

Mobile service quality measurement 2023-Q1 – Summary Report

Mobile service quality measurement - methodology

Field measurements methodology (outdoors)



Measurement methodology (Outdoors)

Measurement methodology entailed conducting quality-measuring tests on samples of voice calls and data services to determine the quality of telecom services provided for users within Egypt’s market. To this end, measuring equipment and vehicles were used for distances of **116 thousand kilometers**, across major and sub roads of urban and rural areas, during the first quarter of 2023.

Voice service quality indicators- per area

Call-Blocked Rate



Rate of unsuccessful attempts to start a phone call, out of the overall sample within a specific area.

Call-Dropped Rate



Rate of disconnected phone calls for technical issues before being ended out of the overall sample within a specific area.

Call Access Time



Rate of calls requiring a long time or taking long seconds, from the time the dial button is pressed until a ring is heard by the other side, out of the overall sample within a specific area.

Voice Quality Rate



Level of voice purity during phone calls for measurement samples within a specific period of time.

Data service KPIs for each area examined

http Download Throughput



Minimum download speed is monitored for the lowest 10% of sample within a specific area

http Upload Throughput



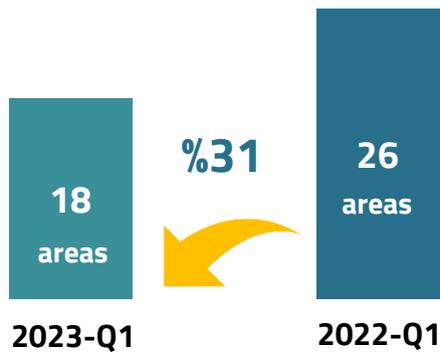
Minimum upload speed is monitored for the lowest 10% of sample.

Mobile service quality measurement 2023-Q1 – Summary Report

Mobile service quality measurement indicators – voice and data

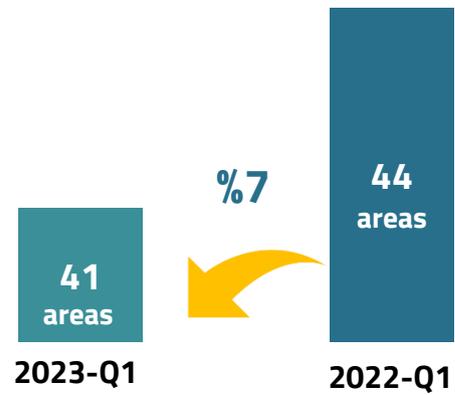
Below is the average number of areas where voice and data quality issues were monitored in 2023-Q1, compared to 2022-Q1:

Areas affected by data quality issues (Out of 81 areas)



The average number of areas having poor indicators with respect to data service improved during 2023-Q1, and decreased by **31%** compared to 2022-Q1

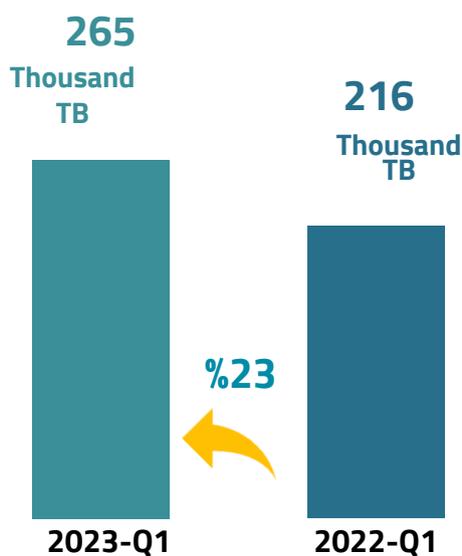
Areas affected by voice quality issues (Out of 81 areas)



The average number of areas having poor indicators with respect to voice service improved during 2023-Q1, and decreased by **7%** compared to 2022-Q1

Indicators of mobile service consumption, in terms of voice and data (2023-Q1 compared to 2022-Q1)

Data service average consumption



Number of voice calls made via 4G technology (VoLTE)



Quality measurement indicators of mobile services- voice service

Voice quality indicators – average number of affected areas per operator

Orange

Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor quality indicators with respect to voice service reached **27** during 2023-Q1. As monitored, the number of areas having poor quality indicators with respect to voice service increased by **17%** during 2023-Q1, in comparison to the same period of 2022.

Vodafone

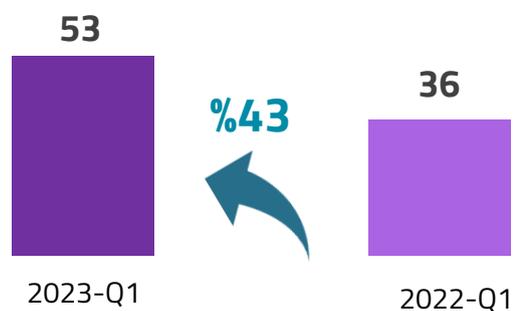
Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor quality indicators with respect to voice service reached **19** during 2023-Q1. As monitored, the number of areas having poor quality indicators with respect to voice service increased by **5%** during 2023-Q1, in comparison to the same period of 2022.

WE

Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor quality indicators with respect to voice service reached **53** during 2023-Q1. As monitored, the number of areas having poor quality indicators with respect to voice service increased by **43%** during 2023-Q1, in comparison to the same period of 2022.

Etisalat

Average number of affected areas

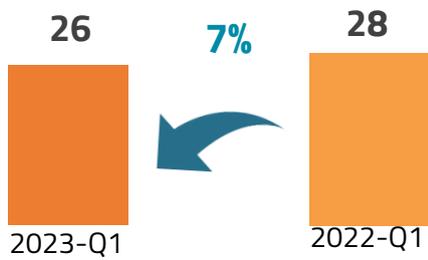


Out of 81 cities and districts, the total number of areas having poor quality indicators with respect to voice service reached **12** during 2023-Q1. As monitored, the number of areas having poor quality indicators with respect to voice service improved by **52%** during 2023-Q1, in comparison to the same period of 2022.

Data quality indicators – average number of affected areas per operator

Orange

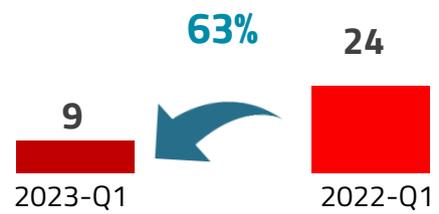
Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor indicators with respect to data service improved by **7%** during 2023-Q1, compared to the same period of 2022, recording **26**.

Vodafone

Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor indicators with respect to data service improved by **63%** during 2023-Q1, compared to the same period of 2022, recording **9**.

WE

Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor indicators with respect to data service improved by **20%** during 2023-Q1, compared to the same period of 2022, recording **4**.

Etisalat

Average number of affected areas



Out of 81 cities and districts, the total number of areas having poor indicators with respect to data service improved by **90%** during 2023-Q1, compared to the same period of 2022, recording **1**.

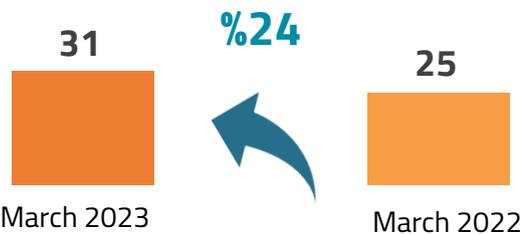
Mobile service quality measurement 2023-Q1 – Summary Report

Quality measurement indicators of mobile services- Date Transfer Rate (DTR)

DTR improved post activation of new frequency bands

Orange

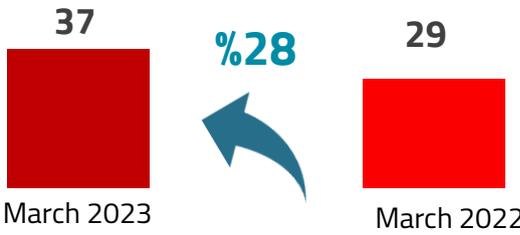
Average Download Throughput
Mbps/second



Average download throughput improved by **24%** in March 2023, compared to March 2022.

Vodafone

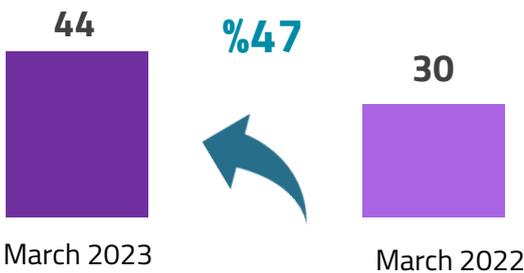
Average Download Throughput
Mbps/second



Average download throughput improved by **28%** in March 2023, compared to March 2022.

WE

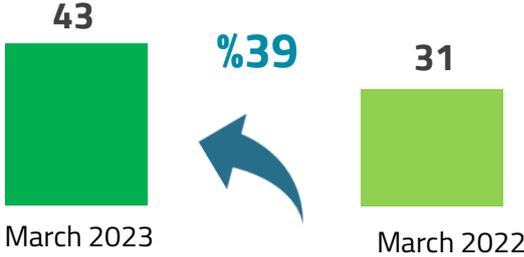
Average Download Throughput
Mbps/second



Average download throughput improved by **47%** in March 2023, compared to March 2022.

Etisalat

Average Download Throughput
Mbps/second



Average download throughput improved by **39%** in March 2023, compared to March 2022.

Mobile service quality measurement 2023-Q1 – Summary Report

Measures taken by NTRA to improve service quality for users:

1. Fines of about EGP 32 million were imposed on mobile operators for violating telecom quality standards



NTRA imposed fines of about **EGP 32 million** on mobile operators for trespassing telecom quality parameters during the first quarter of 2023

2. New 823 cell sites were approved since the beginning of 2023



NTRA approved the deployment of **new 823 cell sites** since the beginning of 2023, by an increase of **5%** in comparison to same period of 2022. NTRA also deployed small coverage stations at the top of light poles within Greater Cairo to remove coverage impediments at the areas where cell sites cannot be deployed. This would actually contribute to improving telecom service quality and expand the capacity of mobile infrastructure to take in the increasing traffic in Egypt's market.

3. Law enforcement campaigns were executed across 14 governorates to improve the service quality



NTRA executed law enforcement campaigns across 14 governorates during the first quarter of 2023 to remove **153 interference sources** at a total of **140 unauthorized repeaters** and **455 antennas** which harm the service quality. Furthermore, NTRA detained one the largest importers of unauthorized repeaters in Mansoura, Daqahliyah, where **118 repeaters** and **300 antennas** were confiscated.

In fact, this step came in line with the latest amendment to Telecommunications Law, acknowledged in December 2022, stating that tough sanctions against the possession, marketing and unlicensed importation of unauthorized mobile repeaters shall be imposed.