

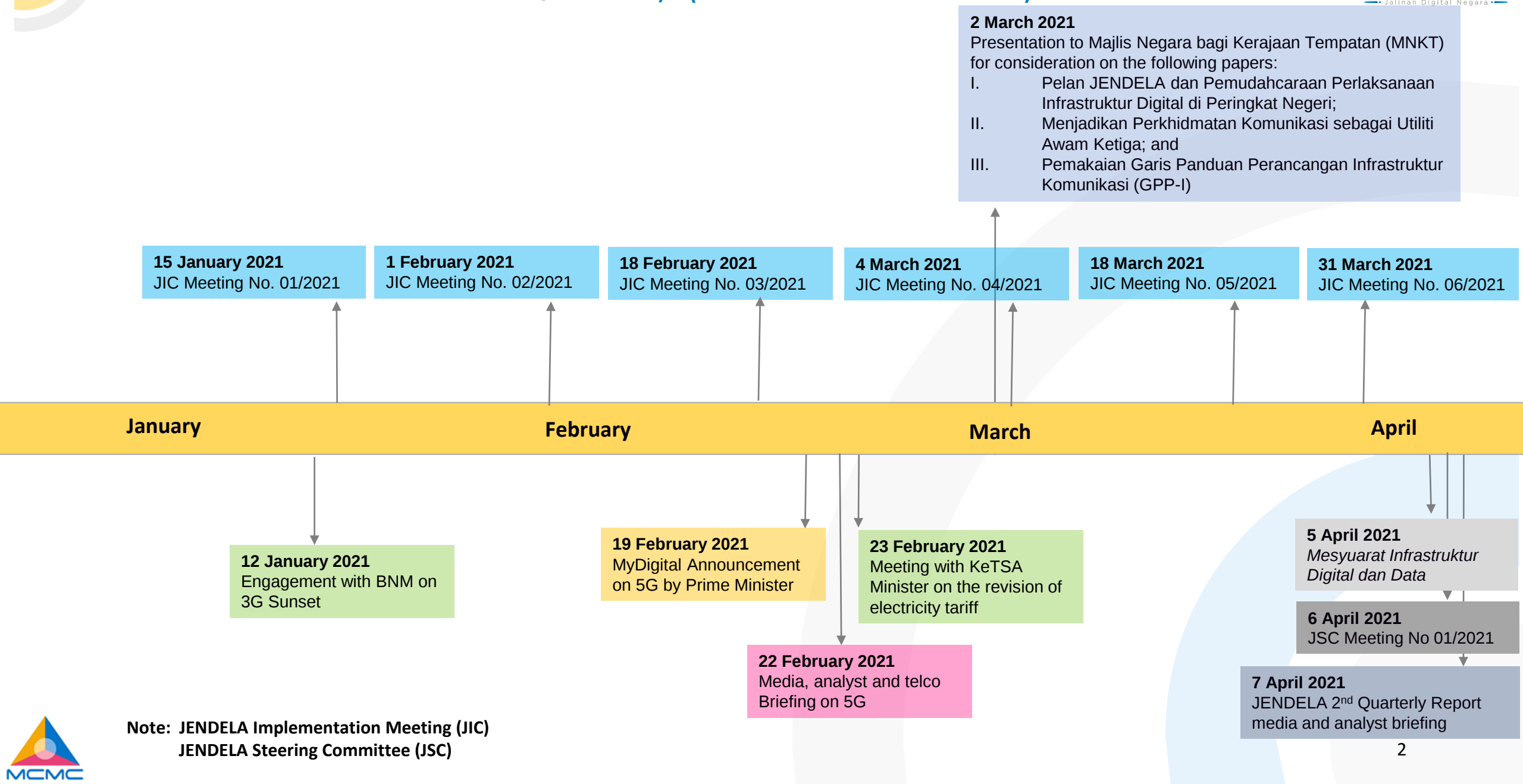


2nd Quarterly Report

7 April 2021



The JENDELA Q1 2021 Journey (Jan 2021- to date)



Note: JENDELA Implementation Meeting (JIC)
JENDELA Steering Committee (JSC)

Phased Approach



JENDELA aims to provide all Malaysians to have quality access to digital connectivity nationwide. JENDELA comes with **2 phases**:

Phase 1 (*now to 2022*)

- **4G mobile coverage**: from 91.8% to 96.9% in populated area
- **Mobile broadband speed**: from 25Mbps to 35Mbps
- **7.5 million premises passed**
- **Gradual retirement of 3G networks** by end 2021.
- **5G planning and implementation** for commercialisation (previously in phase 2)

Phase 2 (*2023 and beyond*)

- Utilising **FWA** and other **fit-for-purpose technologies** to address further gaps in digital divide

**National Aspirations
by 2025**



9Mil
Premises passed

100Mbps
speed by adopting 5G

100%
4G coverage in populated areas



The JENDELA Action Plan (2020-2022)

2020

2021

2022

8 targets realisation

JENDELA Targets



National target realisation of 96.9% mobile coverage, 35 Mbps speed and 83% of premises passed*

- 1 Construct 940 new mobile sites in urban and suburban
- 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

4 policy support



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 infra
- 3 Digital infrastructure to be planned, deployed and treated as **public utility**
- 4 Standardisation of **electricity tariff** for communications service based on industrial rates

4 CIMS KPIs



National Digital Infrastructure Map

- 1 CIMS to be upgraded into a one-stop digital infrastructure databank
- 2 Rakyat-centric Portal on Service Coverage Availability by SPs
- 3 Policy Development on **Infrastructure Asset Management Framework**
- 4 Integration of e-Spectra and CIMS

Phase 2: Ongoing discussion between MCMC and Ministries on introduction of 5G and new technology

5G demo

5G planning and priming for infra to be 5G-ready

5G rollout to meet the National Aspirations



National Aspirations

Targeted Projects



**Fibre Connectivity
(Gigabit Access) in
Premises/ Homes**

- **Fiberise 1,245,452** premises



**4G Coverage in
populated
areas**

- **Upgrade 12,499** existing 2G/3G base stations to 4G to expand 4G coverage and improve 4G quality (Commercial* and USP)
- **193 new 4G sites** to improve mobile coverage nationwide (Commercial*)
- Satellite connectivity at **839 locations** to improve mobile coverage in remote areas (USP)



**Wireless
Broadband
Speed**

- **Sunset 3G network** and migrate the spectrum for 4G technology use, hence, further improve the speed

* Continuous commercial network rollout to cater increasing demand and quality in commercial areas

	Baseline	Status as at 31 Dec 2020	Status as at 31 Mar 2021	JENDELA Phase 1 Targets (end of 2022)
	4.957 million premises passed	5.414 million premises passed	5.707 million premises passed	7.5 million premises passed
	25 Mbps* Mobile Broadband Speed	25.6 Mbps* Mobile Broadband Speed	25.44 Mbps * Mobile Broadband Speed	35 Mbps Mobile Broadband Speed
	91.8% 4G Coverage	92.03% 4G Coverage	93.51%** 4G Coverage	96.9% 4G Coverage

* Mobile Broadband Speed is based on monthly data from Ookla

** Coverage is measured on quarterly basis. Data as at Q4 2020

Digital Infrastructure





Q1 2021 Performance (Jan- March 2021)



FIXED-BROADBAND

Premises Passed

292,826

Target: 221,539

132.2%



MOBILE-BROADBAND

New Sites

29

Target: 25

116%

Upgrade Sites

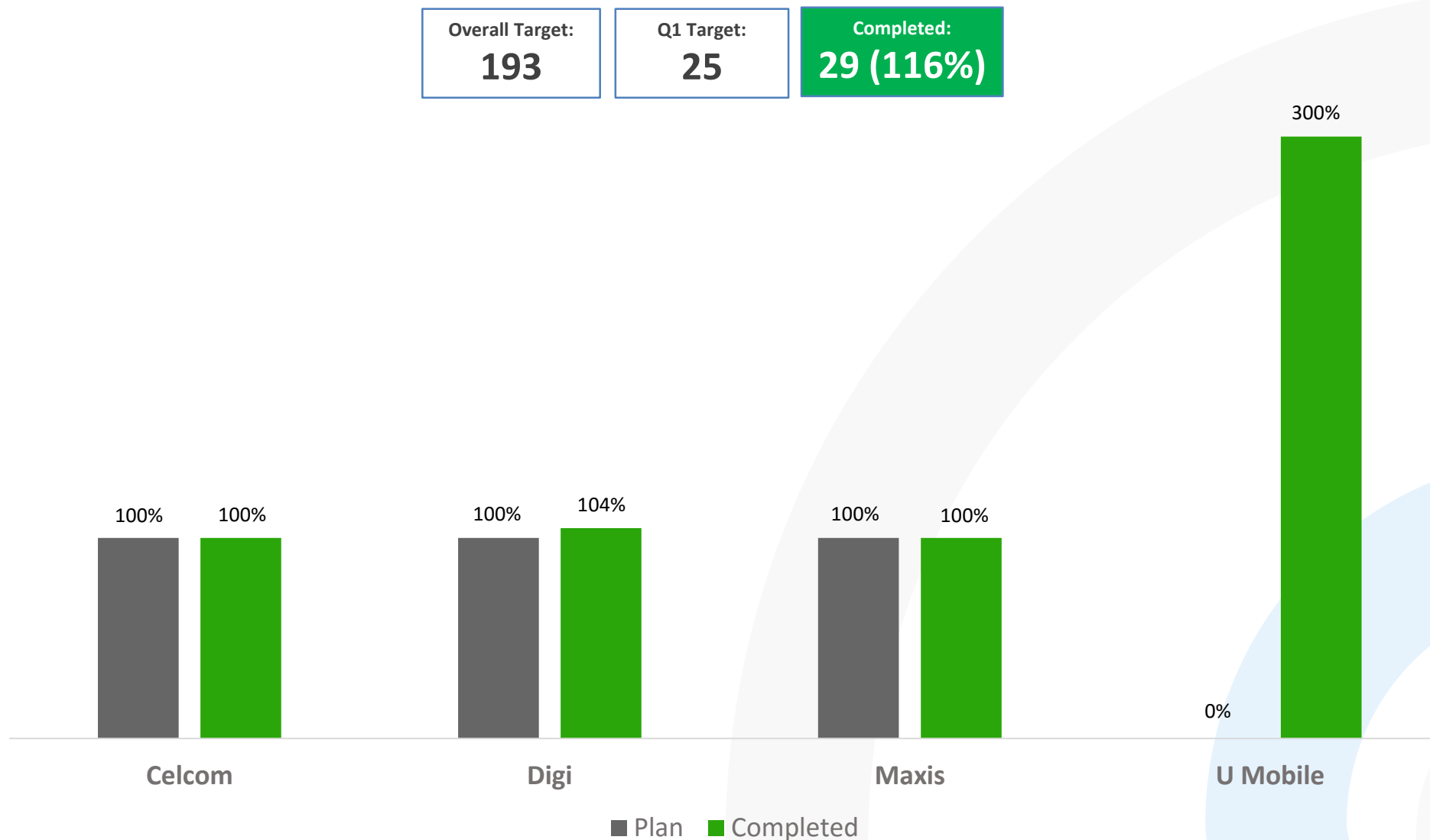
3,278

Target: 3,223

101.7%

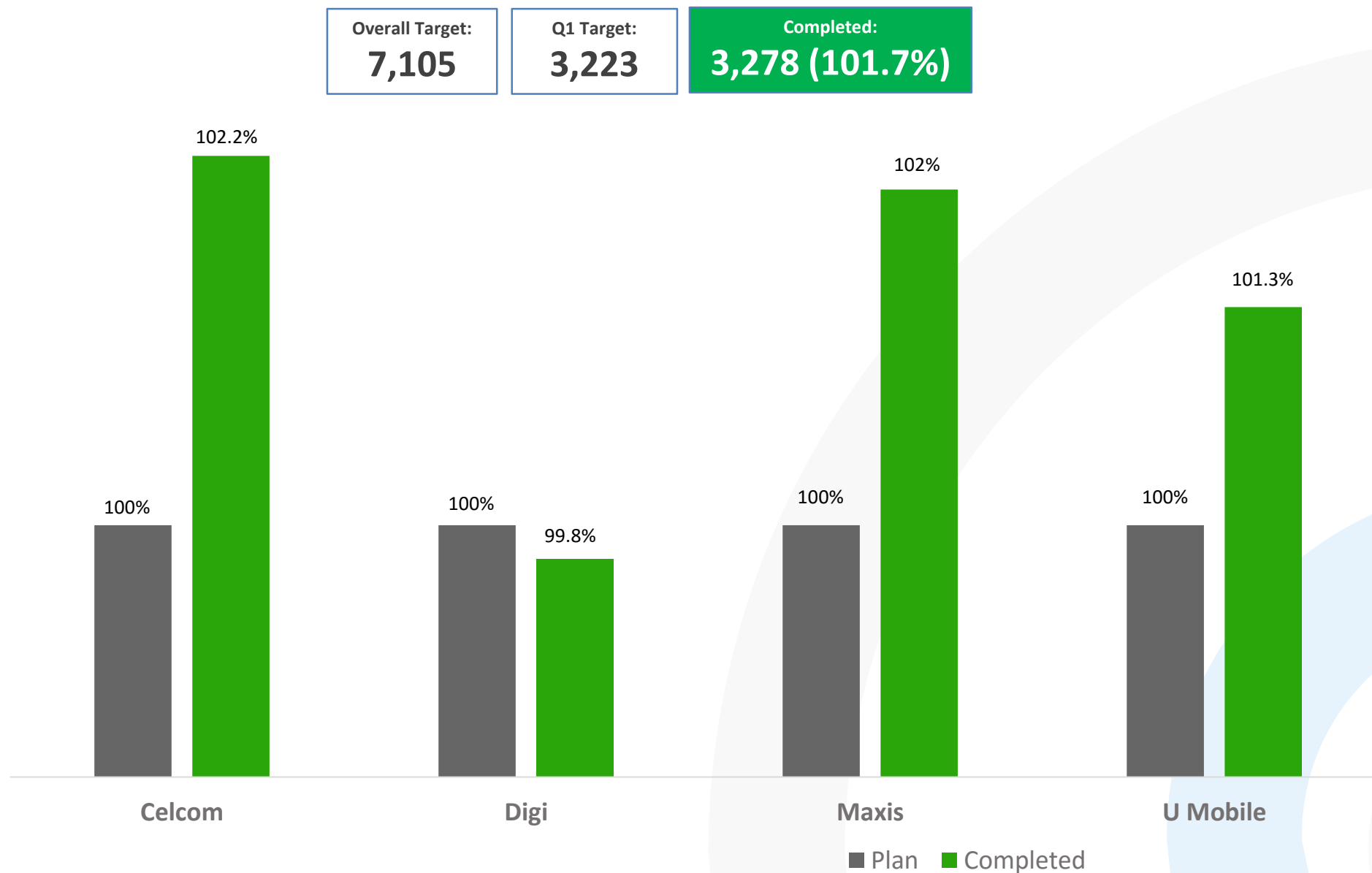


Summary of Service Provider's Performance for 4G New Sites (Jan- March 2021)





Summary of Service Provider's Performance for 4G Upgrading Base Station (Jan- March 2021)



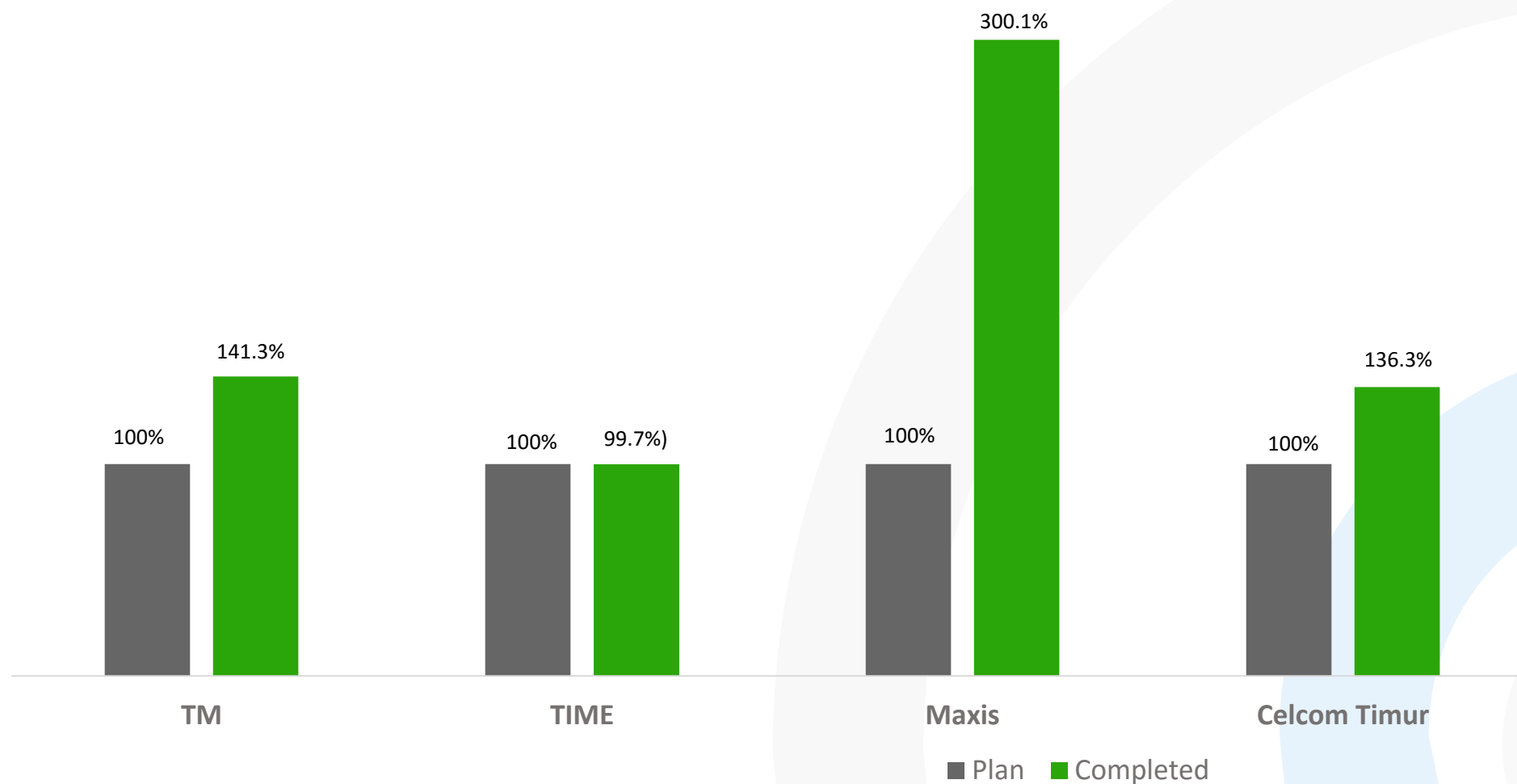


Summary of Service Provider's Performance for Gigabit Access (Jan- March 2021)

Overall Target:
836,119
Premises Passed

Q1 Target:
221,539
Premises Passed

Completed:
292,826
(132.2%)



Cost of Doing Business at States For Tower Structure as at 31 March 2021

No.	State	Cost of deployment for new tower (RM)	Cost of renewal for existing towers (RM)				
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	Sarawak	37,600	2,880	2,880	2,880	2,880	15,380
2	Johor	26,750	18,000	18,000	18,000	18,000	18,000
3	Melaka	16,085	17,810	17,810	17,810	17,810	17,810
4	Terengganu	14,378	9,900	9,900	9,900	9,900	9,900
5	Kedah	12,910	3,635	3,635	3,635	3,635	3,635
6	Kelantan	12,700	3,000	3,000	3,000	3,000	3,000
7	Perlis	12,400	7,900	7,900	7,900	7,900	7,900
8	WP Putrajaya	11,350	1,350	1,350	1,350	1,350	1,350
9	Pulau Pinang	10,500	5,000	5,000	5,000	5,000	5,000
10	N. Sembilan	10,400	7,400	7,400	7,400	7,400	7,400
11	Perak	9,925	6,500	6,500	6,500	6,500	6,500
12	WP KL	9,800	5,600	5,600	5,600	5,600	5,600
13	Selangor	8,600	6,900	6,900	6,900	6,900	6,900
14	Sabah	8,500	6,500	6,500	6,500	6,500	6,500
15	Pahang	7,150	1,000	1,000	1,000	1,000	1,000
16	WP Labuan	2,065	2,000	2,000	2,000	2,000	2,000

State	Total cost for 6 years (RM)
Johor	116,750
Melaka	105,135
Sarawak	64,500
Terengganu	63,878
Perlis	51,900
N. Sembilan	47,400
Selangor	43,100
Perak	42,425
Sabah	41,000
WP KL	37,800
Pulau Pinang	35,500
Kedah	31,085
Kelantan	27,700
WP Putrajaya	18,100
Pahang	12,150
WP Labuan	12,065

High Cost (> RM10,000 for new towers and > RM40,000 for total cost for 6 years)
 Low cost (< RM10,000 for new towers and < RM40,000 for total cost for 6 years)

Note:

Cost of permit varies among the PBTs even though within the same State. This table is based on the highest cost of permit charged by the PBTs in any particular State.

Median cost for year 1 : RM10,925

Median cost for 6 years : RM41,713



Cost of Doing Business at States For Rooftop Structure as at 31 March 2021

No.	State	Cost of deployment for new rooftop structure (RM)	Cost of renewal for existing rooftop structure (RM)				
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	Sarawak	12,500	0	0	0	0	12,500
2	WP Putrajaya	12,000	2,000	2,000	2,000	2,000	2,000
3	Johor	11,540	5,000	5,000	5,000	5,000	5,000
4	Kedah	11,260	2,000	2,000	2,000	2,000	2,000
5	Kelantan	11,200	3,000	3,000	3,000	3,000	3,000
6	Terengganu	10,100	4,600	4,600	4,600	4,600	4,600
7	Perlis	9,500	3,000	3,000	3,000	3,000	3,000
8	Sabah	8,500	4,500	4,500	4,500	4,500	4,500
9	WP KL	7,900	5,000	5,000	5,000	5,000	5,000
10	N. Sembilan	7,750	6,000	6,000	6,000	6,000	6,000
11	Pulau Pinang	7,500	5,000	5,000	5,000	5,000	5,000
12	Perak	7,425	4,000	4,000	4,000	4,000	4,000
13	Melaka	7,000	6,500	6,500	6,500	6,500	6,500
14	Pahang	6,150	1,000	1,000	1,000	1,000	1,000
15	Selangor	6,000	4,500	4,500	4,500	4,500	4,500
16	WP Labuan	1,500	1,500	1,500	1,500	1,500	1,500

State	Total cost for 6 years (RM)
Melaka	39,500
N. Sembilan	37,750
Johor	36,540
Terengganu	33,100
WP KL	32,900
Pulau Pinang	32,500
Sabah	31,000
Selangor	28,500
Perak	27,425
Kelantan	26,200
Sarawak	25,000
Perlis	24,500
WP Putrajaya	22,000
Kedah	21,260
Pahang	11,150
WP Labuan	9,000

 High Cost (> RM8,000 for new rooftop structure and > RM30,000 for total cost for 6 years)
 Low cost (< RM8,000 for new rooftop structure and < RM30,000 for total cost for 6 years)

Note:

Cost of permit varies among the PBTs even though within the same State. This table is based on the highest cost of permit charged by the PBTs in any particular State.

Median cost for year 1
Median cost for 6 years

: RM8,200
: RM27,963

3G Network Sunset





Q1 2021 FORECASTED ACHIEVEMENT



CUSTOMER MIGRATION



629,018¹

3G customers were migrated

Q1 target: 562,490 customers

130%

Forecasted to migrate
732,652² customers



NETWORK MIGRATION



20,492¹

3G carriers were switched off

Q1 target: 19,607 3G carriers

128%

Forecasted to switch off
25,161² 3G carriers

¹ achievement as at 28th February 2021

² to be completed by 31st March 2021

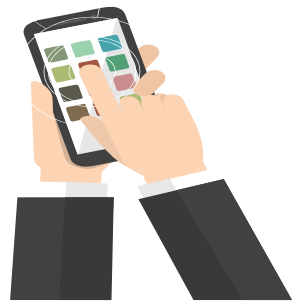


No more certification and importation of 3G and 4G equipment without VoLTE from 1st January 2021



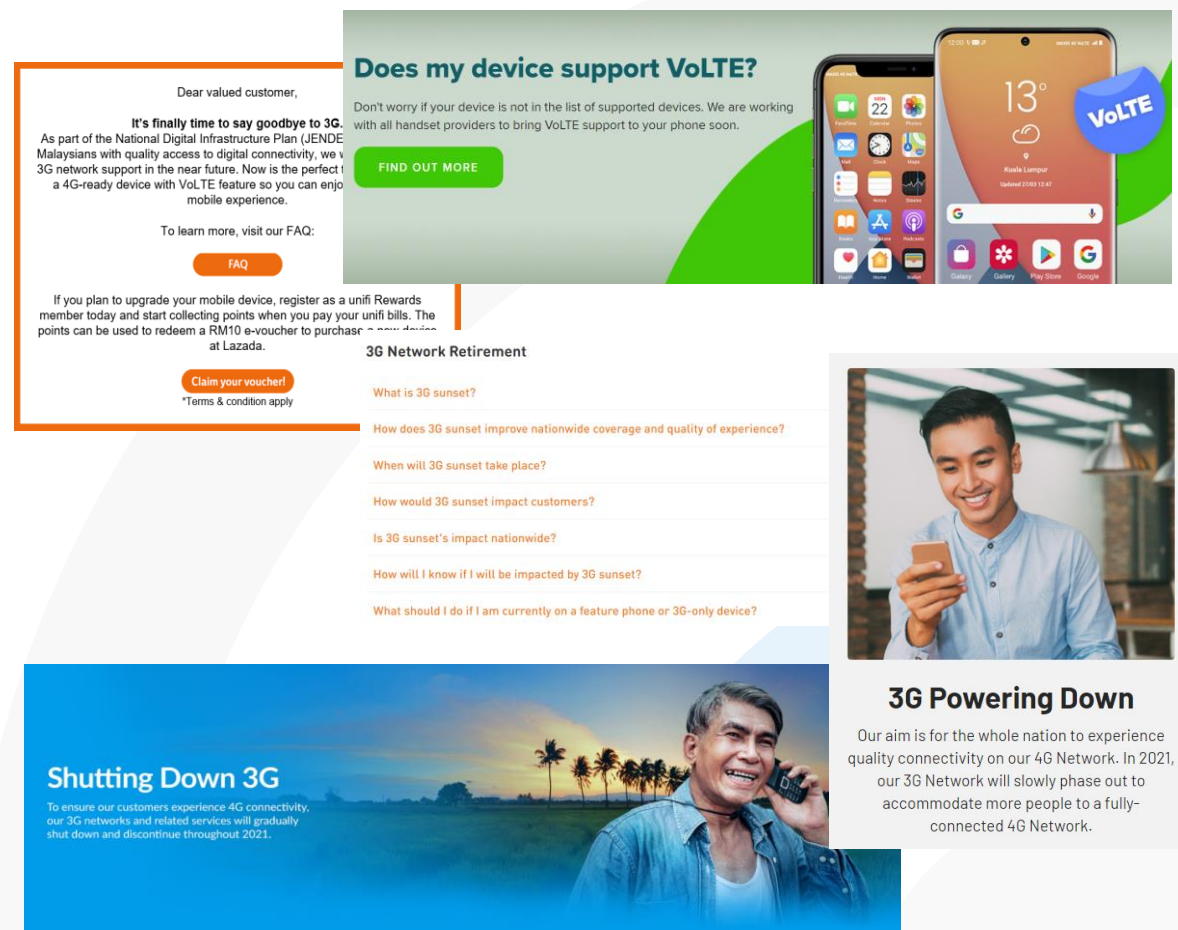
Accelerate VoLTE provisioning & adoption of VoLTE service by the customers

~16 millions VoLTE phones provisioned



Special Working Group on VoLTE Testing was established comprises of MCMC, SPs, SIRIM and phone manufacturers

Aggressive communications plan to reach out to the customers



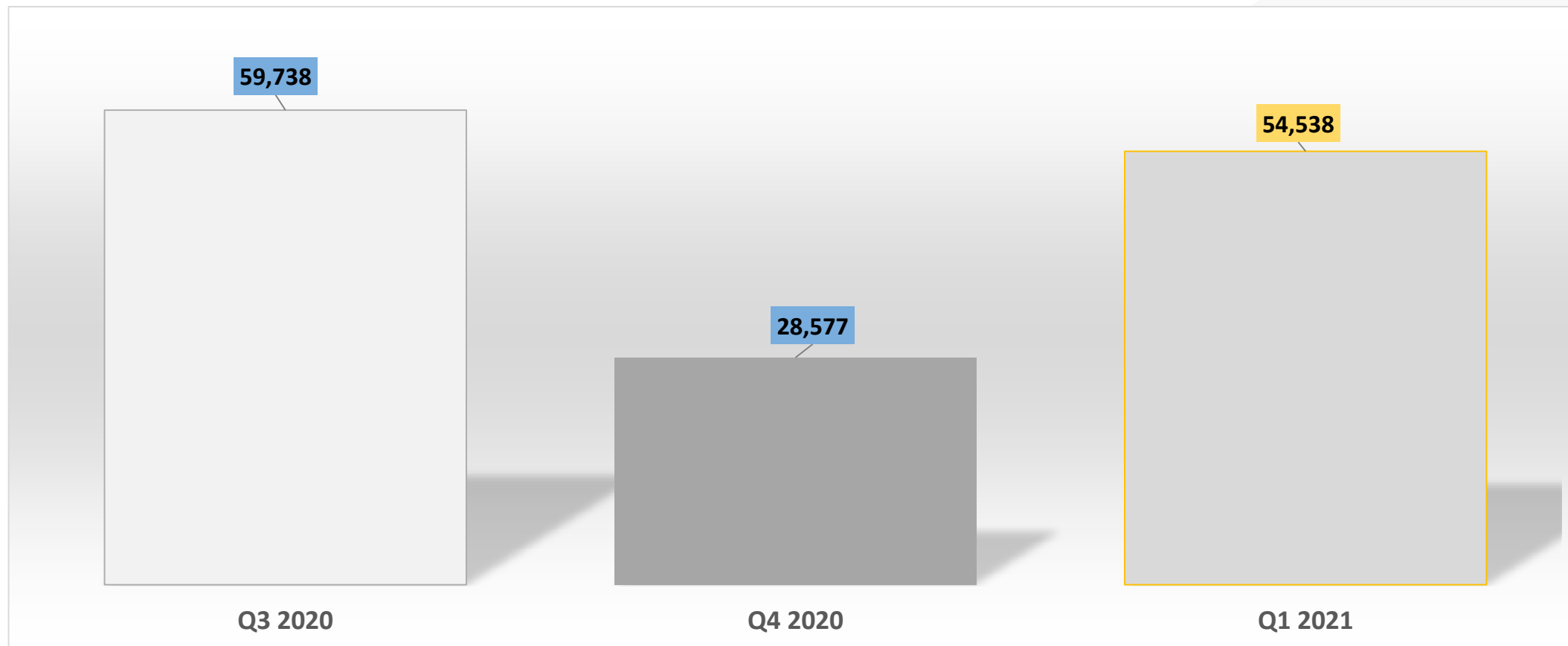
Consumer Complaints





Overall Network Complaints (Jan-March 2021)

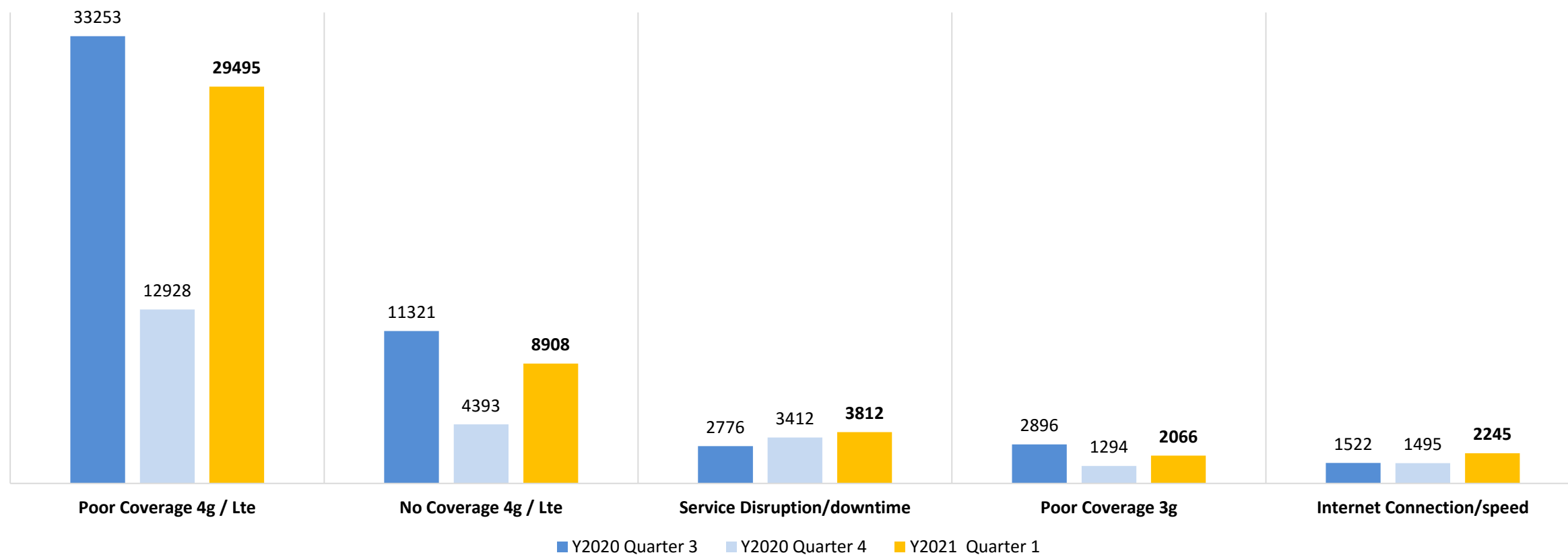
Network complaints posted significant reduction in Q4 2020. MCMC recorded 54,538 complaints in Q1 2021, due to MCO 2.0 started on 13 January 2021





Network Complaints by Category (Jan-March 2021)

Overall, the quality of service on 4G services remains the concerns as reported by the complainants. Hence JENDELA will continue to optimise the coverage for 4G.

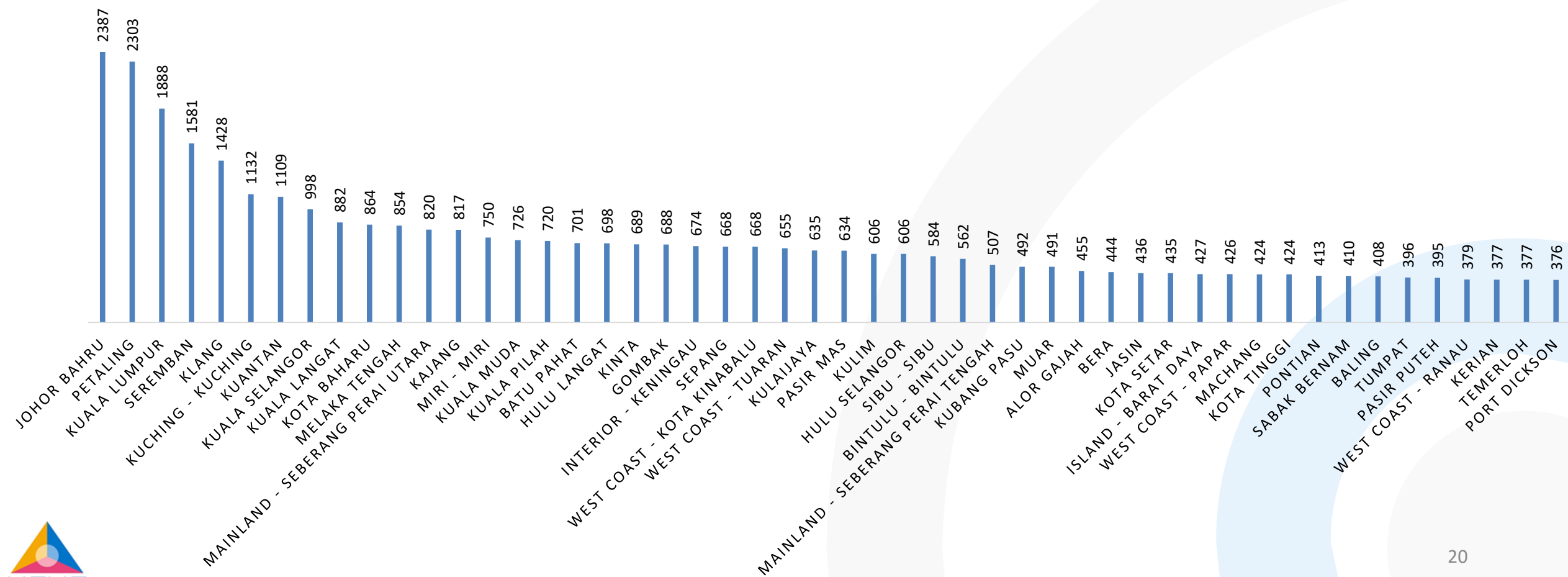




Network Complaints - Top 50 Districts (Jan-March 2021)

From the top 50 districts, 80% of the complaints are from Zone 1 & Zone 2. The complaints are mainly due to the shift of traffic from business and offices to residential, and increased demand of bandwidth due to MCO. Service Providers are continuously upgrading and optimising the infrastructure at all these districts to improve the quality of services.

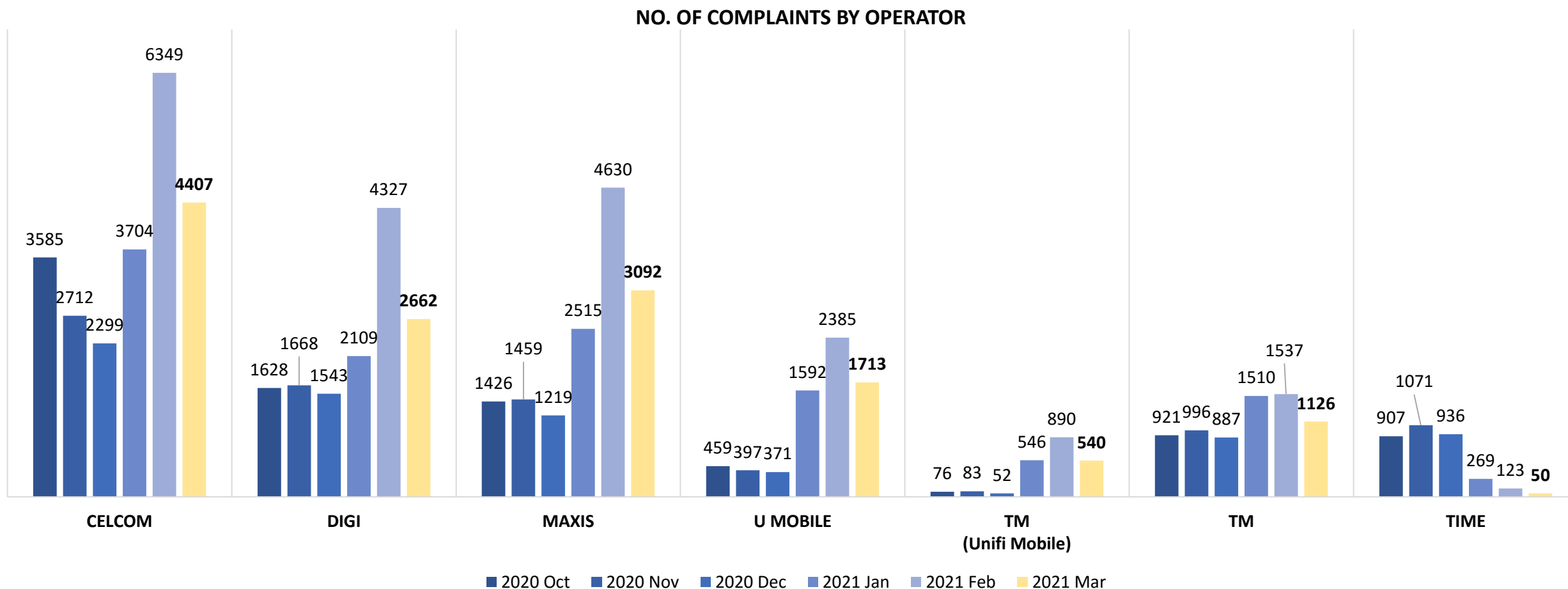
NO. OF COMPLAINTS BY DISTRICT





Network Complaints by Service Provider (Jan-March 2021)

At the industry level, most service providers recorded an upward trend. The spike on the month of February 2021 was triggered by the Movement Control Order (MCO 2.0) with heavy utilisation to cater work from home and online classes/meetings.

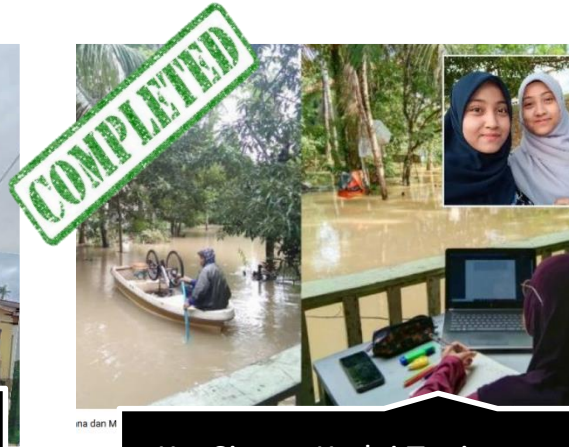


Resolved Connectivity Issues

MCMC together with Service Providers have addressed over 22 connectivity issues in the Q1 2021.
Some of them are:-



Kg. Bonggol Pak Esah, Pasir Puteh



Kg. Siram, Kedai Tanjong, Pasir Mas



Kg Aring 5, Gua Musang



Pulau Aman, Pulau Pinang



Kg. Labi, Beaufort

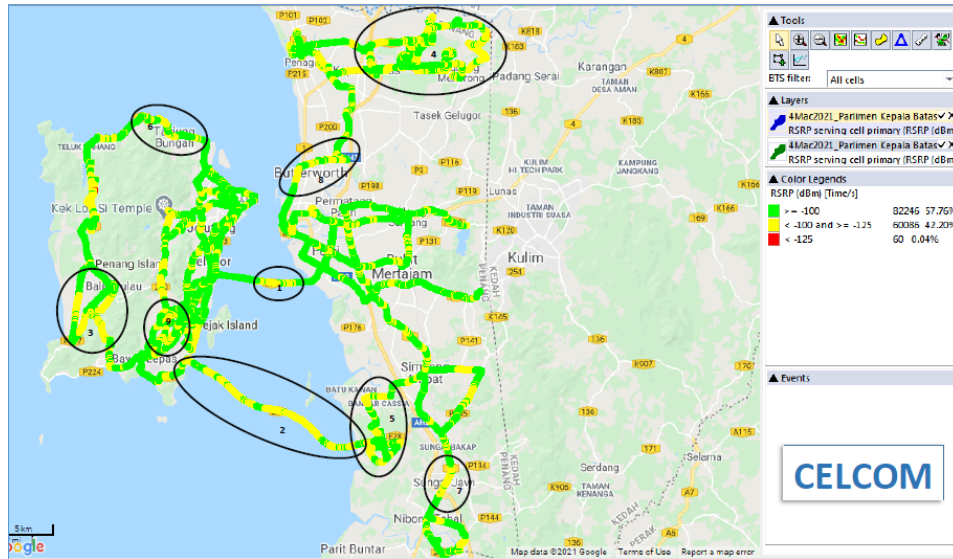


Kg. Kaum Asli Kemidak, Bekok Segamat



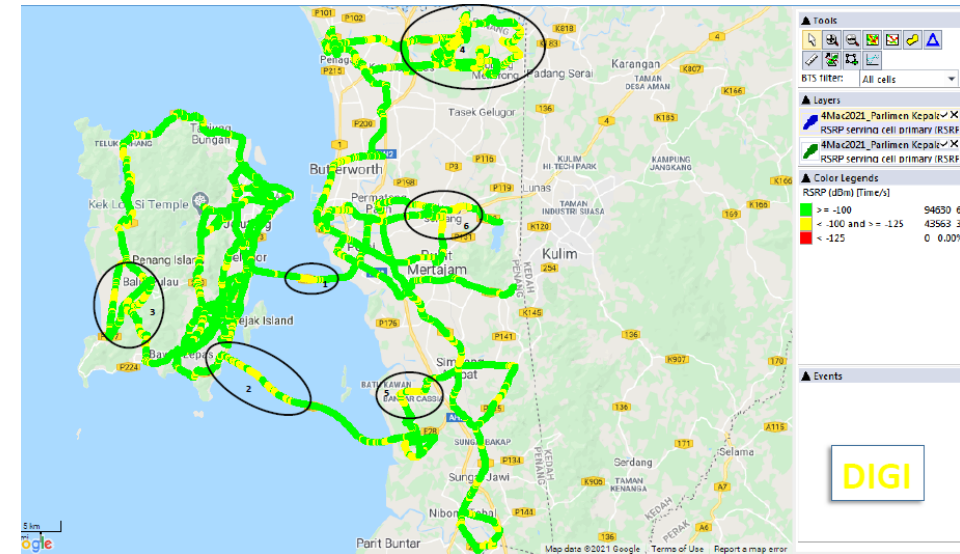
Quality Audit at Selected (Randomised) Zone 1 and Zone 2

Quality Audit at Zone 1 and Zone 2 - Penang



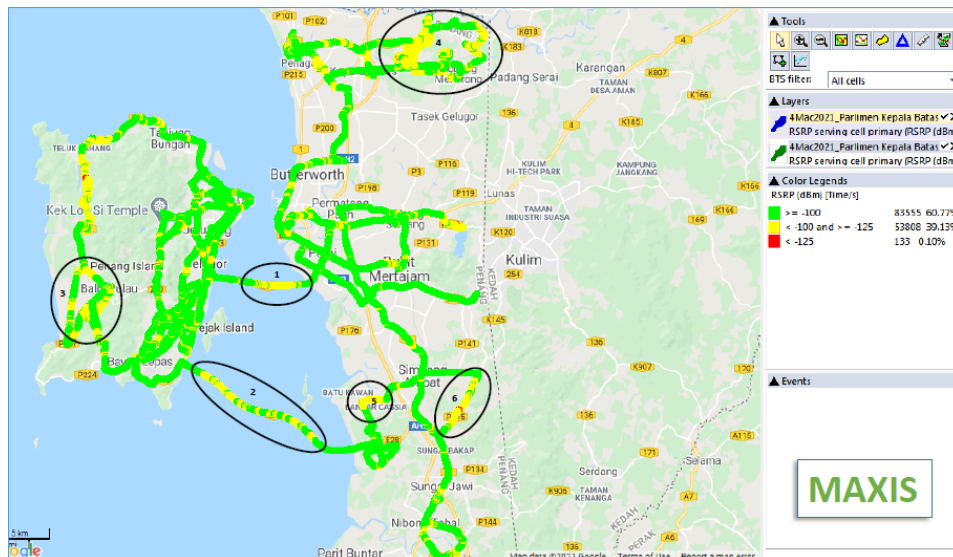
Improvement required at:

1. Jambatan P.Pinang (di bahagian pertengahan)
2. Jambatan ke-2 P.Pinang
3. Kawasan Balik Pulau (Pondok Upeh / Jln Baru)
4. Bertam & Kepala Batas
5. Bandar Cassia Batu Kawan
6. Tanjung Bungah
7. Jawi
8. Lingkaran Luar Butterworth @ BORR
9. Bayan Lepas



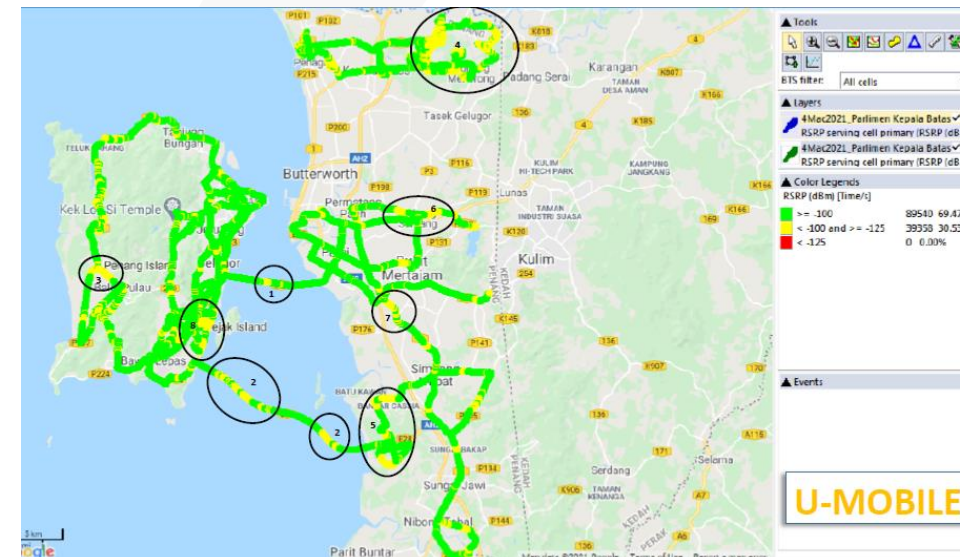
Improvement required at:

1. Jambatan P.Pinang (di bahagian pertengahan)
2. Jambatan ke-2 P.Pinang
3. Kawasan Balik Pulau (Pondok Upeh / Jln Baru)
4. Bertam & Kepala Batas
5. Bandar Cassia Batu Kawan
6. Kubang Semang / Penanti



Improvement required at:

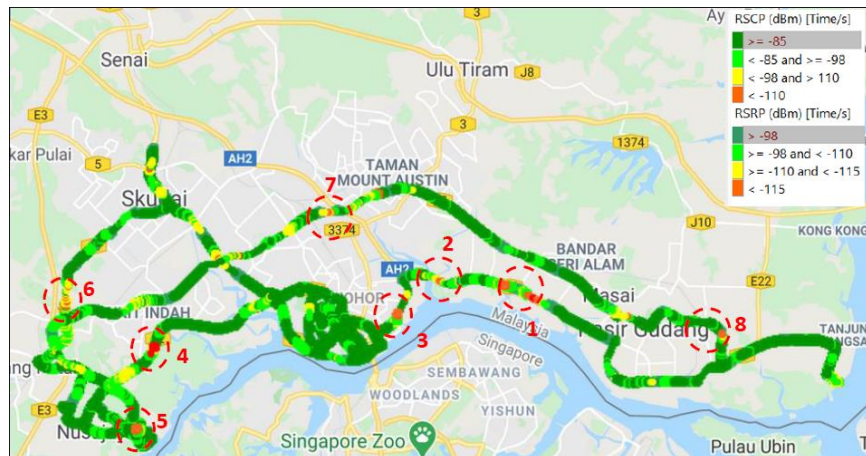
1. Jambatan P.Pinang (di bahagian pertengahan)
2. Jambatan ke-2 P.Pinang
3. Kawasan Balik Pulau (Pondok Upeh / Jln Baru)
4. Bertam & Kepala Batas
5. Bandar Cassia Batu Kawan
6. Jalan Valdor



Improvement required at:

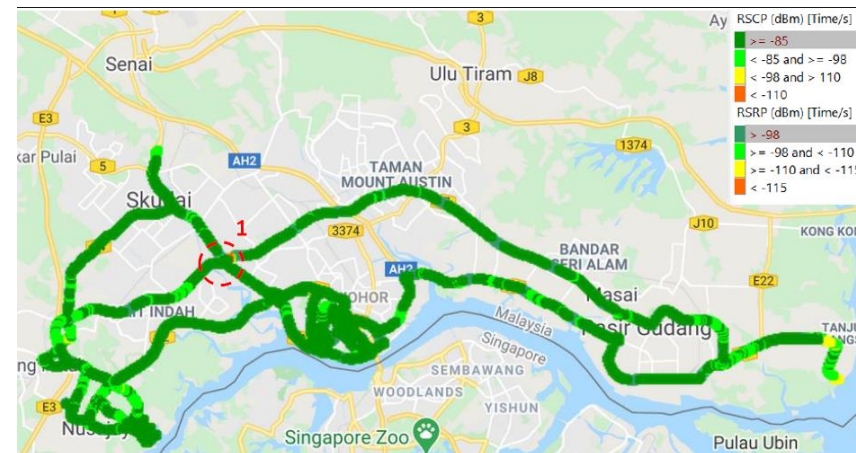
1. Jambatan P.Pinang (di bahagian pertengahan)
2. Jambatan ke-2 P.Pinang
3. Kawasan Balik Pulau (Air Putih / Jln Baru)
4. Bertam & Kepala Batas
5. Bandar Cassia Batu Kawan
6. Penanti / Kubang Semang
7. Bukit Minyak
8. Bayan Baru

Quality Audit at Zone 1 and Zone 2 – Johor Bahru



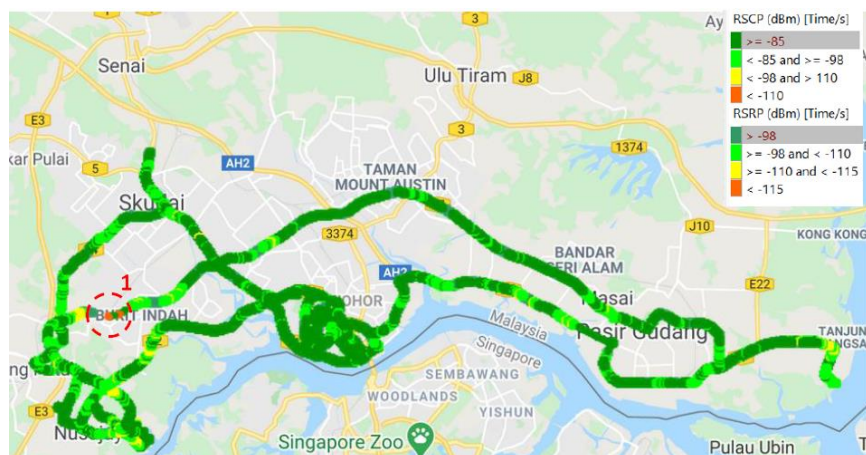
Improvement required at:

1. Taman Megah Ria
2. JB East Coast Highway (near Kg Plentong)
3. EDL (near Jln Seri Pelangi 1)
4. Jln Ismail Sultan
5. Persiaran Dato' Menteri
6. Near to Rumah Iskandar Malaysia
7. Pasir Gudang Highway
8. Taman Pasir Putih



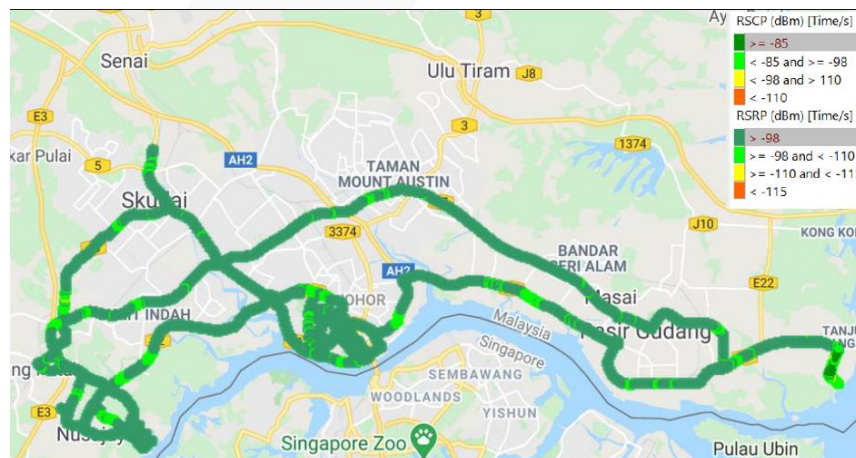
Improvement required at:

1. Pasir Gudang Highway



Improvement required at:

1. 2nd Link Highway

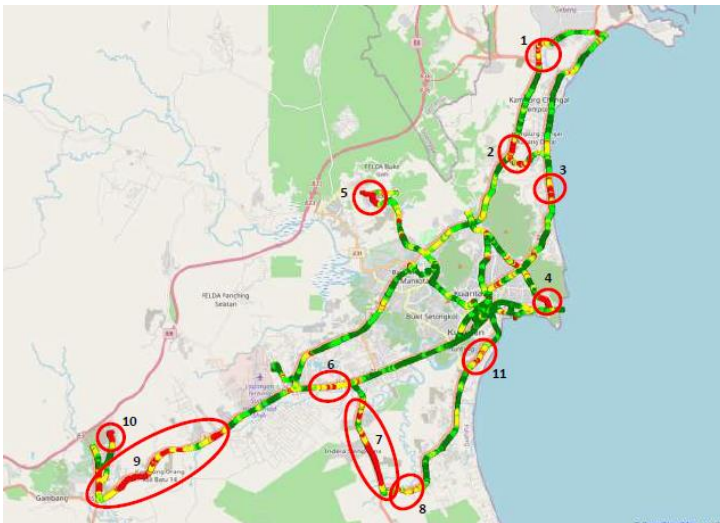


Quality Audit at Zone 1 and Zone 2 – Kuantan



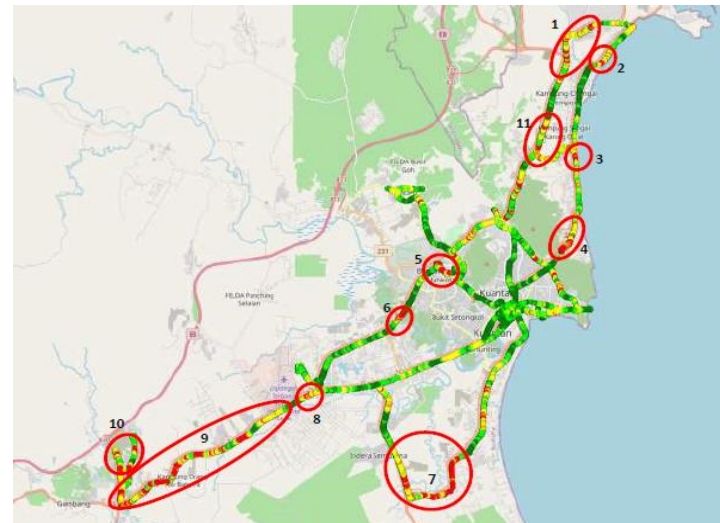
Improvement required at:

1. Jln Balok Makmur ke Balok Perdana
2. Jln Bypass (Sg Karang Darat 2 ke Taman PSJ)
3. Jln. Batu Hitam, Beserah
4. Jln. Tengku Muhammad, Tok Sira
5. Jln KotaSAS-RTP Bkt Goh
6. Jln Gambang, Batu 7
7. Jln KUIPSAS-Tg Lumpur (Soi)
8. Jln Tg Lumpur-Soi
9. Jln Gambang, Batu 11 – Simpang 4 Gambang
10. Pahang Technology Park
11. Jln Tg Lumpur (Peramu)



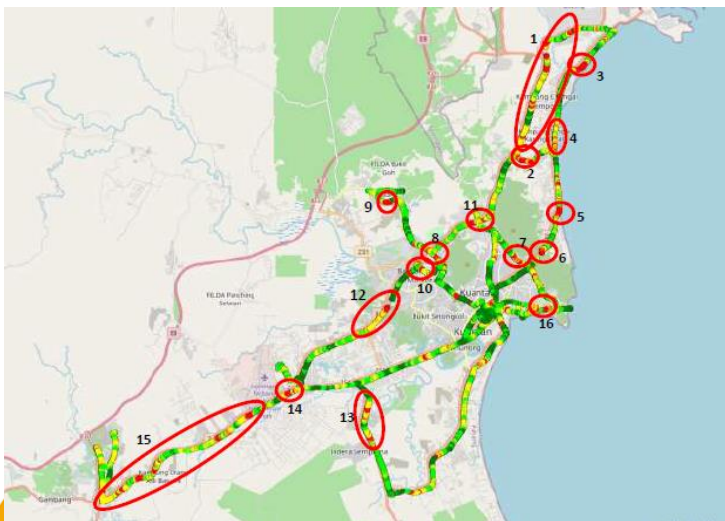
Improvement required at:

1. Jln Balok Makmur ke Balok Perdana
2. Jln. Seberang Balok
3. Jln. Sg Karang
4. Jln. Beserah-Pelindung
5. Jln IM7-Bulatan Cengkih
6. Jln Bypass (IM16-Jambatan)
7. Jln Inderasempurna – Sg Soi
8. Jln Gambang, Batu 8
9. Jln Gambang, Batu 9 – Simpang 4 Gambang
10. Simpang 4 Gambang – Tol Kuantan
11. Jln Bypass, Sg Karang Darat



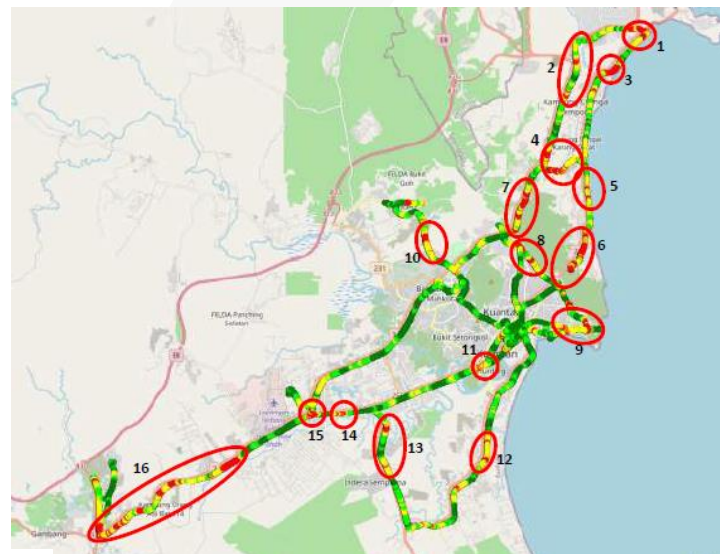
Improvement required at:

1. Jln Bypass Gebeng-Sg Karang Darat
2. Jln. Bypass ke Tmn PSJ
3. Jln. Seberang Balok
4. Jln. Kg Sg Karang Darat
5. Jln Beserah (Kg Alur)
6. Jln Beserah-Pelindung
7. Jln Semambu
8. Jln Simpang Semambu-Polisas
9. Jln Kotasas
10. Jln Sultan Ahmad Shah (UIA)
11. Jln Bulatan Cengkih
12. Jln Bypass
13. Jln KUIPSAS-Indera Sempurna
14. Jln Gambang, Batu 8
15. Jln Gambang (Batu 9 – Simpang 4 Gambang)
16. Jln Teluk Cempedak

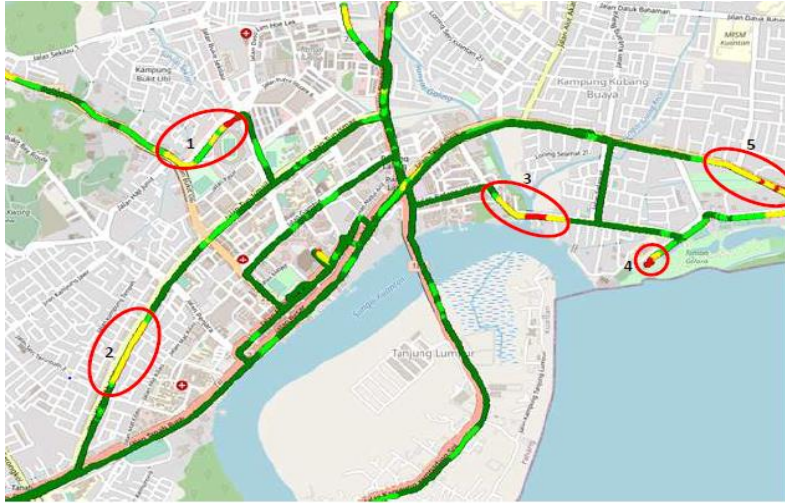


Improvement required at:

1. Jln Bypass Gebeng-Balok
2. Jln Bypass Balok Baru-Balok Jaya
3. Jln. Seberang Balok
4. Jln. Bypass ke Tmn PSJ
5. Jln. Sg Karang
6. Jln. Beserah-Pelindung
7. Jln. Bypass (Sg Karang Darat-Semambu)
8. Jln Semambu
9. Jln Teluk Sisek (Tok Sira) – Jln Tengku Muhammad
10. Jln KotaSAS
11. Kemunting
12. Jln Kempadang Makmur
13. Jln KUIPSAS-Indera Sempurna
14. Jln Gambang (Taman Tas)
15. Jln Gambang, Batu 8
16. Jln Gambang (Seri Mahkota-Simpang 4 Gambang)



Quality Audit at Zone 1 and Zone 2 – Pusat Bandaraya Kuantan



Improvement required at:

1. Jln Dato' Lim Hoe Lek (near stadium)
2. Jln Wong Ah Jang
3. Jln Tanjung Api
4. Taman Gelora
5. Jln. Dato Mahmud-Teluk Cempedak



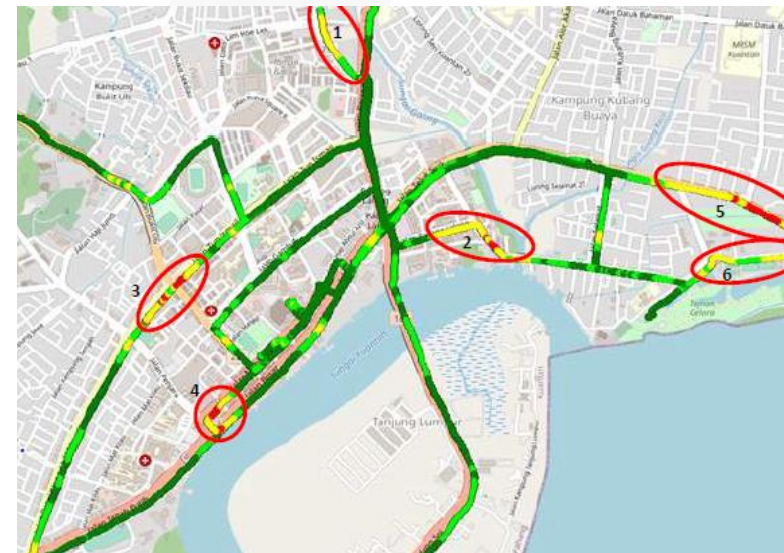
Improvement required at:

1. Jln Tanjung Api
2. Jln Dato Abu Samah
3. Jln Teluk Sisek-Jln Dato Mahmud
4. Jln Tanah Putih (Kemunting)



Improvement required at:

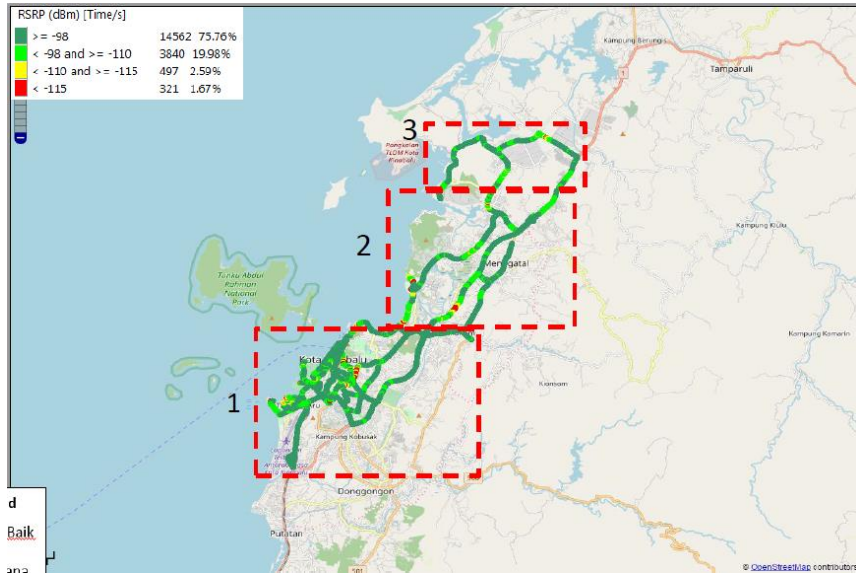
1. Jln Bukit Ubi
2. Jln Tun Ismail
3. Jln Tg Lumpur
4. Jln Pdg Lalang-Tg Api
5. Jln. Dato Mahmud-Teluk Cempedak
6. Jln Teluk Sisek-Jln Dato Mahmud
7. Jln Besar



Improvement required at:

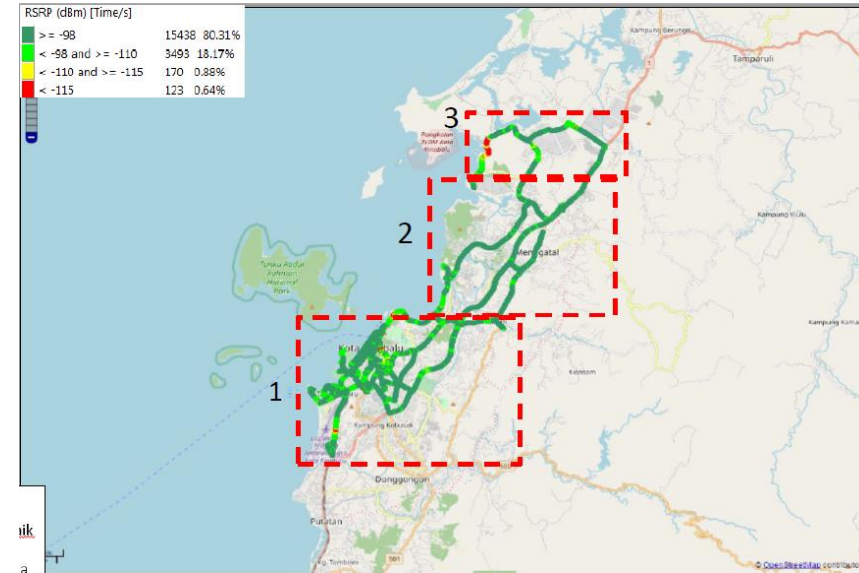
1. Jln Haji Ahmad
2. Jln Pdg Lalang-Tg Api
3. Jln Bukit Ubi-Jln Tun Ismail
4. Jln Penjara
5. Jln. Dato Mahmud-Teluk Cempedak
6. Jln Dato Abu Samah

Quality Audit at Zone 1 and Zone 2 – Kota Kinabalu



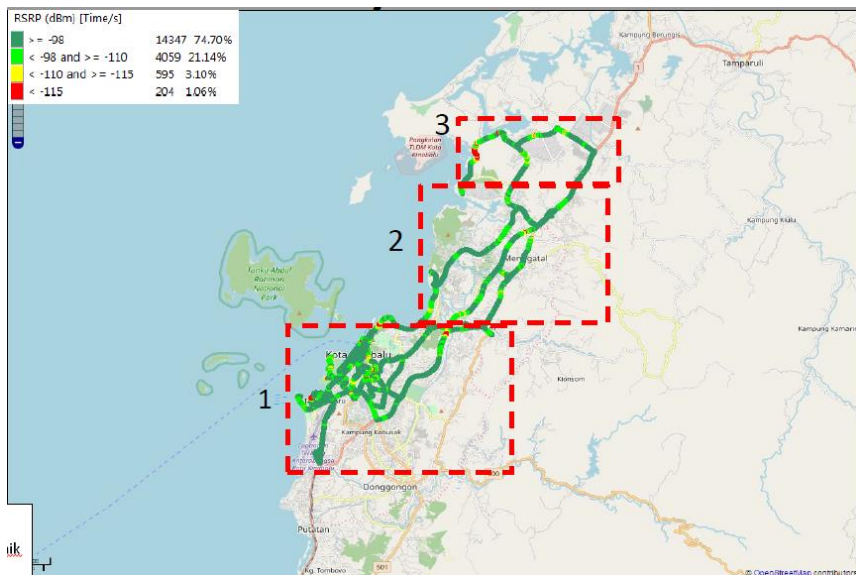
Among locations that require improvement are:

- 1.Shangri-La Tg Aru
- 2.Jalan Kg. Tg. Aru
- 3.Pan Pcfic Sutera Harbour
- 4.Jalan Queen Elizabeth 1
- 5.Jalan Tuaran
- 6.Jalan Istana
- 7.Jln Tun Fuad Stephen
- 8.Pusat Pentadbiran Negeri Sabah
- 9.Jln Sepanggar
- 10.Jln Norowot



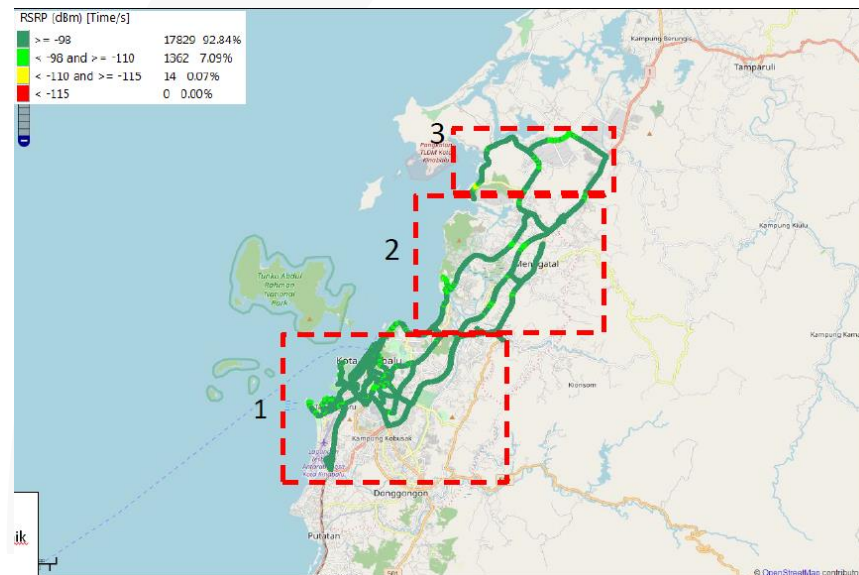
Among locations that require improvement are:

- 1.Jln Keapayan
- 2.Jln Nenas
- 3.Jln Istana
- 4.Jln Tg. Lipat
- 5.Jln Teluk Sepanggar



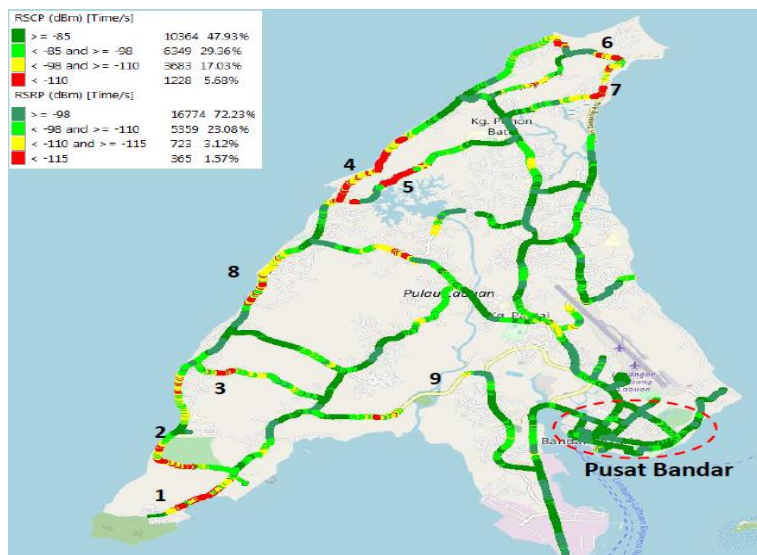
Among locations that require improvement are:

- 1.Jln Rumah Pangsa 1 Tg Aru
- 2.Pan Pacific Sutera Harbour
- 3.Jln Tun Fuad Stephen
- 4.Bulatan Jln Nenas
- 5.Jalan Lintas
- 6.Jln Tuaran Bypass
- 7.Jln Teluk Sepanggar
- 8.Jln Politeknik



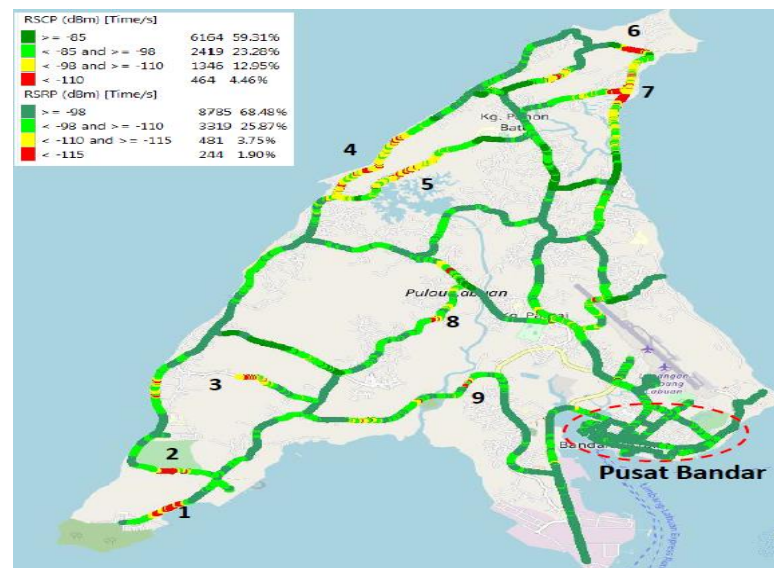
U Mobile records 92.84% with very good while 7.09% good coverage. Overall good coverage is 99.93% in Kota Kinabalu District.

Quality Audit at Zone 1 and Zone 2 – W.P Labuan



Improvement required at:

1. Jln Sg. Bebuluh
2. Jln Sg. Pagar
3. Jln Bukit Timbalai
4. Jln Pancur Hitam
5. Jln OKK Daud
6. Jln Tanjung Kubong
7. Jln Lubok Temiang
8. Jln Bebuluh
9. Jln Kinabanuwa



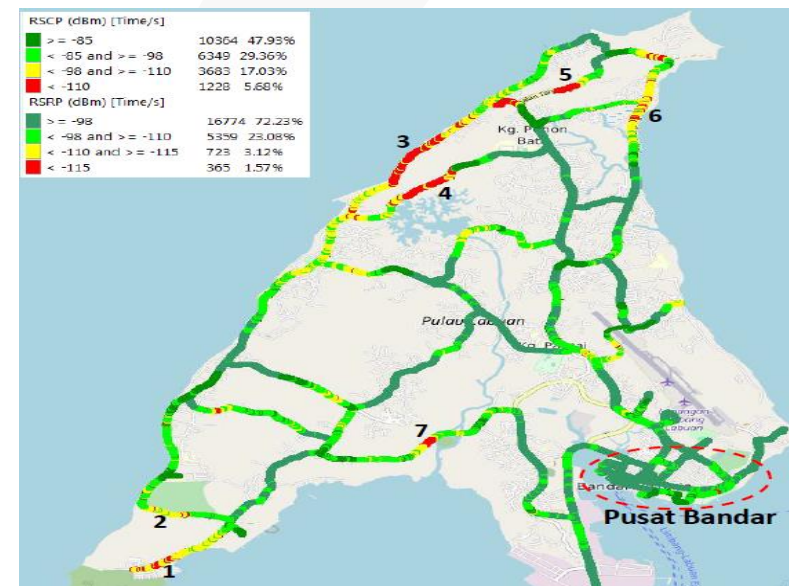
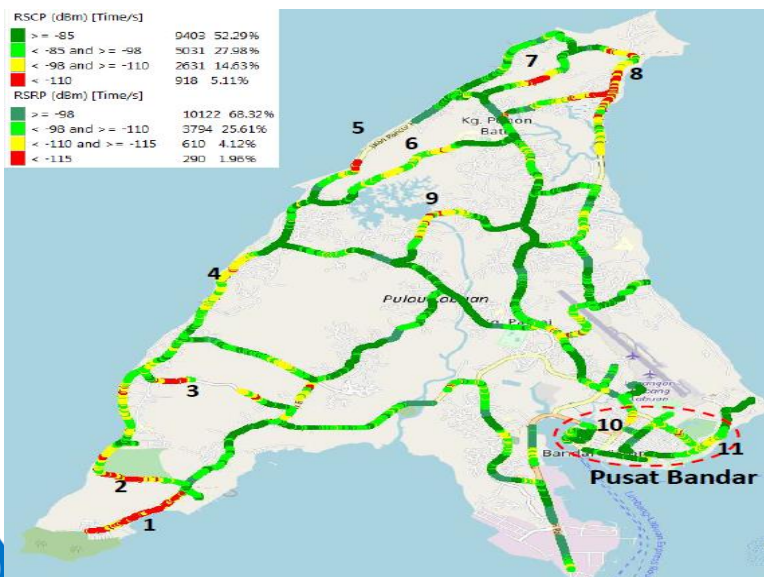
Improvement required at:

1. Jln Sg. Bebuluh
2. Jln Sg. Pagar
3. Jln Bukit Timbalai
4. Jln Pancur Hitam
5. Jln OKK Daud
6. Jln Tanjung Kubong
7. Jln Lubok Temiang
8. Jln Bebuluh
9. Jln Kinabanuwa



Improvement required at:

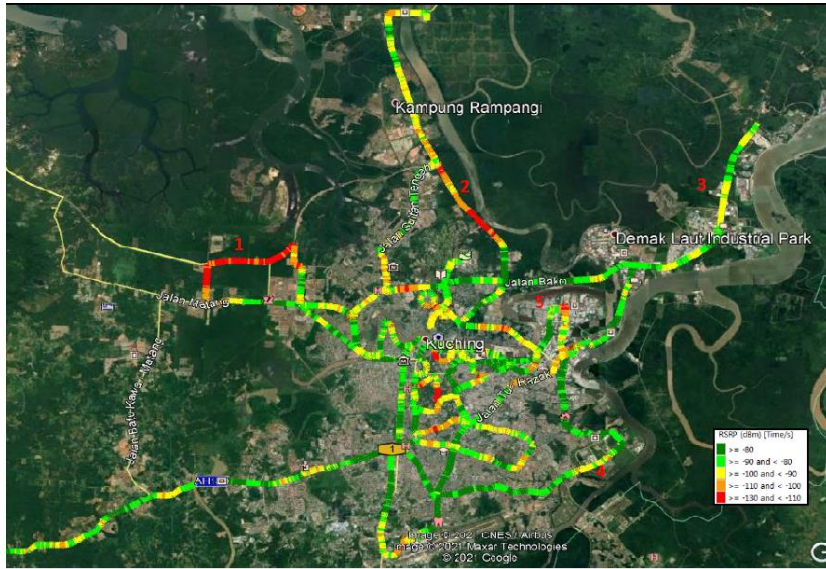
1. Jln Sg. Bebuluh
2. Jln Sg. Pagar
3. Jln Bukit Timbalai
4. Jln Lada
5. Jln Pancur Hitam
6. Jln OKK Daud
7. Jln Tanjung Kubong
8. Jln Lubok Temiang
9. Jln Bukit Kuda
10. Pusat Bandar 1
11. Pusat Bandar 2



Improvement required at:

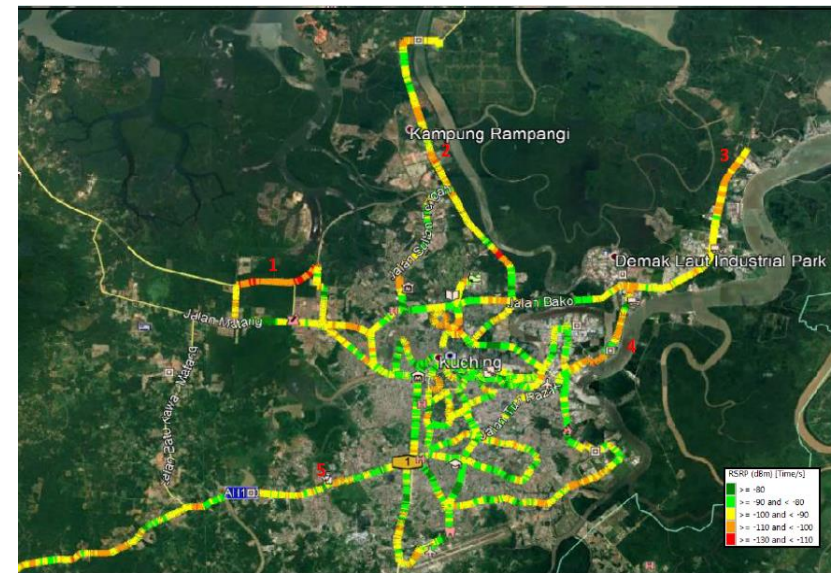
1. Jln Sg. Bebuluh
2. Jln Sg. Pagar
3. Jln Pancur Hitam
4. Jln OKK Daud
5. Jln Tanjung Kubong
6. Jln Lubok Temiang
7. Jln Kinabanuwa

Quality Audit at Zone 1 and Zone 2 – Kuching



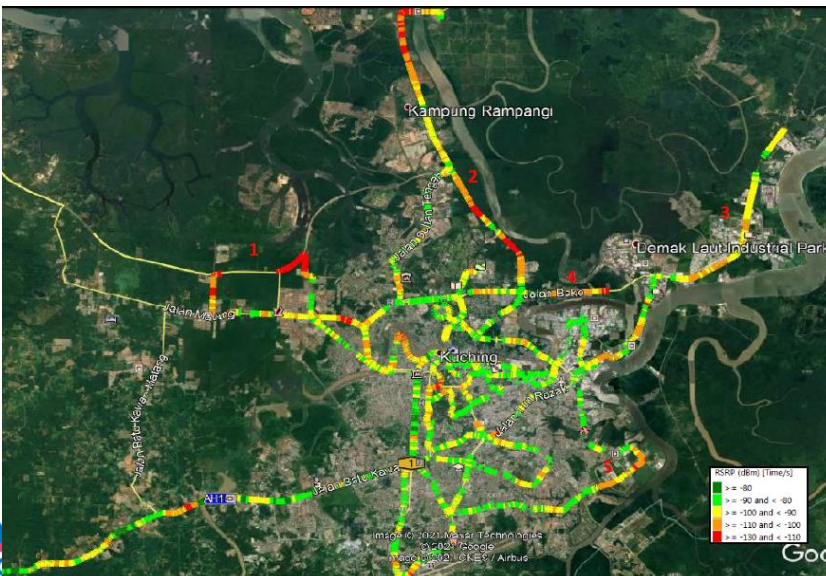
Improvement required at:

1. Matang FAC
2. Jln Sultan Tengah
3. Demak Laut
4. Sama Jaya
5. Bintawa area



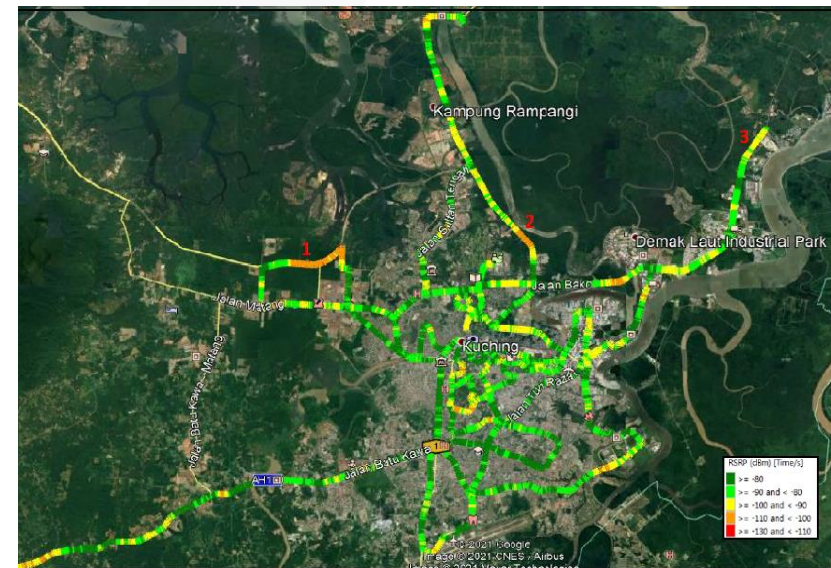
Improvement required at:

1. Matang FAC
2. Jln Sultan Tengah
3. Bako area
4. BCCK area
5. Batu Kawa main route area



Improvement required at:

1. Matang FAC
2. Jln Sultan Tengah
3. Demak Laut
4. Bako area
5. Sama Jaya



Improvement required at:

1. Matang FAC
2. Jln Sultan Tengah
3. Bako area



Thank you