



## OUR NETWORK

Provided connectivity for all through network coverage and service quality with 4G leadership and fibre footprint expansion

As the leading Converged Network Solutions provider, Maxis has continued to not only expand its network coverage footprint and indoor reach, but has also invested in enhancing its service quality and state-of-the-art capabilities to ensure our customers enjoy reliable connectivity and an overall Unmatched Personalised Experience always. We are leveraging technological innovation and aggressively powering our digital transformation to stay ahead and to deliver on our ambitions. In the year under review, we invested close to RM1.2 billion of capex to upgrade network sites, enlarge our fibre footprint and build converged solutions.

To be able to effectively serve our subscribers, comprising of 12.4 million subscriptions in Mobile and Fibre services, we have dedicated functions covering all aspects of network growth, services, operations and maintenance for timely delivery of businesses enablement and meeting our promise in best customer experience. Given the critical importance of network planning and optimisation, we have put in place investments to ensure that we remain as an industry leader in network coverage and service quality. All the network design principles are tuned to exceed the minimum requirement of MCMC's Mandatory Standard Quality of Service while the internal processes are periodically reviewed and enhanced, in accordance with our ISO9001:2015 certification and digital transformation initiatives.

### Unmatched converged network experience

Maxis has continued to uphold our commitment of enhancing both mobile and fibre services, following the momentum gained from the droves of consumers and enterprises switching to a largely digital-first behaviour in 2020 because of the pandemic lock-down. To ensure we continue delivering the best experience, Maxis has invested substantially in building and upgrading sites to meet the growing needs of our customers. This been necessary, especially during a time when connectivity, speed and stability helps to assure the zero business interruption, retaining productivity, and continuous education for the many who are working and learning from home.

In 2021, we accelerated our network capacity upgrades to keep up with the surge of network traffic while maintaining our Mobile network leadership. We also continued to deliver consistent customer experience as a leader in 4G download speed since 2016 as reported by the MCMC. The success in retaining our Mobile services superiority is also anchored with our advanced transmission high speed microwave and wide deployment of fibre hence enhances on the resiliency of our network, ensuring for a continuous and Always On experience.

In line with our converged network ambitions, we have expanded our fibre transmission to 21,000 km. This expansion, plus the extensive reach of our fibre access agreement has enabled us to grow our Home subscribers to more than half a million subscribers, with 92,000 subscribers added in 2021 itself. Besides the successful marketing programme, we also trust that the healthy growth of Home is in part due to the improved customer experience contributed by our LTE back-up dongle for seamless and zero interruption, hence, delivering the Always On experience.

### Our Network Leadership Highlights



**4G Leader** in 4G download speed (as per MCMC report)



**92.3% Speed data** samples above 3 Mbps



**93.5% 4G LTE** Population Coverage



**57% Voice** traffic conducted over VoLTE



**21,000 km Expansion** of our fibre transmission



**530,000+ Subscribers** for Home and Business Fibre



**2,500 site** upgrades for JENDELA



# Our Value Creation Theme 1: Enabling a Digital Nation

Our Value Creation Outcome

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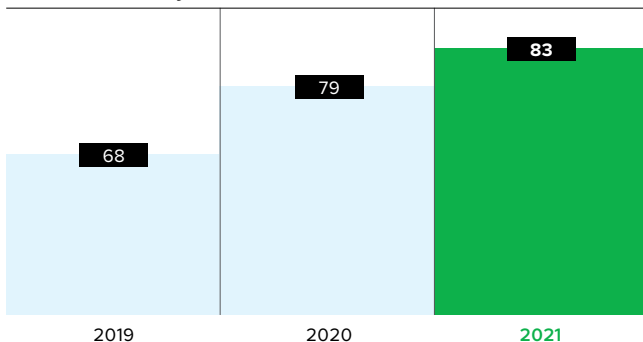


We have also seen encouraging progress in our Voice over LTE (VoLTE) service since its launch in the fourth quarter of 2020. VoLTE enables customers to enjoy a better voice experience with better connectivity. The growing traction has led to the number of active subscribers surpassing our 2021 target, with more than 57% of our voice traffic being conducted over VoLTE; highest in traffic enjoying premium voice experience.

Maxis is also proud to report that we actively contribute to nation-building through our support of the Jalanan Digital Negara Plan (JENDELA) initiative, which is targeted at improving infrastructure to meet the need for higher quality fixed and mobile connectivity for all Malaysians. Maxis continues to cooperate with the industry regulator and other Malaysian telcos to make connectivity a basic utility. In 2021, we completed more than 2,500 site upgrades to support JENDELA.

In addition, and as part of the JENDELA initiative, we are pleased to highlight that we are near to complete in the implementation of the 3G sunsetting directive announced by the MCMC. In 2021, Maxis embarked early in the beginning of the year to communicate and engage with our customers on the impending 3G sunset to ensure customer experience impact is kept to minimal. We started ahead of the industry to reduce 3G connectivity progressively and carried out state-wide shutdown in the last quarter of 2021 and 1st quarter

### Service Delivery NPS\*



\* NPS scores from our Enterprise customers.

2022. This initiative has allowed us to repurpose the 3G spectrum for 4G usage and has enabled our customers to experience better overall connectivity.

### Supporting local business

The Network team continues to support large businesses and small-and-medium enterprises (SMEs) through a suite of connectivity and managed services solutions. In 2021, we demonstrated our strong delivery capabilities by successfully producing Software Defined Wireless Access Network (SDWAN) solutions, Bandwidth Leasing and Managed Internet of Things (IoT) solutions, which were deployed to large Malaysian clients. We were also the first to offer Private LTE offshore solutions to our customers.

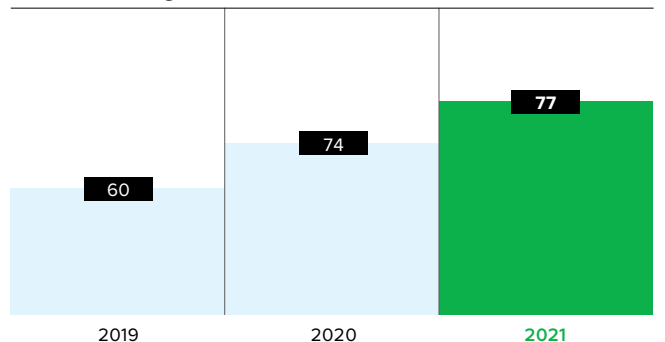
In enabling and supporting our Business Growth converged ambitions, the team is very proud of its Software Defined capable Maxis Programmable Network (MPN) which allows for agility, scalability, visibility ease of customisation and adaptation to requirement with security for our customers. Leveraging on this capability, we are the first telco in Malaysia to offer services such as Bandwidth on Demand (BoD) to businesses.

As an enabler to the Always On proposition, our solutions also benefit on the resiliency of our Network from advanced IP transmission to seamless fail-safe backup of LTE network of our solutions, ensuring that businesses and consumers alike are able to enjoy uninterrupted connectivity.

To support future needs, we have initiated 5G proof of concept (PoC) demonstrations for Malaysian companies. We believe 5G will be the enabler for Business converged solutions as it will provide a competitive advantage through higher speeds, low latency, network slicing and prioritisation options.

Our unrelenting pursuit of service excellence enabled us to maintain and achieve an excellent Net Promoter Score (NPS) of 81 for Service Delivery and 77 for Managed Services in 2021.

### Service Management NPS\*

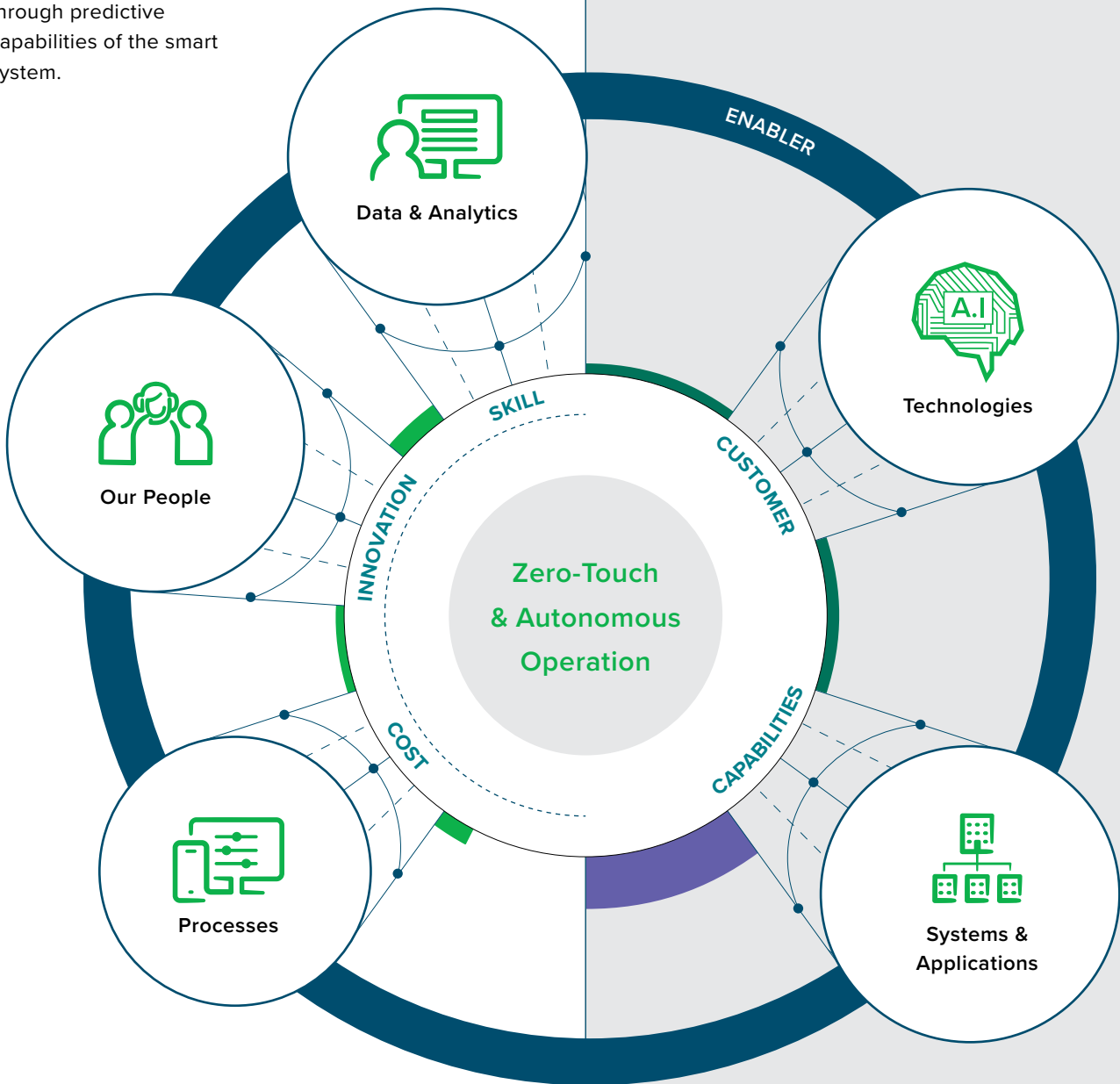




**Digitalising our Network**

In line with the digital transformation Maxis has embarked on, the Network team has also leveraged digitalisation and adopted various technologies to improve the effectiveness and efficiencies of our network design, processes and operations. The team is exploring, developing and applying more use cases related to Artificial Intelligence (AI), machine learning (ML), Robotic Process Automation (RPA) and Advanced Analytics to enable autonomous operations of our Network. Through this initiative, we have been able to improve on our fault detection and prevention through predictive capabilities of the smart system.

We were also able to improve the customer experience with proactive fault notifications, reduced downtime and provide a shorter service impact analysis (translated to faster resolve of service disruption).



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2021 Flood Network Impact & Recovery



Maxis initiated and executed several proactive measures in 2021 in preparation for the year end monsoon season. This included:

- 4 boats for use during floods located in Pahang (2), Johor (1) and Penang (1); complete with flood mitigation simulation exercises with the relevant authorities
- Deployed generators as standby to 49 sites in anticipation of prolonged power disruptions during floods based on previous years' experience
- Mobilised additional contractor support in strategic locations prone to floods
- Installed snorkel on Maxis vehicles to enable mobility in flood-impacted areas or roads
- Prepared 55 portable generators nationwide ready-for-mobilisation from all key bases (Central-11, Eastern-10, Northern-12, Southern-9 and East Malaysia-13)



Although we were prepared for the monsoon season, specifically on the East Coast of Malaysia, like the rest of the nation, we were caught by surprise by the unexpected severe flooding impacting other states, namely Selangor, Negeri Sembilan and Kuala Lumpur.

Despite this, the impact to our Network was manageable resulting from our enhancement of the network's infrastructure robustness such as transmission redundancy for collection sites, strengthening of our battery back-up and minimising the number of interdependent sites (to the collection points) hence making the network to be more resilient.

The peak of the disaster was between 18th to 20th December 2021 with sporadic locations thereafter until 5th January 2022. The event caused both Mobile and Fibre service disruptions which were contributed by Tenaga Nasional Berhad (TNB) essential power shutdown and road closures. The floods also impacted our Enterprise customers, but more than 90% were recovered by 31 December 2021. The remaining were related to premise clean-up and replacement of faulty devices submerged during the flood.

Maxis teams and our vendors were instantly mobilised to address the network disruptions. Service Operations Center also immediately set up an Emergency Disaster Warroom, that ran 24/7 throughout the period, to manage customer communications as well as providing daily updates to MCMC as well as periodic status update through SMS broadcast and daily emails to Maxis management on the restoration progress.

To ensure fast recovery, Maxis Field Operations worked around the clock to explore alternative access to impacted sites and obtain parts replacement for damaged equipment. Additionally, the team deployed portable and mobile gensets to sites experiencing prolonged power shutdown. Maxis also worked closely with industry players in genset sharing together with Fire Services Department (Bomba), TNB, National Security Council (MKN), NADMA and MCMC for access arrangements to affected sites. The majority of affected mobile sites were recovered by 27 December 2021, whereas fixed network collection points (OLTs) connectivity on TM-HSBA access was recovered by 31 December 2021.