Nevertheless, in 2021 alone, we provided 1 million ports, surpassing all of our previous delivery numbers.

The importance of fiberisation lies in how it will transform the lives of people every day. Improvements in internet speeds is just one the most obvious benefits of fibre optic cables. This will also provide 10 to 20 times faster and more reliable connectivity than conventional copper. Currently, the spotlight seems very much focused on the potential benefits of 5G and leads to the question of what fiberisation has to do with 5G?

5G promises to deliver much better throughput and bandwidth. Fiberisation, on the other hand, is about revamping and refreshing network transport systems with fibre cables, and adequate

fiberisation is essential for an effective 5G rollout. DNB - the wholesale network provider for 5G services - has placed its faith in our advanced network infrastructure capabilities by signing a fibre leasing agreement with a total contract value of RM2 billion over ten years. DNB will leverage our fibre cable network, which spans over 650,000km, to provide its 5G services.

2. MODERNISATION OF NETWORKS THROUGH VIRTUALISATION

Virtualisation enables the transformation of hardware network functions to software-based functions.

It essentially allows us to scale the network technologies to meet the needs of our customers. For example, DNB building a higher network capacity will allow it to onboard other service providers to deliver 5G services using its wholesale network. We are also building our own telco cloud where all virtualised network elements reside. We aim to achieve network virtualisation at five times the current levels by 2024!

These network automation initiatives will help us deliver services even more efficiently, reducing the potential for human error. This reduces cost and also differentiates our services. In addition, network modernisation will help introduce new and innovative services much faster to our enterprise customers.

3. UPSKILLING AND RE-SKILLING OUR TALENT

Deploying new technologies cannot succeed without the contribution of skilled talent.

We empower a workforce that equally embraces our vision and is capable of harnessing the potential of new and emerging technologies. Reskilling and upskilling our employees has become a critical endeavour given the rapidly advancing nature of technologies such as AI and others.

At all levels of society, the digital skills gap remains a global problem, especially in the era of 4IR. Having skilled talents is a key factor that helps differentiate companies and countries. Among the many studies reflecting that fact, The 2019 World Economic Forum highlighted that at least 133 million new roles will be generated by 2022 as one outcome of technological advancement.

Given the convergence of IT and networks, TM has increased efforts to train network engineers, who account for 40% of our overall network team. Our objective is to train them as a vital resource especially as today's networks have evolved beyond just being about the hardware.

Whether we are discussing our 5G rollout or addressing the digital divide, fiberisation, network modernisation and talent development are the three invaluable ingredients that will help us prepare for a globally competitive digital economy.

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