

# 2026H1 Orange Group DSB0 campaign in Botswana

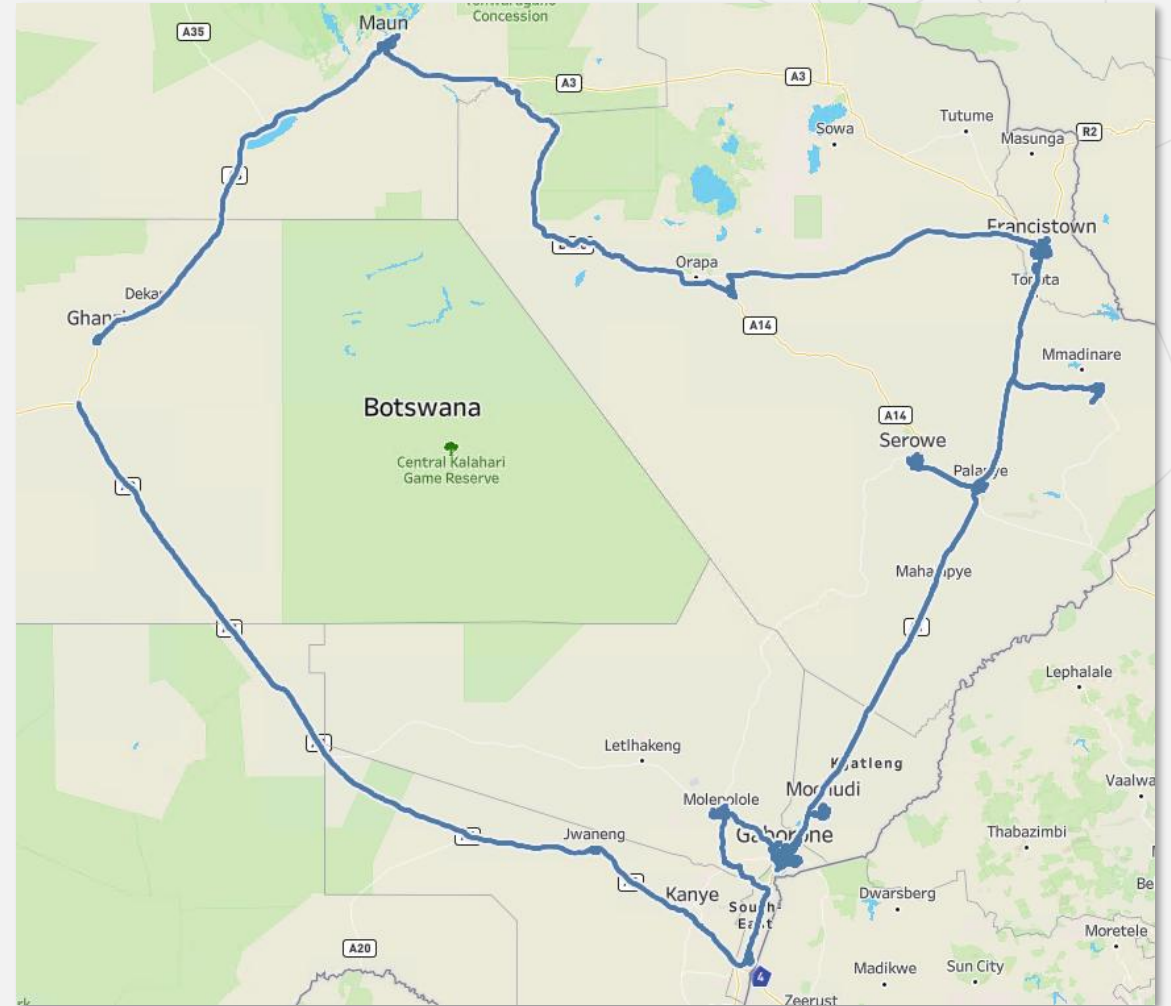
Campaign results

# Change History

| Version | Date         | Changes         |
|---------|--------------|-----------------|
| 1.0     | 16/July/2026 | Initial version |
|         |              |                 |
|         |              |                 |

# Campaign methodology

- » Measurements were conducted by driving a car with Rohde & Schwarz equipment across Botswana. Smartphones were installed in-car, such that the measurements represent in-car performance
- » The campaign was conducted between 22/May/2026 and 10/June/2026, including approximately 106 hours of drive tests.
- » Big cities, small cities & conn.roads were selected based on their importance and population
- » A total distance of roughly 4,100 km was covered during the tests; approximately 2,250 voice calls were made on each network; and around 19,750 data tests were conducted per network.

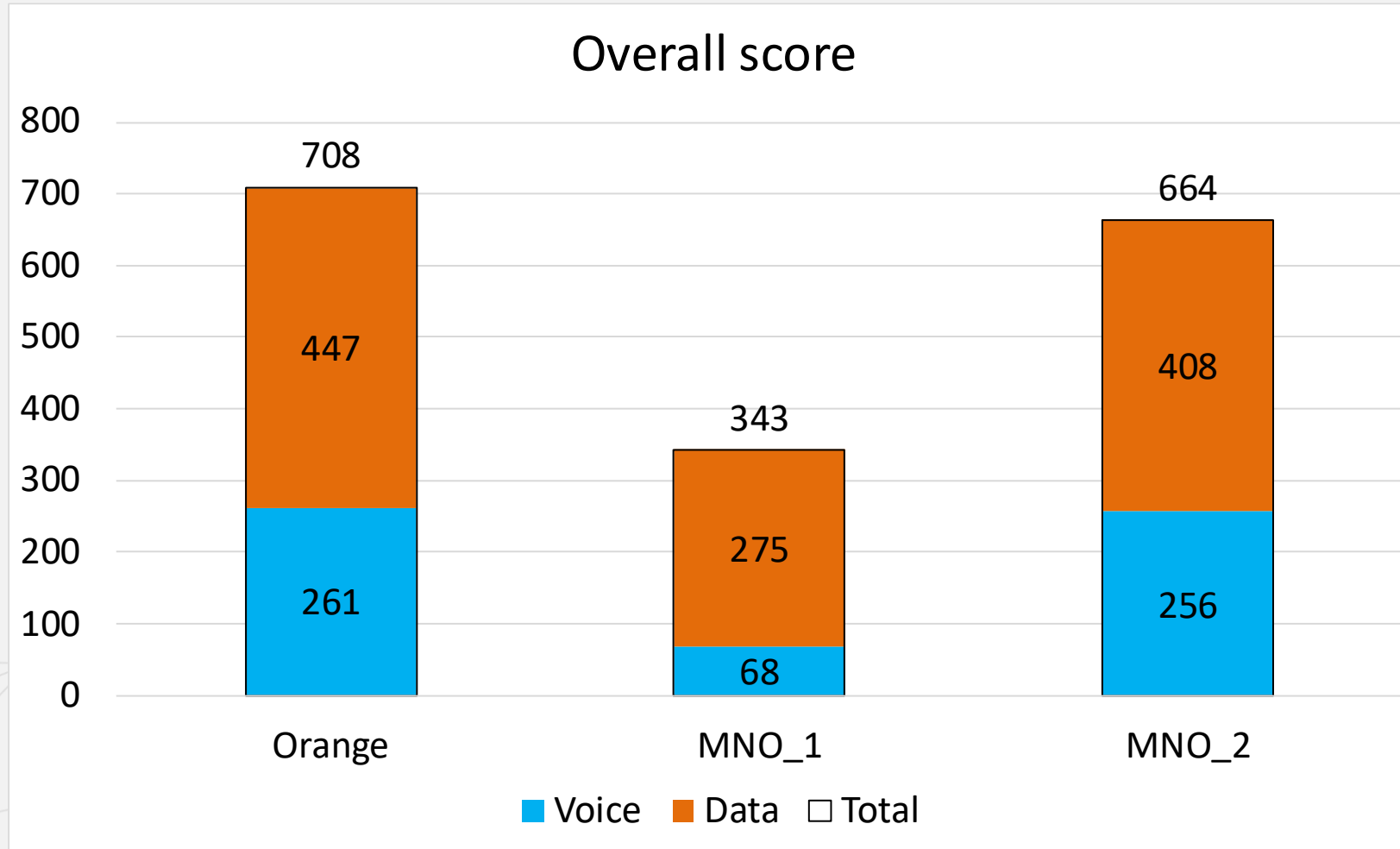


# Campaign setup

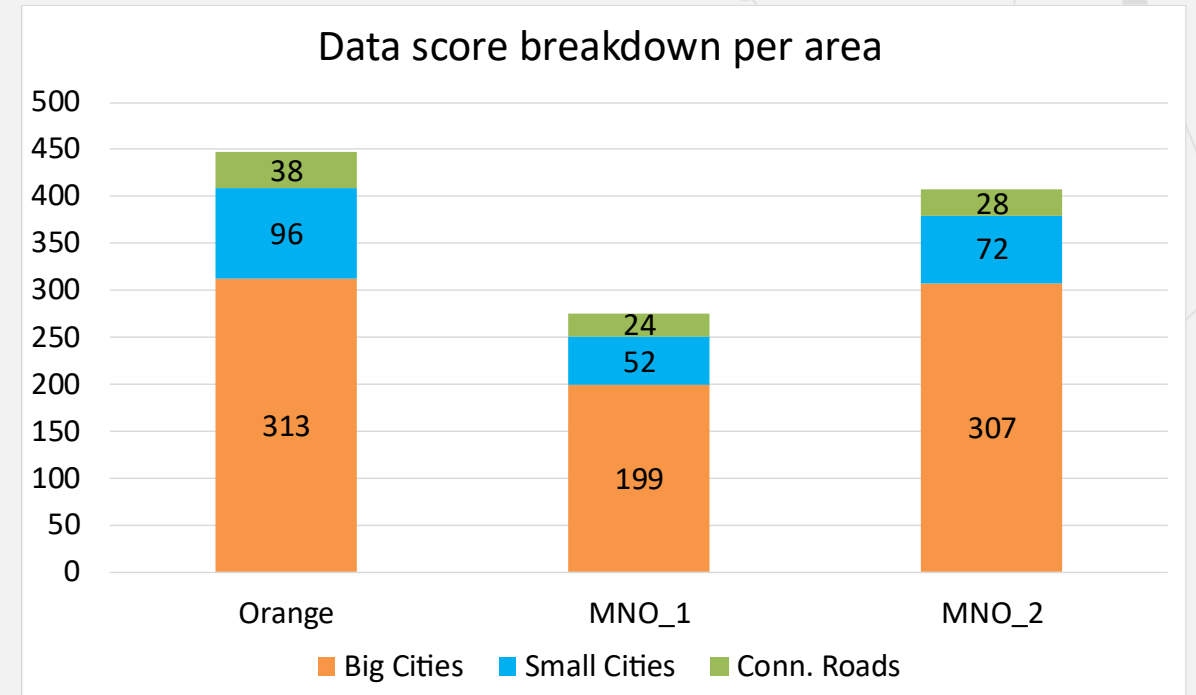
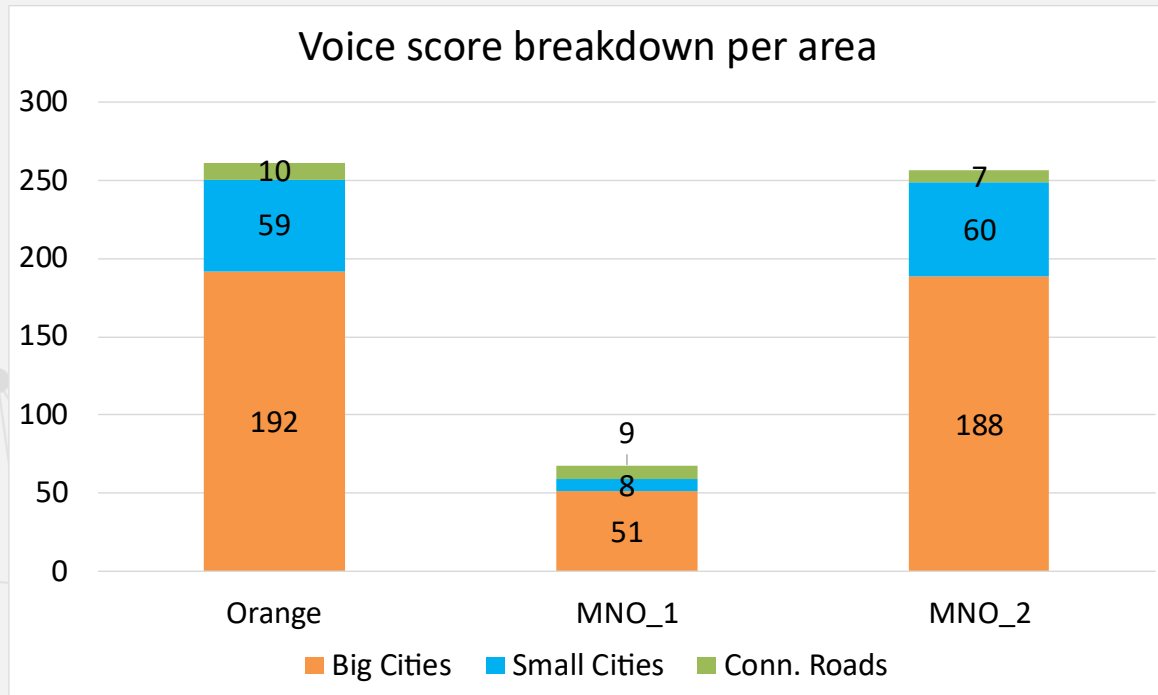
|            | Voice                                                                                                                                             | Data                                                                                                                                                                                                |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device     | Samsung Galaxy S21+                                                                                                                               | Samsung Galaxy S24 Ultra                                                                                                                                                                            |
| Test cases | Mobile-to-mobile calls<br>Best available voice technology<br>115 sec call window<br>85 sec call duration<br>HTTP 100kB traffic injection per call | Data 5G preferred<br>HTTP DL & UL multi-stream tests 7s<br>HTTPS 10MB DL & 5MB UL file transfers<br>8 live web pages + Newton<br>YouTube FHD live stream ~ 30s<br>YouTube UHD buffered stream ~ 45s |
| Routes     | Drive tests in Big cities (35%), Small cities (35%), Conn.Roads (30%)                                                                             |                                                                                                                                                                                                     |
| Scoring    | Orange Group methodology, based on ETSI TR 103 559                                                                                                |                                                                                                                                                                                                     |

WhatsApp calls were also included in the Voice scenario, in a ratio 2 legacy calls:1 WA call – excluded in scoring calculation;  
 SMS also included in the Voice scenario

# Overall score per service



# Data & voice score breakdown per area



# Voice & data service KPIs overview – Big cities

» Big cities aggregation  
voice & data service KPIs  
overview

| BIG CITIES SUMMARY      |                       |        | ORANGE | MNO_1 | MNO_2 |
|-------------------------|-----------------------|--------|--------|-------|-------|
| VOICE/VOLTE M2M         | QUALIFIED             | [%]    | 99.4%  | 91.6% | 99.2% |
|                         | CALL SETUP TIME       | [sec]  | 5.9    | 9.1   | 3.7   |
|                         | AVG SPEECH QUAL       | [#]    | 3.7    | 3.4   | 3.5   |
| HTTP DOWNLOAD FDTT (7s) | QUALIFIED             | [%]    | 100.0% | 96.5% | 99.9% |
|                         | AVERAGE DATA RATE     | [Mbps] | 225.8  | 35.9  | 219.0 |
|                         | P10 DATA RATE         | [Mbps] | 113.5  | 8.6   | 95.5  |
|                         | P90 DATA RATE         | [Mbps] | 354.9  | 75.3  | 357.6 |
| HTTP UPLOAD FDTT(7s)    | QUALIFIED             | [%]    | 99.9%  | 98.1% | 99.9% |
|                         | AVERAGE DATA RATE     | [Mbps] | 42.0   | 22.5  | 45.8  |
|                         | P10 DATA RATE         | [Mbps] | 11.6   | 7.2   | 13.4  |
|                         | P90 DATA RATE         | [Mbps] | 78.7   | 41.5  | 81.7  |
| HTTP FILE DL (10MB)     | QUALIFIED             | [%]    | 100.0% | 95.5% | 99.9% |
|                         | AVERAGE SESSION TIME  | [sec]  | 1.0    | 5.1   | 1.1   |
|                         | P10 DATA RATE         | [Mbps] | 64.6   | 7.9   | 50.5  |
|                         | P90 DATA RATE         | [Mbps] | 167.5  | 62.3  | 183.5 |
| HTTP FILE UL(5 MB)      | QUALIFIED             | [%]    | 99.8%  | 97.7% | 99.8% |
|                         | AVERAGE SESSION TIME  | [sec]  | 3.0    | 5.0   | 2.4   |
|                         | P10 DATA RATE         | [Mbps] | 6.6    | 3.6   | 10.1  |
|                         | P90 DATA RATE         | [Mbps] | 56.0   | 36.1  | 61.3  |
| HTTP LIVE PAGE DL       | QUALIFIED             | [%]    | 98.2%  | 91.1% | 97.6% |
|                         | TIME TO 1st 1000kByte | [sec]  | 1.8    | 2.2   | 1.8   |
| YouTube STREAMING HD    | QUALIFIED             | [%]    | 100.0% | 97.5% | 99.3% |
|                         | START TIME            | [sec]  | 0.7    | 0.9   | 0.6   |
|                         | VMOS                  | [#]    | 4.0    | 4.0   | 4.1   |
| YouTube STREAMING 4k    | QUALIFIED             | [%]    | 99.5%  | 96.9% | 99.7% |
|                         | START TIME            | [sec]  | 0.3    | 0.4   | 0.3   |
|                         | VMOS                  | [#]    | 4.3    | 4.3   | 4.3   |

# Voice & data service KPIs overview – Small cities

» Small cities aggregation voice & data service KPIs overview

| SMALL CITIES SUMMARY    |                       |        | ORANGE | MNO_1 | MNO_2 |
|-------------------------|-----------------------|--------|--------|-------|-------|
| VOICE/VOLTE M2M         | QUALIFIED             | [%]    | 98.6%  | 89.3% | 99.3% |
|                         | CALL SETUP TIME       | [sec]  | 6.4    | 8.7   | 3.8   |
|                         | AVG SPEECH QUAL       | [#]    | 3.6    | 3.4   | 3.2   |
| HTTP DOWNLOAD FDTT (7s) | QUALIFIED             | [%]    | 99.3%  | 94.6% | 97.4% |
|                         | AVERAGE DATA RATE     | [Mbps] | 189.3  | 35.8  | 108.6 |
|                         | P10 DATA RATE         | [Mbps] | 72.2   | 7.4   | 13.7  |
|                         | P90 DATA RATE         | [Mbps] | 316.1  | 74.8  | 252.5 |
| HTTP UPLOAD FDTT(7s)    | QUALIFIED             | [%]    | 99.5%  | 96.4% | 97.8% |
|                         | AVERAGE DATA RATE     | [Mbps] | 38.3   | 22.0  | 31.8  |
|                         | P10 DATA RATE         | [Mbps] | 8.6    | 6.2   | 2.3   |
|                         | P90 DATA RATE         | [Mbps] | 75.3   | 42.3  | 78.5  |
| HTTP FILE DL (10MB)     | QUALIFIED             | [%]    | 99.7%  | 94.8% | 97.9% |
|                         | AVERAGE SESSION TIME  | [sec]  | 1.4    | 5.7   | 3.2   |
|                         | P10 DATA RATE         | [Mbps] | 43.3   | 6.7   | 11.2  |
|                         | P90 DATA RATE         | [Mbps] | 150.9  | 60.0  | 148.7 |
| HTTP FILE UL(5 MB)      | QUALIFIED             | [%]    | 99.6%  | 96.1% | 97.1% |
|                         | AVERAGE SESSION TIME  | [sec]  | 3.6    | 5.6   | 7.8   |
|                         | P10 DATA RATE         | [Mbps] | 5.6    | 3.4   | 1.9   |
|                         | P90 DATA RATE         | [Mbps] | 52.1   | 34.8  | 51.5  |
| HTTP LIVE PAGE DL       | QUALIFIED             | [%]    | 96.2%  | 83.9% | 92.0% |
|                         | TIME TO 1st 1000kByte | [sec]  | 1.9    | 2.3   | 2.0   |
| YouTube STREAMING HD    | QUALIFIED             | [%]    | 99.7%  | 93.6% | 98.2% |
|                         | START TIME            | [sec]  | 0.7    | 0.9   | 0.8   |
|                         | VMOS                  | [#]    | 4.0    | 4.0   | 4.0   |
| YouTube STREAMING 4k    | QUALIFIED             | [%]    | 98.9%  | 94.8% | 98.0% |
|                         | START TIME            | [sec]  | 0.4    | 0.5   | 0.4   |
|                         | VMOS                  | [#]    | 4.3    | 4.2   | 4.2   |

# Voice & data service KPIs overview – Conn. Roads

» Conn. Roads aggregation voice & data service KPIs overview

| CONN. ROADS SUMMARY     |                       |        | ORANGE | MNO_1 | MNO_2 |
|-------------------------|-----------------------|--------|--------|-------|-------|
| VOICE/VOLTE M2M         | QUALIFIED             | [%]    | 79.2%  | 66.6% | 78.9% |
|                         | CALL SETUP TIME       | [sec]  | 6.0    | 9.3   | 4.5   |
|                         | AVG SPEECH QUAL       | [#]    | 3.6    | 3.5   | 3.1   |
| HTTP DOWNLOAD FDTT (7s) | QUALIFIED             | [%]    | 88.0%  | 73.1% | 80.6% |
|                         | AVERAGE DATA RATE     | [Mbps] | 113.6  | 28.2  | 74.2  |
|                         | P10 DATA RATE         | [Mbps] | 11.0   | 5.5   | 5.4   |
|                         | P90 DATA RATE         | [Mbps] | 255.1  | 64.1  | 194.1 |
| HTTP UPLOAD FDTT(7s)    | QUALIFIED             | [%]    | 86.3%  | 77.0% | 85.8% |
|                         | AVERAGE DATA RATE     | [Mbps] | 27.9   | 15.3  | 25.0  |
|                         | P10 DATA RATE         | [Mbps] | 2.1    | 2.0   | 1.6   |
|                         | P90 DATA RATE         | [Mbps] | 70.3   | 35.1  | 66.0  |
| HTTP FILE DL (10MB)     | QUALIFIED             | [%]    | 86.2%  | 72.8% | 79.8% |
|                         | AVERAGE SESSION TIME  | [sec]  | 3.1    | 7.5   | 4.8   |
|                         | P10 DATA RATE         | [Mbps] | 11.2   | 5.0   | 6.1   |
|                         | P90 DATA RATE         | [Mbps] | 135.4  | 53.0  | 117.1 |
| HTTP FILE UL(5 MB)      | QUALIFIED             | [%]    | 83.3%  | 73.4% | 82.7% |
|                         | AVERAGE SESSION TIME  | [sec]  | 7.8    | 10.4  | 9.2   |
|                         | P10 DATA RATE         | [Mbps] | 2.3    | 1.7   | 1.6   |
|                         | P90 DATA RATE         | [Mbps] | 49.1   | 28.8  | 46.9  |
| HTTP LIVE PAGE DL       | QUALIFIED             | [%]    | 82.6%  | 65.4% | 74.2% |
|                         | TIME TO 1st 1000kByte | [sec]  | 2.0    | 2.4   | 2.1   |
| YouTube STREAMING HD    | QUALIFIED             | [%]    | 87.8%  | 78.9% | 83.6% |
|                         | START TIME            | [sec]  | 0.8    | 1.1   | 1.0   |
|                         | VMOS                  | [#]    | 4.0    | 4.0   | 4.0   |
| YouTube STREAMING 4k    | QUALIFIED             | [%]    | 89.6%  | 75.0% | 82.6% |
|                         | START TIME            | [sec]  | 0.4    | 0.8   | 0.8   |
|                         | VMOS                  | [#]    | 4.2    | 4.1   | 4.1   |



EXPERTS IN **RADIO ACCESS** AND **MOBILE DATA**

Commsquare NV  
Dellingstraat 34/1, 2800 Mechelen, Belgium  
T: +32 15 52 88 74

Commsquare Hellas  
Paparrigopoulou 21, 15343 Ag. Paraskevi, Athens, Greece  
T: +30 210 64 45 022

Commsquare Ltd  
Third floor Connexions Building  
159 Princes Street Ipswich Suffolk IP11QJ, UK  
T: +44 1473 487 130

Regional Office Jordan  
25 Otbah Ben Ghazwan Street, Suite 205, Amman, Jordan  
T: +962 6 200 5688

[www.commsquare.com](http://www.commsquare.com)