



Q2 2022 REPORT

19 September 2022



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Suruhanjaya Komunikasi dan Multimedia Malaysia

JENDELA THE PROGRESS

Connectivity has no boundaries and it brings vast economic opportunities for everyone. With global reach, it allows people to improve their quality of life and opens access to the previously inaccessible things and information. With almost three million users, Internet connectivity has been emerging as one of the most important tools of communication.

The Government recognises the digital divide among the *rakyat* has created inequality in economic opportunities and widened the rich-poor gap and the lack of accessibility is among the main factors contributing to the widening digital divide. To address the concern, a 5-year holistic action plans namely the *Jalinan Digital Negara* (JENDELA) was introduced by the Malaysian Communications and Multimedia Commission (MCMC) and driven by the telecommunications industry to improve digital connectivity and achieve nationwide 4G coverage. This transformative initiative is in line with the 12th Malaysia Plan (12MP) for digital growth.

JENDELA aspires to fiberise nine (9) million premises, expand 4G coverage to 100% of populated areas, and increase mobile broadband speed to 100 Mbps by end of 2025. It is on track to achieve its stipulated targets despite both internal and external challenges.



JENDELA JOURNEY

JENDELA, which started in September 2020, is now fast approaching the end of Phase 1 (2020 – 2022) that focuses on optimising existing resources and infrastructure for mobile and fixed broadband. Throughout the journey, JENDELA has gained acknowledgement and approval at various national platforms.

Some of them are federal recognition of telecommunications as public utility, adoption of *Garis Panduan Perancangan Infrastruktur Komunikasi* (GPP-I) by the respective state governments and the establishment of *Jawatankuasa Penyeragaman Kos Caj dan Fi Pembangunan Infrastruktur Komunikasi* approved by Mesyuarat Menteri Besar dan Ketua Menteri (MBKM).



JENDELA JOURNEY

JENDELA has gained acknowledgment and approval at various national platforms. Some of them are:

2020

1 **27 October 2020**

JENDELA and Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I) presented at Mesyuarat Majlis Perancang dan Fizikal Negara (MPFN)

2 **19 February 2021 & 27 September 2021**

Announcement of JENDELA in MyDigital and Rancangan Malaysia Ke-12 (RMK-12)

2021

3 **3 March 2021**

JENDELA, GPP-I and Telecommunications as 3rd Public Utility approved in Mesyuarat Majlis Negeri dan Kerajaan Tempatan (MNKT)

4 **2 June 2021**

Endorsement of 'Telecommunications as a Public Utility' by the Cabinet

5 **13 July 2021**

Uniform Building By-Laws (UBBL) 1984 amendment that also includes the use of new G20 form approved by MNKT

6 **13 August 2021**

JKT sent a letter to SUK of 11 states in West Malaysia and KSU Kementerian Wilayah Persekutuan (KWP) to gazette the approved UBBL amendment

2022

7 **28 June 2022**

Establishment of Jawatankuasa Penyeragaman Kos Caj dan Fi Pembangunan Infrastruktur Komunikasi approved by Mesyuarat Menteri Besar dan Ketua Menteri (MBKM)

JENDELA TARGET










JENDELA aims to enable enhanced coverage and good quality of experience to the people nationwide. By the end of 2025, JENDELA aspires to have nine (9) million premises passed with gigabit speed, 100% Internet coverage in populated areas and 100 Mbps mobile broadband speed.

For the Phase 1 of JENDELA (2020–2022), JENDELA is on track to achieve its targets of 7.5 million premises passed with gigabit speed, 96.9% 4G coverage in populated areas and 35 Mbps mobile broadband speed. Phase 1 also saw the gradual retirement of 3G networks by the end 2021, and Satellite Connectivity to improve mobile coverage in remote areas, which was previously in Phase 2, was brought forward to Phase 1 to serve more rural areas. The progress of Phase 1 influenced guiding principles and approach of Phase 2.



CONNECTIVITY FOR ALL
Enhanced coverage and
quality of experience

JENDELA Target

Phase 1 (2020 -2022)			Phase 2 (2023 -2025)
 4G coverage in populated area 96.9%	 Mobile broadband speed (mean) 35 Mbps	 Premises passed with gigabit speed 7.5 mil	Completion of Phase 1; transition to Phase 2
 Gradual retirement of 3G networks by end 2021	 Satellite Connectivity to improve mobile coverage in remote areas (previously in phase 2)	 5G planning and implementation for commercialisation (previously in phase 2)	
Progress of Phase 1 influenced guiding principles and approach of Phase 2			 Internet coverage in populated areas 100%
			 Mobile broadband speed (mean) 100 Mbps¹
			 Premises passed with gigabit speed 9.0 mil
Telecommunications as a Third Public Utility			
JENDELA Governance, Monitoring and Reporting			
5GDP and Planning		5G Roll-Out	

Overarching National Initiatives

Note: ¹ As per existing roll-out plan by DNB under JENDELA

JENDELA PHASE 1 ACTION PLANS (2020 - 2022)




MCMC and the telecommunication service providers carried out a total of eight (8) initiatives aimed at improving the overall connectivity, of which six (6) initiatives were completed. The remaining two (2) to be completed by the end of 2022. The construction of 1,661 new sites across Malaysia to extend the mobile 4G coverage in rural and remote areas is in various stages of survey and permit approval, while the fiberisation of 929,631 additional premises are on track to be accomplished by the end of 2022 (as of Q2 2022, 624,955 premises completed).

On top of this, another four (4) initiatives deployed to support policy and harmonisation for the implementation of JENDELA have been accomplished by Q2 2022. These include fiberising premises, constructing new mobile towers, upgrading existing base stations, shutting down 3G networks, and other activities related to policy support and coordination.

The JENDELA Map was introduced in July 2021 and it has three main functionalities i.e. coverage map, users' feedback and feedback status. It is an independent information system to guide and inform service providers and the public on the telecommunication services and coverage available. The public is able to check the fixed and wireless broadband coverage in their area and submit feedback or complaints on issues like connectivity downtime, coverage or dropped calls.

The support of all stakeholders has enabled us to advance the planning and rollout of 5G services and satellite connectivity from Phase 2 to Phase 1 to address connectivity challenges in rural and remote areas. About 839 sites have been deployed with Satellite Broadband, while selected towns in Cyberjaya, Putrajaya and Kuala Lumpur now enjoy 5G services followed by further expansions to other major towns in Johor, Penang, Negeri Sembilan, Kelantan, Perak, Perlis, Pahang, Sabah and Sarawak.

JENDELA Phase 1 Action Plans (2020 – 2022)

	2020	2021	2022
 National target realisation of 96.9% mobile coverage, 35 Mbps speed and 75 million premises passed	1 Construct 940 new 4G sites in urban and suburban areas ✓		
	2 Upgrade 16,214 existing base stations in urban & suburban areas ✓		
	3 Fiberise 352,101 premises ✓		
	4 Upgrade 4,589 existing 2G/3G base stations to 4G to expand coverage and increase the speed ✓		
	5 Sunset 3G network and migrate the spectrum for 4G technology use ✓		
	6 Fiberise 1,245,452 additional premises ✓		
	7 Construct 1,661 new sites across Malaysia to extend the mobile 4G coverage in rural and remote areas*		
	8 Fiberise 929,631 additional premises (624,955 premises passed already completed)**		
 Policy Support & Harmonisation	1 Blanket approval by States and PBTs (based on the commencement of USP sites) ✓		
	2 Access to Federal-owned lands and buildings to develop digital infrastructure ✓		
	3 Digital infrastructure to be planned, deployed and treated as public utility ✓		
	4 Standardisation of electricity tariff for communications service based on industrial rates ✓		
 JENDELA Map	1 Development of JENDELA Map Portal to provide digital infrastructure information and service availability by service providers ✓		
	Satellite and 5G have been accelerated to Q4 2022 from the initial plan under JENDELA Phase 2 <div> <div>1 Satellite Broadband at 839 locations 5G rollout to meet national targets – rolled out at 3 locations (Cyberjaya, Putrajaya, KL) ✓</div> <div>2 Expanding to other major towns in Johor, Penang, Negeri Sembilan, Kelantan, Perak, Pahang, Perlis, Sabah and Sarawak ✓</div> </div>		

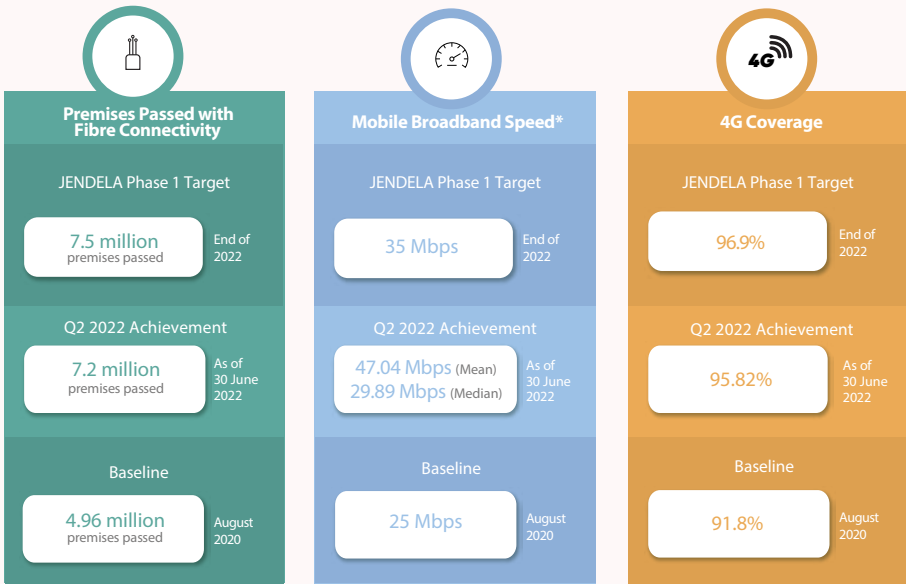


OVERALL PERFORMANCE

As at 30 June 2022, approximately 7.2 million premises have access to fibre broadband while 95.82% of all populated areas have access to 4G network. The mobile broadband speed has also increased to 47.04 Mbps (mean), far exceeding its initial target of 35 Mbps in Phase 1 which was due to complete at the end of 2022.

Moving forward, we anticipate a challenging journey to cover the remaining 1.1% of the targeted 96.9% of populated areas with 4G network services given its remote and interior geographical conditions.

JENDELA Phase 1 Overall Performances



* Based on monthly data from Ookla





OVERALL DIGITAL INFRASTRUCTURE PERFORMANCE

To enhance the overall digital infrastructure, JENDELA monitors and tracks Premises Passed with Fibre Connectivity for fixed broadband, and three (3) key components under mobile broadband: upgrade of base stations, number of new mobile towers built and Satellite Connectivity.

From September 2020 – June 2022, the industry players collectively fiberised 2,238,323 premises, upgraded 34,136 base stations to 4G technology, built 1,306 new mobile towers and enabled Satellite Connectivity to 839 sites to enhance the overall digital connectivity and experience.

Meanwhile, between April–June 2022, the industry players have fiberised 167, 758 premises, upgraded 1,710 base stations to 4G technology, built 57 new mobile towers and enabled Satellite Connectivity to 47 sites.



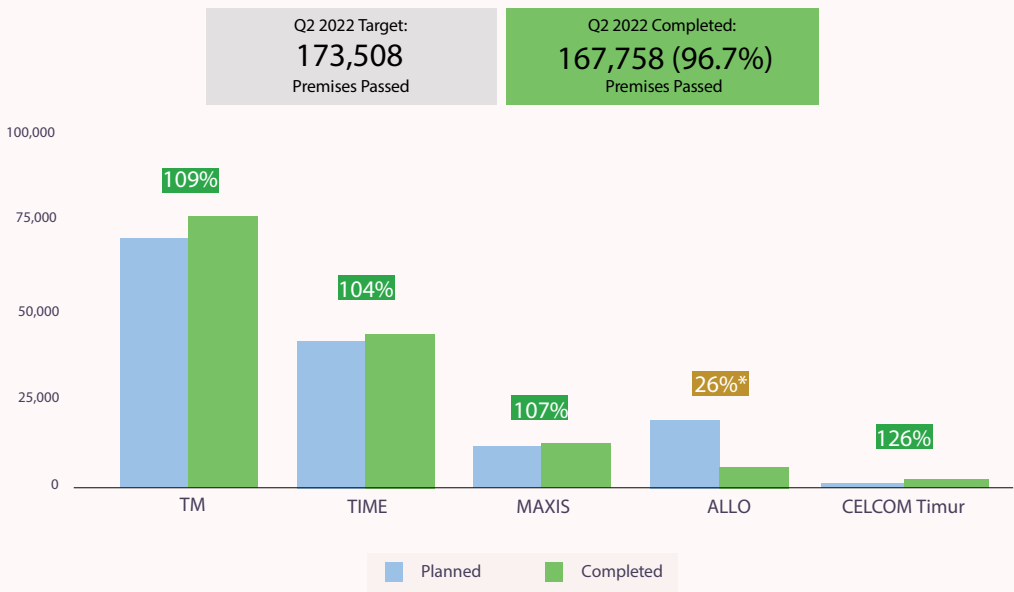
Overall Digital Infrastructure Performance					
	2020 (Sept - Dec 2020)	2021 (Jan -Dec 2021)	2022 (Jan – Mar 2022) (Apr – June 2022)		TOTAL (Sep 2020 – June 2022)
FIXED BROADBAND					
 Premises passed with Fibre Connectivity	456,757 129.7% <small>Target: 352,101</small>	1,434,142 115.2% <small>Target 2021: 1,245,452</small>	179,666 105.7% <small>Target Q1 2022: 170,017</small>	167, 758 96.7% <small>Target Q2 2022: 173,508</small>	2,238,323 Premises Passed
MOBILE BROADBAND					
 Base Station Upgrades to 4G Technology	16,367 100.9% <small>Target: 16,214</small>	13,807 110.5% <small>Target 2021: 12,499</small>	2,252 90.4% <small>Target Q1 2022: 2,491</small>	1,710 106.4% <small>Target Q2 2022: 1,607</small>	34,136 Base Stations Upgrade
 New 4G Towers	939 99.9% <small>Target: 940</small>	250 129.5% <small>Target 2021: 193</small>	60 100% <small>Target Q1 2022: 60</small>	57 109.6% <small>Target Q2 2022: 52</small>	1,306 New Towers
 Satellite Connectivity	N/A	437 Locations	355 Locations	47 Locations	839* Locations

Note:
* All 839 locations have been completed

PERFORMANCE FOR PREMISES PASSED

For the Q2 ended 30 June 2022, the industry players have fiberised 167,758 or 96.7% premises as compared to the targeted 173,508 premises. Celcom over achieved the fiberisation by 126% followed by TM (109%), Maxis (107%) and TIME (104%). On the other hand, ALLO only managed to fiberise 26% of the premises due to shortage of material and revision of plan to avoid duplication.

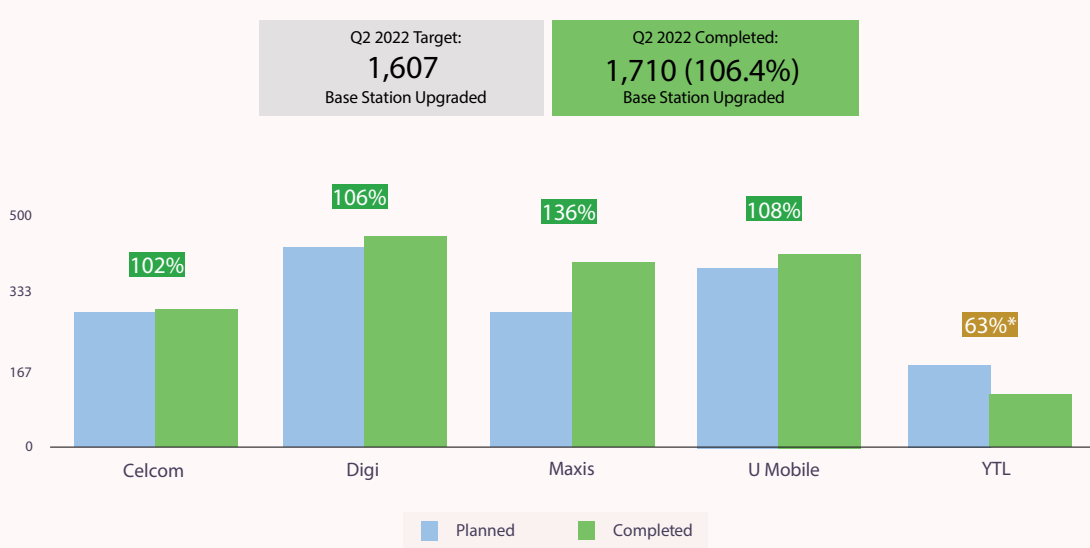
Summary of Service Providers' Performance for Premises Passed with Fibre Connectivity (Apr – June 2022)



PERFORMANCE FOR BASE STATIONS UPGRADE

For the base stations upgrade, the five (5) key mobile broadband service providers have upgraded a total of 1,710 base stations, or 106.4% of its original target. Most of the service providers exceeded their respective targets such as Celcom (108%), Digi (106%), Maxis (136%) and U Mobile (108%), while YTL upgraded 63% of the target set due to delay in fibre rollout.

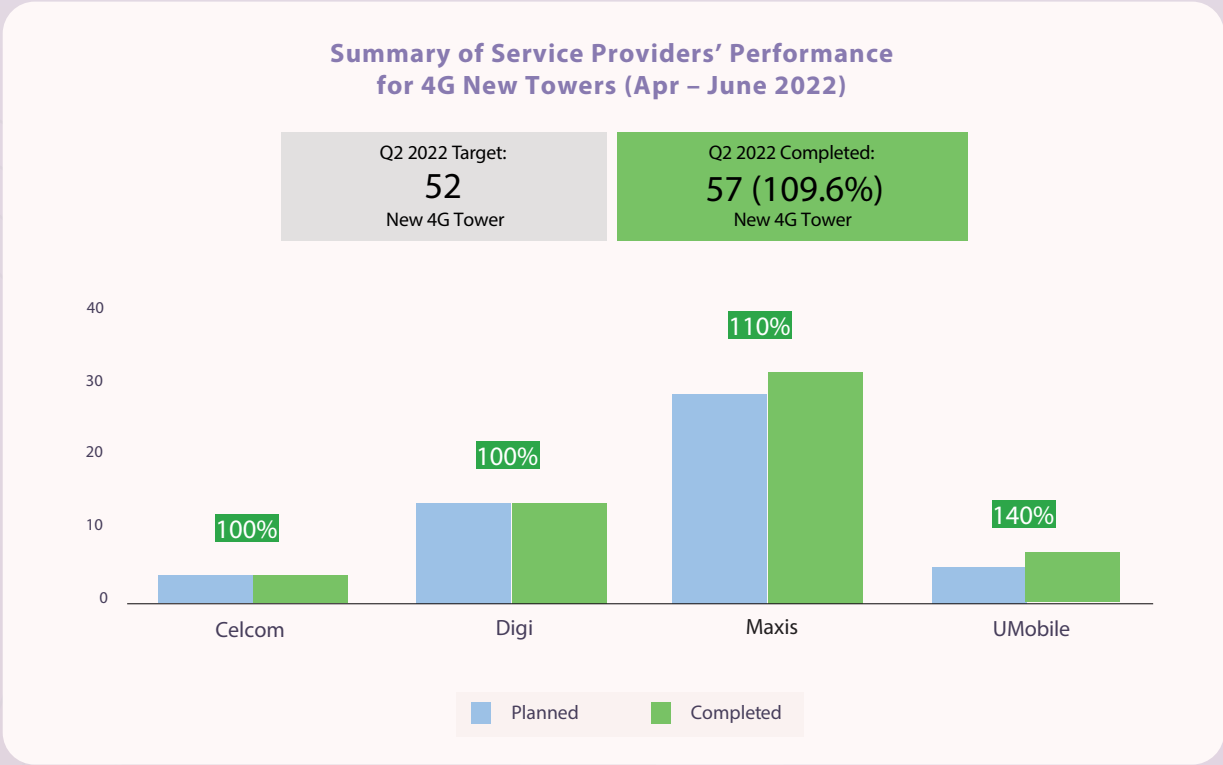
Summary of Service Providers' Performance for Base Stations Upgrade (Apr – June 2022)



Note:
* YTL's shortfalls due to delay in tower fiberisation rollout. YTL is working with the fibre provider to expedite the rollout to be completed by Q4 2022

PERFORMANCE FOR 4G NEW TOWERS

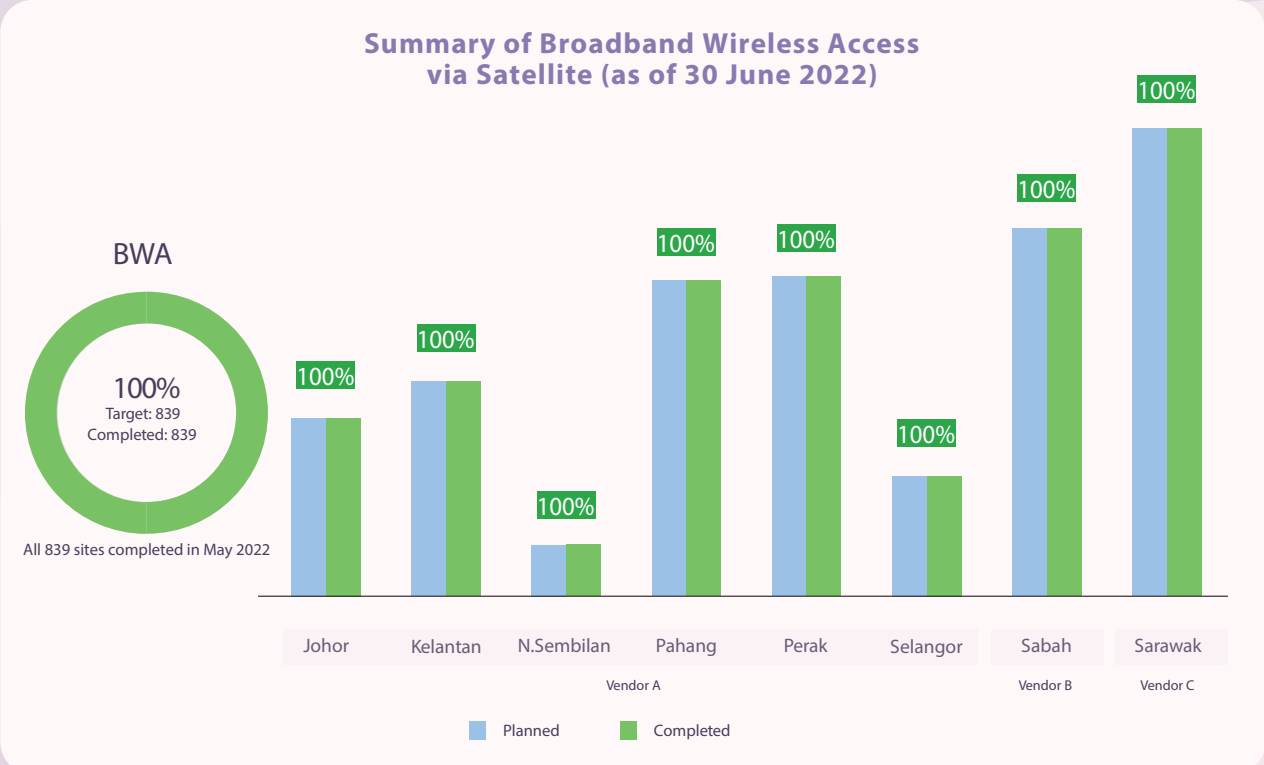
Similarly, the four (4) key mobile broadband service providers – Celcom (100%), Digi (100%), Maxis (110%) and U Mobile (140%) – successfully achieved more than their respective targets for Q2 2022, constructing a total of 57 new 4G towers or 109.6% of its original target of 52 towers.



ACCESS VIA SATELLITE

To improve mobile coverage in rural and remote areas, JENDELA has identified 839 locations across eight (8) states – Johor, Kelantan, Negeri Sembilan, Pahang, Perak, Selangor, Sabah and Sarawak – to be provided with broadband wireless access via Satellite.

As of 30 June 2022, all 839 locations were successfully completed.



ADDRESSING ISSUES AND CHALLENGES THROUGH POLICY COORDINATION AT STATE LEVEL

MCMC continuously works towards addressing issues and challenges to implement JENDELA, especially in the states through policy coordination.

Among the issues settled were:

- Recognition of communication infrastructure as the third public utility
- Adoption of *Garis Panduan Perancangan Infrastruktur (GPP-I)* at State
- Communication Infrastructure Permit Management (CIPM) system to monitor the status of communication structure permit
- Establishment of *Majlis Digital Negeri* or *Jawatankuasa Infrastruktur Negeri* to facilitate issues on the communication infrastructure development
- Establishment of *Jawatankuasa Khas Penyeragaman Kos Caj dan Fi Pembangunan Infrastruktur Komunikasi* approved by Mesyuarat Menteri Besar & Ketua Menteri (MBKM)

As of 30 June 2022, all States are reviewing the UBBL amendments which includes G1-G21 forms and yet to gazette the amendments.



Addressing Issues and Challenges Through Policy Coordination at State Level

- Recognition of communication infrastructure as the third public utility ✓
- Adoption of *Garis Panduan Perancangan Infrastruktur (GPP-I)* at State ✓
- Communication Infrastructure Permit Management (CIPM) system to monitor the status of communication structure permit ✓
- Establishment of *Majlis Digital Negeri* or *Jawatankuasa Infrastruktur Negeri* to facilitate issues on the communication infrastructure development ✓
- Establishment of *Jawatankuasa Khas Penyeragaman Kos Caj dan Fi Pembangunan Infrastruktur Komunikasi* approved by Mesyuarat Menteri Besar & Ketua Menteri (MBKM) on 28 June 2022 ✓
- As of 30 June 2022, all States are still reviewing the UBBL amendments which includes G1-G21 forms and yet to gazette the amendments

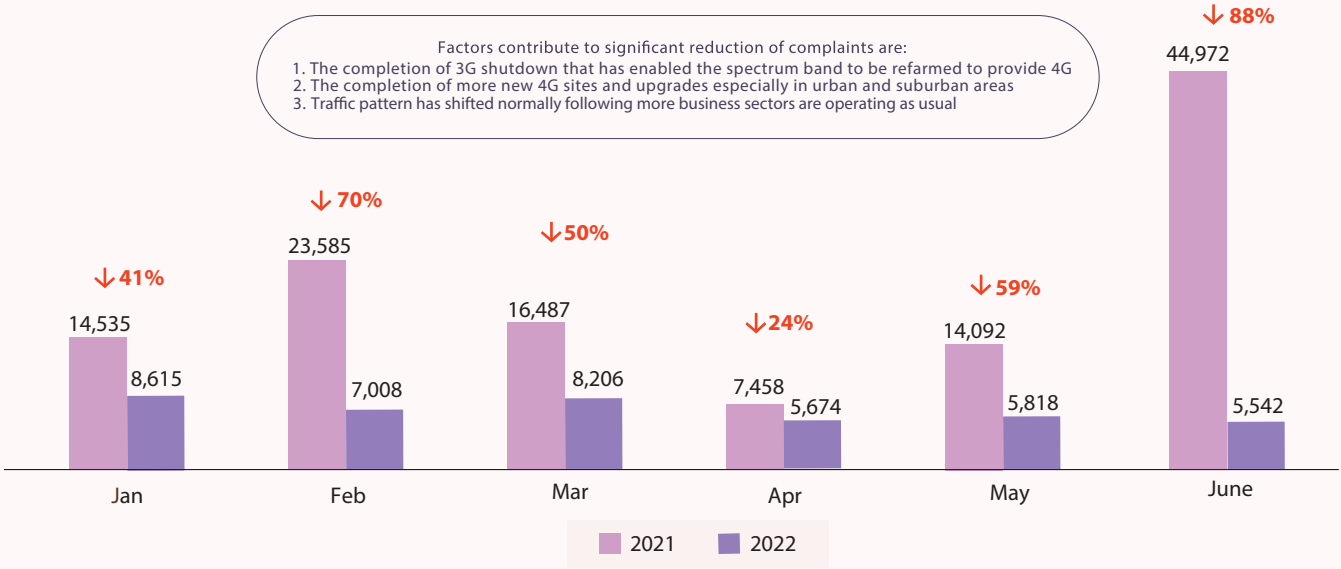
OVERALL NETWORK COMPLAINTS

From January – June 2022, a total of **40,863** network related complaints were received. This is 66% lower as compared to the same period last year which recorded 121,129 complaints.

The telcos continue to optimise the service quality of 4G network and at the same time the consumers are urged to upgrade their devices to 4G Volte phones to able to enjoy the service coverage and for better user experience.

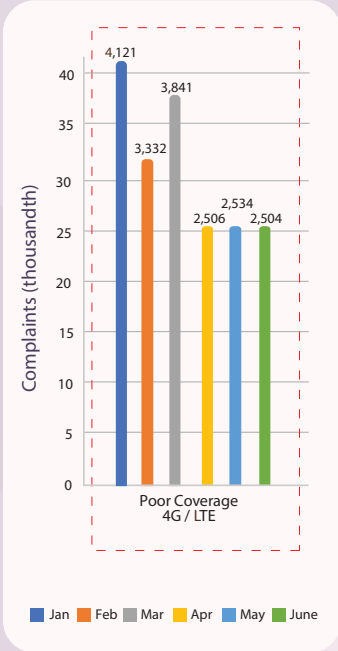
Overall Network Complaints
(Jan - Jun 2022, as of 30 June 2022)

- Factors contribute to significant reduction of complaints are:
- 1. The completion of 3G shutdown that has enabled the spectrum band to be refarmed to provide 4G
 - 2. The completion of more new 4G sites and upgrades especially in urban and suburban areas
 - 3. Traffic pattern has shifted normally following more business sectors are operating as usual



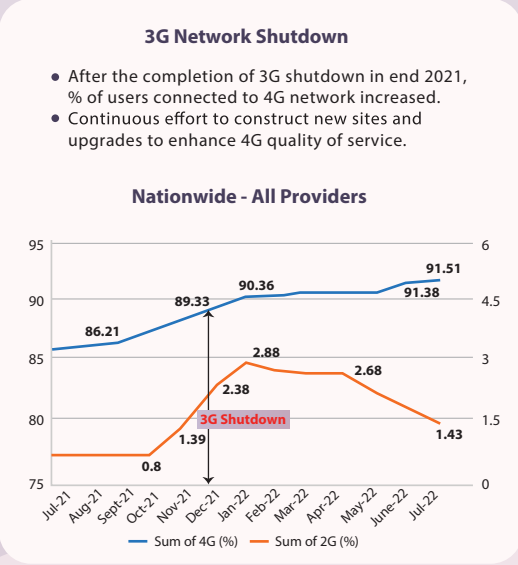
Overall Network Complaints (Jan - Jun 2022, as of 30 June 2022)

- The complaints received were dominated by cellular services with the **issue of 4G quality of services**.



Note:

- The service providers are committed to expedite the upgrading works after 3G is completely shutdown in 2021 to enhance 4G quality especially in rural areas to reduce the number of complaint related to 4G quality of services
- With the completion of 1,661 new 4G towers under JENDELA 1 project, it is expected that the complaints at rural areas will be further reduced as a result of better 4G coverage and quality received by the Rakyat



Consumer

- Still using 3G SIM card
- Using device that does not support 4G VoLTE
- Unaware of how to use VoLTE or activate the VoLTE function in their device
- Continuous awareness to educate consumers



RESOLVED CASES

MCMC and the service providers have addressed a total of five (5) connectivity complaints that gained media and public attention between April and June 2022.

Five (5) cases involving Pulau Pinang, Terengganu, Perak, Selangor, and Sarawak states have been completed.

High Profile Connectivity Issues

MCMC together with Service Providers have addressed five (5) high profile connectivity cases between April–June 2022.



Kg Pong, Pengkalan Hulu, Perak



SM Sains Tun Syed Sheh Shahbudin
Bukit Mertajam, Pulau Pinang



Cyberjaya, Selangor



Kg Tian Matu, Kg Sungai Sah Matu dan
Kg Kuala Hilir Oya Dalat, Sarawak



Kg Tok Dor, Besut

To accelerate the growth of Malaysia's digital economy, MCMC and the industry players are committed to improve digital connectivity and achieve countrywide 4G coverage. To make this happen, MCMC will continue to engage and educate the people on the right use of devices, ways to check and mitigate network disruptions as well as channels to submit feedback pertinent to connectivity issues.



Thank You





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