



# Q1 2022 REPORT

29 April 2022



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Suruhanjaya Komunikasi dan Multimedia Malaysia

## JENDELA THE PROGRESS

After 18 months of implementation, Jalinan Digital Negara (JENDELA) is well into the last leg of Phase 1 ending 31 December 2022. The national digital infrastructure plan saw the key stakeholders – the regulator, industry players and pertinent government agencies or bodies – working cooperatively since late-2020 to expand existing 4G coverage to 100% of populated areas, increase mobile broadband speed to 100 Mbps, and fiberise nine (9) million premises by end of 2025.

By the end of first quarter of 2022 (Q1 2022), the industry has accumulatively fiberised 2,070,565 premises, upgraded 32,391 base stations, and constructed 1,249 new mobile towers nationwide. These concerted efforts are geared towards optimising existing resources to provide Malaysians with widespread quality broadband coverage and experience as well as facilitating the rollout of 5G network services, which has been accelerated from Phase 2 to Phase 1.

After 18 months of implementation, JENDELA is well into the last leg of Phase 1 ending 31 December 2022



## JENDELA JOURNEY

Since its implementation in September 2020, JENDELA has been confronted with a multitude of challenges contributed by the COVID-19 pandemic, restrictions and natural disasters such as the devastating floods and monsoon season.

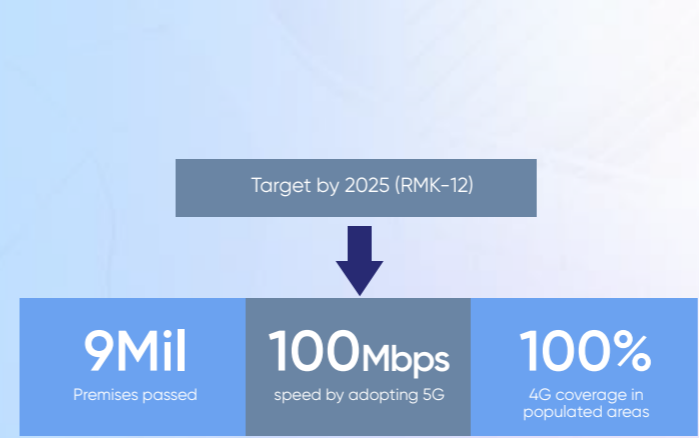
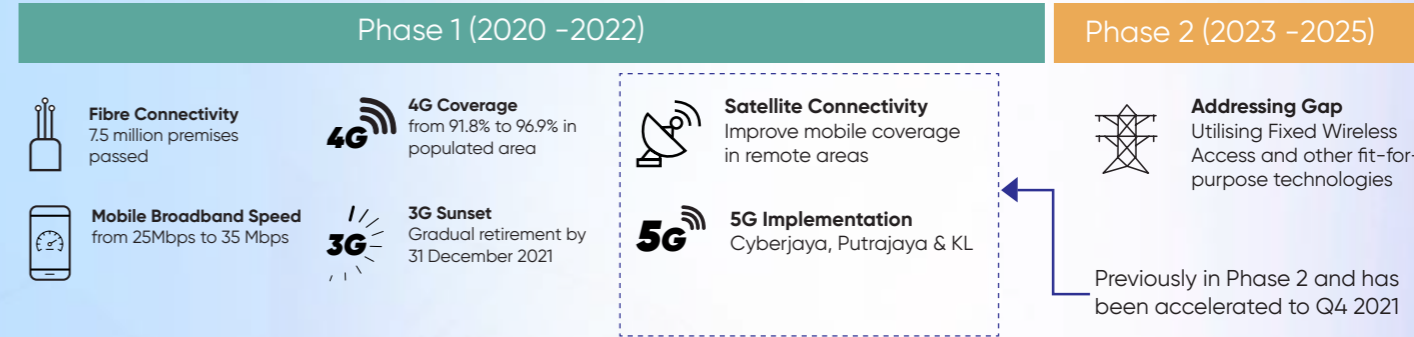
Nevertheless, JENDELA continues to receive overwhelming support and acknowledgment from the industry players, federal and state government authorities, media, and the analysts' community. Some of the key achievements include the adoption and announcement of JENDELA in the MyDigital national blueprint, federal recognition of telecommunications as a public utility, and the adoption of *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)* and Uniform Building By-Laws (UBBL) as standard by the respective state authorities.

Satellite connectivity improving mobile coverage in remote areas, as well as 5G implementation in Cyberjaya, Putrajaya and Kuala Lumpur, which were previously planned for Phase 2 have been accelerated to Q4 2021.

These achievements clearly demonstrated the commitment of the Malaysian government, through MCMC, to transform Malaysia into a high-income, high-technology digital nation by 2025.



### JENDELA Journey



- 2020/2021
- JENDELA has gained acknowledgment and approval at various national platforms. Some of them are :
- JENDELA and *Garis Panduan Perancangan Infrastruktur Komunikasi (GPP-I)* presented at Mesyuarat Majlis Perancang dan Fizikal Negara (MPFN) on 27 October 2020
  - Announcement of JENDELA in MyDigital on 19 February 2021 and RMK-12 on 27 September 2021
  - JENDELA, GPP-I and Telecommunications as 3rd Public Utility approved in Mesyuarat Majlis Negeri dan Kerajaan Tempatan (MNKT) on 3 March 2021
  - Endorsement of 'Telecommunications as a Public Utility' by the Cabinet on 2 June 2021
  - UBBL 1984 amendment that also includes the use of new G20 form approved by MNKT on 13 July 2021
  - JKT sent a letter to SUK of 11 states in Semenanjung and KSU Kementerian Wilayah Persekutuan (KWP) on 13 August 2021 to gazette the approved UBBL amendment

## JENDELA PHASE 1 ACTION PLANS

JENDELA targets to complete the construction of 1,661 new 4G mobile sites and fiberisation of 929,631 premises by the end of 2022. As of 31 March 2022, there are only 473,000 premises to be fiberised while all the identified locations for the new sites are undergoing site inspections or surveys. 798 out of the 839 identified rural and interior locations are now provided with satellite broadband access.



### JENDELA Phase 1 Action Plans (2020 – 2022)

	2020	2021	2022
<p>National target realisation of 96.9% mobile coverage, 35 Mbps speed and 7.5 million premises passed</p>	1 Construct 940 new mobile sites in urban and suburban areas	✓	
	2 Upgrade 16,214 existing base stations at 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 (already completed 277,530 premises passed in 2021)**		✓
<p>Policy Support &amp; Harmonisation</p>	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		✓
<p>JENDELA Map</p>	1 CIMS to be upgraded into a one-stop digital infrastructure databank	✓	
	2 Rakyat-centric Portal on Service Coverage Availability by SPs	✓	
	3 Integration of e-Spectra and CIMS		✓
<p>Satellite and 5G have been accelerated to Q4 2022 from the initial plan under JENDELA Phase 2</p>		<p>Satellite broadband at 839 locations</p>	<p>Already completed at 798 locations</p>
<p>5G Demonstration</p>		<p>5G planning</p>	<p>5G rollout to meet the National Aspirations Rollout in 3 locations – Cyberjaya, Putrajaya and KL</p>

\* All sites in site survey stage

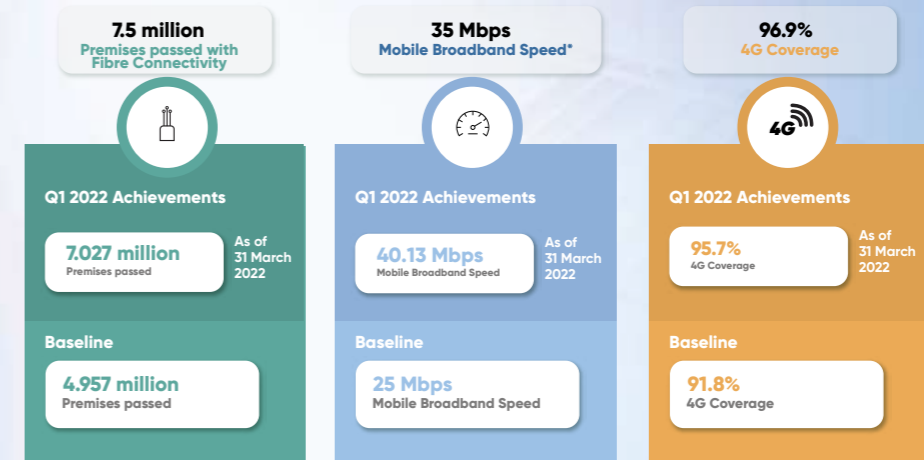
\*\* Balance to be completed is 473,000 premises passed

## JENDELA PHASE 1 OVERALL PERFORMANCE

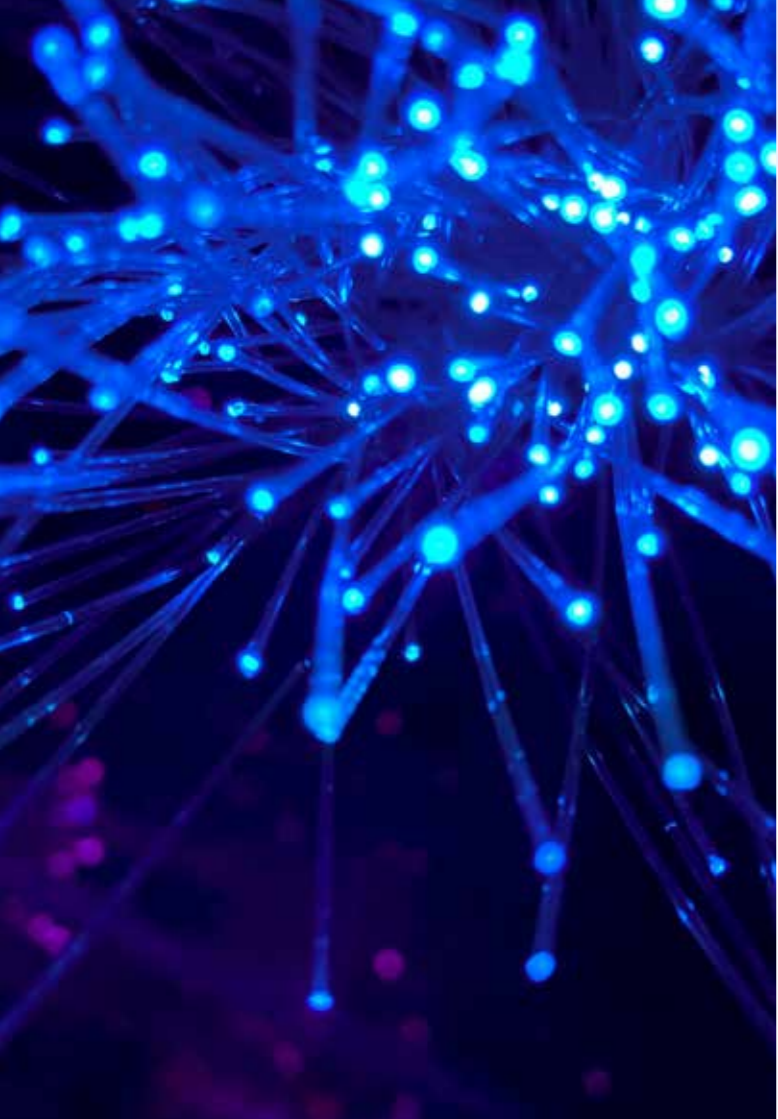
As of 31 March 2022, a total of 7.027 million premises now have access to fibre broadband while 95.7% of all populated areas now have access to the 4G network despite the anticipated challenges such as geographical conditions. The average mobile broadband speed has also increased to 40.13 Mbps, surpassing the original Phase 1 target of 35 Mbps.



### JENDELA Phase 1 Target (end of 2022)






\* Based on monthly data from Ookla



## OVERALL DIGITAL INFRASTRUCTURE PERFORMANCE

The support provided by the industry players and local stakeholders enabled JENDELA to continuously achieve and exceed its overall targets. Jointly, the service providers have fiberised 179,666 premises, upgraded 2,217 base stations to 4G technology, and built 60 new 4G towers in just three (3) months, from January – March 2022.

- 
**FIXED BROADBAND**  
 Premises passed with Fibre Connectivity
  
- 
**MOBILE BROADBAND**  
 Base Station Upgrades to 4G Technology
  
- 
**New 4G Towers**

### Overall Digital Infrastructure Performance

	2020 (Sept - Dec 2020)	2021 (Jan - Dec 2021)	2022 (Jan - March 2022)	TOTAL (Sep 2020 - Mar 2022)
<b>FIXED BROADBAND</b> Premises passed with Fibre Connectivity	456,757 129.7%	Target: 352,101 1,434,142 115.2%	Target 2021: 1,245,452 179,666 105.7%	Target Q1 2022: 170,017 2,070,565 Premises Passed
<b>MOBILE BROADBAND</b> Base Station Upgrades to 4G Technology	16,367 100.9%	Target: 16,214 13,807 110.5%	Target 2021: 12,499 2,217 89%	Target Q1 2022: 2,491 32,391 Base Stations Upgraded
<b>New 4G Towers</b>	939 99.9%	Target: 940 250 129.5%	Target 2021: 193 60 100%	Target Q1 2022: 60 1,249 New Towers

## PERFORMANCE FOR PREMISES PASSED

Of the 179,666 premises passed, or 105.7% of its original target of 170,017, Telekom Malaysia (TM) passed more than 100,000 premises – making it the biggest contributor to the initiative – followed by TIME and Celcom.

Shortage in manpower and raw materials required for pole fabrication resulted in Maxis achieving only 59.6% of its target, however the percentage of the shortfall is insignificant to the industry's total contribution for the premises passed.

### Summary of Service Providers' Performance for Premises Passed with Fibre Connectivity (Jan – Mar 2022)



\* Maxis shortfall is due to:

- Shortage of poles due to lack of manpower as the manufacturers are unable to get foreign worker permits
- Shortage of raw materials for pole fabrication
- Permitting lead time by state agencies (Pahang, Johor and Melaka) related to OSA

## PERFORMANCE FOR 4G TOWERS

The four (4) main mobile broadband service providers have collectively built 60 new 4G towers, with Celcom completing 25% more than its pre-set target.

Digi, despite encountering permit approval issues with the Sabah Local Council, managed to complete 94% of its target.

### Summary of Service Providers' Performance for New 4G Towers (Jan – Mar 2022)



\* Digi's shortfall is due to permit approval from Sabah Local Council (BOMBA and CAAM)

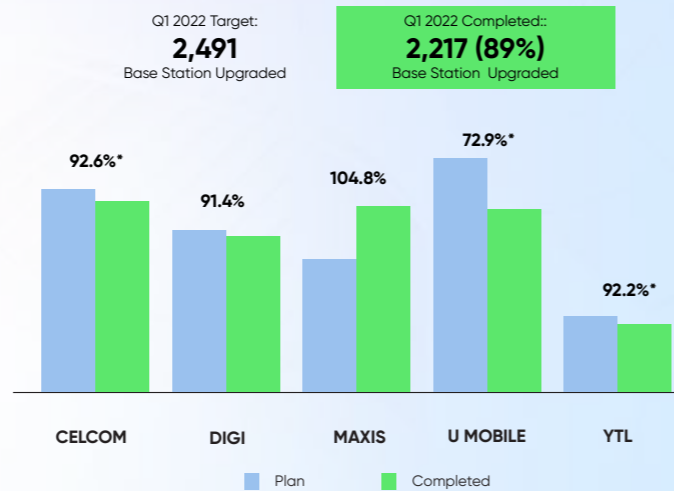
## PERFORMANCE FOR BASE STATIONS UPGRADE

Base stations upgrade saw a shortfall in the overall targets mainly due to inaccessibility to selected sites affected by floods and monsoon season.

However, the service providers have upgraded 2,217 base stations, or 89% of the original target of 2,491, with Maxis successfully exceeding its targets by 4.8%.

Nevertheless, the industry is optimistic to catch up with the small shortfall by subsequent quarters.

Summary of Service Providers' Performance for Base Stations Upgrade (Jan – Mar 2022)



\* Shortfalls due to:  
• Accessibility to the site due flood/monsoon season/remoteness

## ACCESS VIA SATELLITE

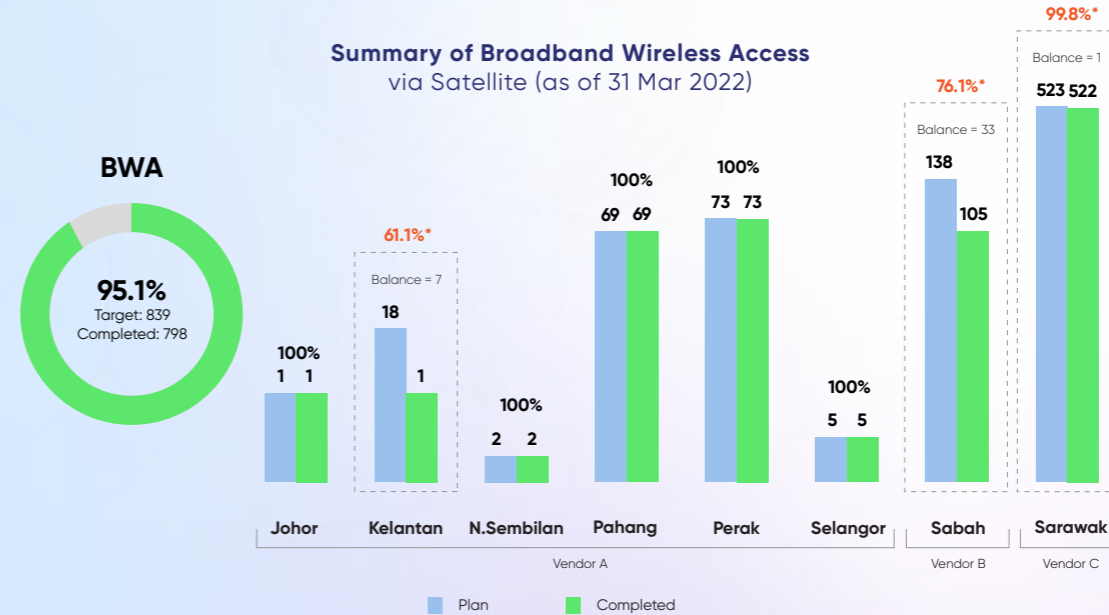
Satellite broadband is a necessary component of JENDELA to provide reliable connectivity in remote locations and interior areas that are difficult to access. A total of 798 locations (or 95.1% of the initial target) across Johor, Negeri Sembilan, Pahang, Perak, and Selangor are now equipped with wireless access via this method.

Inaccessibility to *Orang Asli* settlement due to road closure

caused by the floods and monsoon season, and challenges in locating the settlement due to *Orang Asli's* nomadic lifestyle have added to the delay in the deployment progress in Kelantan (61.1%), Sabah (76.1%) and Sarawak (99.8%).

MCMC and the industry are working towards completing the remaining 33 sites in Sabah by 30 April 2022 and 8 sites in Kelantan and Sarawak by 31 May 2022, barring unforeseen circumstances.

Summary of Broadband Wireless Access via Satellite (as of 31 Mar 2022)



Note:

1- Accessibility issue to Kampung *Orang Asli* because of flood, monsoon season and road closure

2- All sites in Sabah are expected to complete by 30 April 2022

3- 8 sites in Kelantan and Sarawak to complete by 31 May 2022



## ADDRESSING ISSUES AND CHALLENGES

On the policy coordination front, the regulator worked with the Ministry of Communications and Multimedia (K-KOMM) in drafting a Cabinet Ministers' memorandum to facilitate the digital infrastructure development permit fee approval process, and target to circulate it to the relevant ministries at the end of April 2022.

Separately, authorities of all states are still in the midst of reviewing the UBBL amendments as of 31 March 2022.

### 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 ✓
- Memorandum Jemaah Menteri on 'Facilitation of Permit Fee for The Digital Infrastructure Development Approval Process' has been prepared by K-KOMM and target to be circulated to relevant ministries in April 2022
- As of 31 March 2022, all States are still reviewing the UBBL amendments which includes G1-G21 forms and yet to gazette the amendments

## 3G NETWORK SHUTDOWN

86.6% of 3G customers (or over 1.8 million) have since migrated to the 4G network, while the remaining 13.4% of the customers have been informed of the 3G network shutdown, however, they do not see the need for the switch over. As of the end of Q1, 2022, 99.3% of 3G carriers are shut down. The remaining 0.7% of 3G carriers, located in remote areas, are scheduled to shut down in December 2022.

The remaining 13.4% of the customers have been informed of the 3G network shutdown

## 3G Network Shutdown

Customer Migration



**1,815,314**  
No of 3G customers migrated

No of 3G customer:  
2,097,121 customers

Q1 2022 Achievement

**86.6%<sup>1</sup>**

customers migrated

Network Migration



**252,199**  
No of 3G carriers shut down

No of 3G carrier:  
253,860 3G carriers

**99.3%<sup>2</sup>**

3G carriers shutdown

Notes

1 - Based on the forecasted data. The remaining 281,807 (13.4%) customers have already been contacted/engaged. Majority are low data users which can be served with 2G.

2 - The remaining of 1,661 (0.7%) of 3G carriers to complete the shut down by Dec 2022, mostly in remote areas.

## OVERALL NETWORK COMPLAINTS

MCMC received a total of 23,803 network related complaints in a span of three (3) months, a significant decline of 56% compared to the same period in 2021 when Malaysians were confined indoors to prevent the spread of the coronavirus. The quality of 4G network services continues to be the main concern reported by users.

42% of the complaints reported by users came from Zone 1 and Zone 2 in the top 20 districts, including Kuala Lumpur, Petaling, and Johor Bahru.

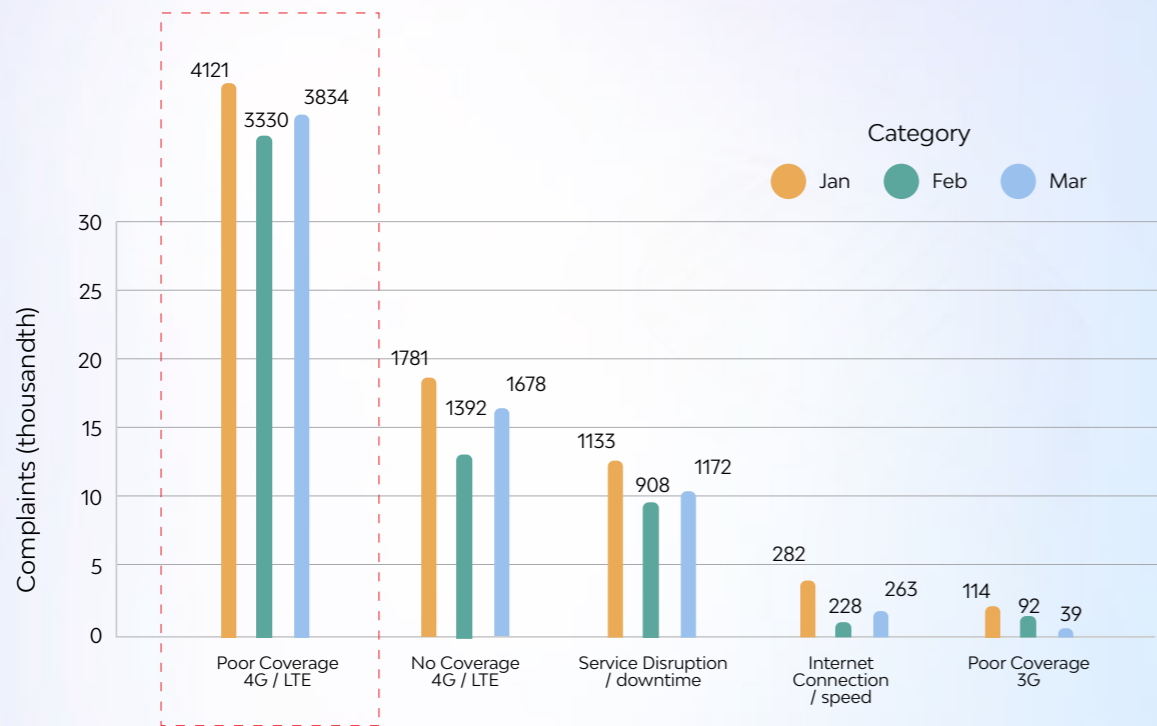
### Overall Network Complaints (Jan - Mar 2022)

As of 31 March 2022:  
MCMC recorded 23,803 network complaints since 1 January 2022



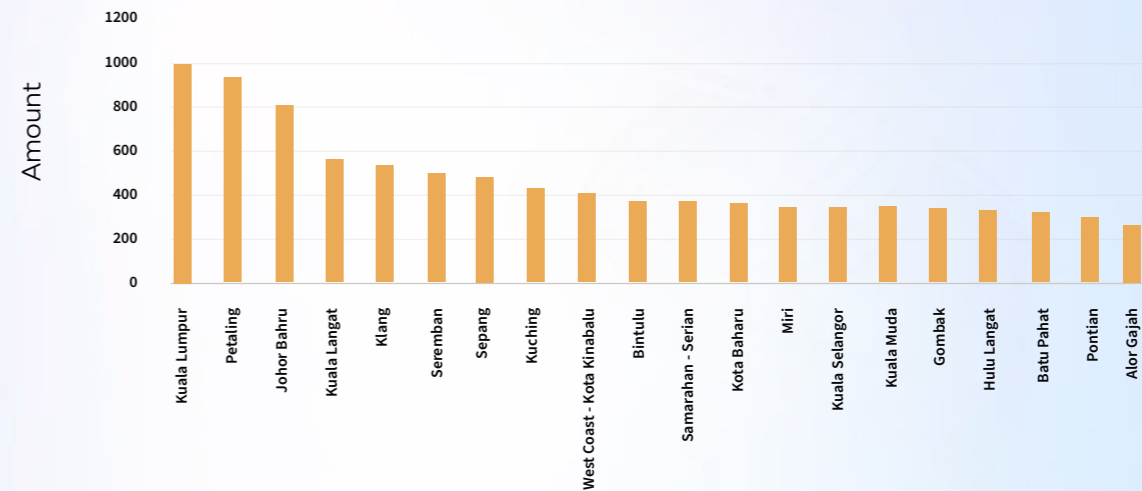
## BY CATEGORY

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



## BY LOCATION

From the top 20 districts, 42% of the complaints are from Zone 1 & 2



## High Profile Connectivity Issues

Between January and March 2022, MCMC and the service providers addressed five (5) high profile connectivity cases and subsequently resolved two (2) cases in Sabah and Sarawak. The construction of new mobile towers in the other three (3) locations in Kedah, Sarawak and Kelantan are expected to be completed by the end of 2022.



Thank You





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Malaysian Communications and Multimedia Commission



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