OOKLA

CASE STUDY

How TRC Jordan Ensures Reliable, Resilient Connectivity with Ookla Data

Introduction

Jordan's telecommunications regulatory authority, the Telecommunications Regulatory Commission (TRC), is responsible for monitoring quality of service standards and holding operators accountable for providing services, ensuring sustainable growth in the telecoms sector. When Jordan went into a nationwide lockdown in 2020, daily data traffic increased 31% as distance learning and teleworking took over. To ensure both connectivity and economic growth during this time, it was key to maintain the resilience of Jordan's networks.

TRC uses Ookla data to monitor daily mobile network traffic, understand fixed internet availability, assess operator performance, ensure compliance, remotely monitor coverage and quality issues, and plan for the national rollout of 5G in Jordan.

"TRC Jordan is committed to the development of accessible, reliable broadband and mobile internet access. Ookla data helps us assess the performance, quality, and coverage of mobile networks so that we can hold operators accountable for their networks, promote competition, inform policy decisions, and allocate funding appropriately — resulting in faster, more accessible networks for our constituents."

— Zeid AlKadi, Director of Licensees and Consumer Affairs, Telecommunications Regulatory Commission - Jordan

Improved nationwide mobile network speeds under increased demand during the pandemic

Rapidly and remotely resolved a larger amount of consumer complaints than ever before

Gained unprecedented insight into operators' spectrum utilization and commitments post-allocation

Situation

As an early adopter of crowdsourced network intelligence, TRC Jordan helped inform the ITU-T efforts to standardize crowdsourcing, Recommendations **ITU SG12 E.806** and **ITU SG12 E.812**. The emergence of the pandemic in 2020 only increased the need for crowdsourced data, as work became remote and it was no longer safe to send network testers into the field. In order to maintain network resilience and service continuity, TRC needed to remotely monitor performance and operator compliance with universal service commitments and national roaming migration agreements — as well as remotely handle consumer complaints about network coverage or quality.

Solution

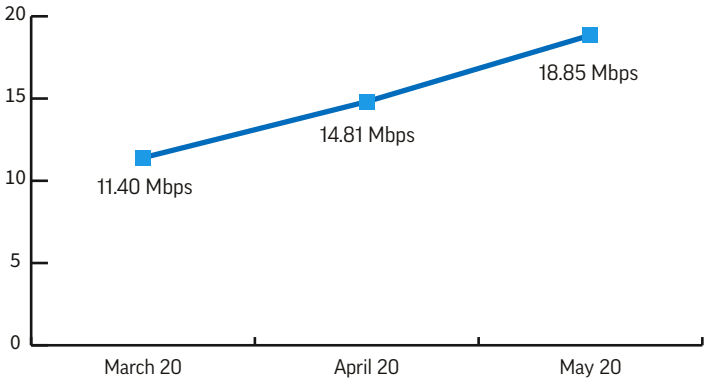
TRC applied remote monitoring, performance evaluation, and operator compliance — and empowered their team with network intelligence to help resolve consumer complaints. TRC uses Ookla's Speedtest Intelligence® and Cell Analytics™ to identify needed network improvements, understand operators' spectrum utilization post-allocation, and resolve complaints.

Maintaining network resiliency during the pandemic

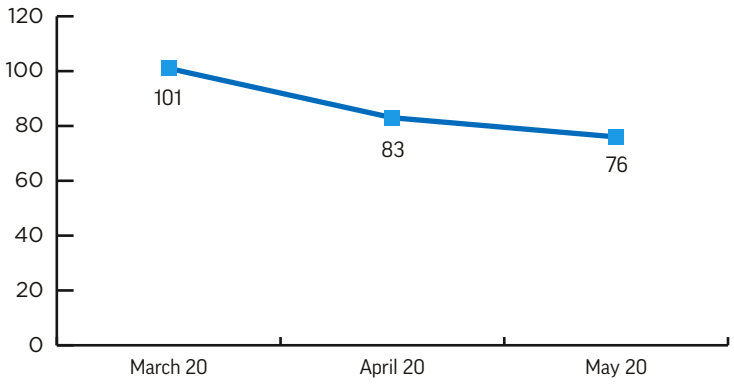
On March 16, 2020, after Jordan's nationwide lockdown went into effect, TRC rolled out a temporary free spectrum allocation for operators in order to improve connectivity. TRC used Cell Analytics to validate that operators were using the spectrum (as well as to ensure that operators gave the spectrum back at the conclusion of the temporary allocation in June 2022). TRC also analyzed the spectrum utilization over the 24-month period to see how operators deployed specific network technologies (such as LTE) in key areas.

Using Speedtest Intelligence, TRC was able to see how speeds were improved in Jordan as a result of the free spectrum allocation. From March 2020 to May 2020, the median national mobile download speed nearly doubled, and Jordan's Speedtest Global Index ranking jumped 25 spots.

Jordan's Median Download Speed (Mbps)
Speedtest Intelligence® | March 2020 – May 2020



Jordan's Speedtest Global Index Ranking on Mobile
Speedtest Intelligence® | March 2020 – May 2020



Using crowdsourced data — as opposed to traditional time-consuming data collection methods such as walk testing — allowed TRC to safely and remotely oversee all coverage and quality issues during the lockdown. Using Cell Analytics, TRC was able to remotely resolve 97% of consumer complaints about network coverage and quality. Crowdsourced coverage analysis also helped reveal a digital divide related to coverage and capacity issues, so TRC could better prioritize coverage enhancements for underserved locations, such as remote quarantine areas in the North Dead Sea and the Al Omari Cross Border.

Validating operator commitments

The spread of Covid-19 made it unsafe to send probes into the field to validate operator commitments, so TRC leveraged crowdsourced network intelligence to maintain 24/7 operator performance monitoring. With Cell Analytics, operator commitments such as site optimization, base station buildups, technology additions, and spectrum commitments could all be validated remotely. TRC remotely validated site buildup commitments and coverage indicators as per the Universal Service Commitment — as well as monitor service availability and identify areas with poor coverage as per the National Roaming Migration Agreement.

Gaining visibility into indoor mobile performance, fixed internet availability, and operator interconnection points

Looking at the full connectivity landscape in Jordan, TRC leveraged Ookla data to understand other key indicators of consumer connectivity, including:

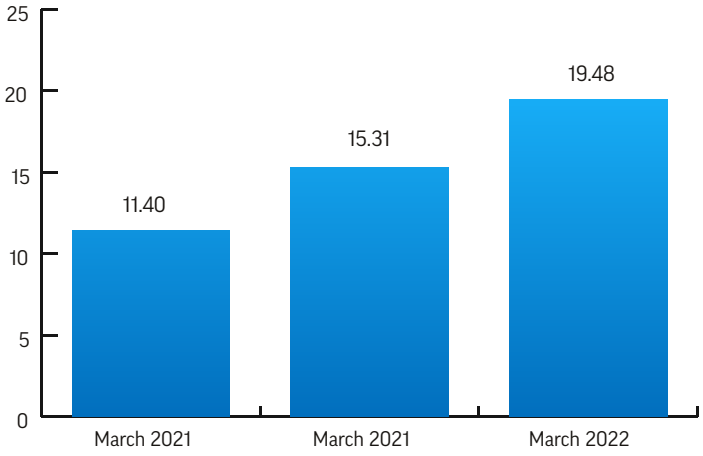
- Availability of fixed-line internet, using latency and throughput to discern technology type for Fiber to the Home (FTTH) and ADSL
- Visibility into indoor consumer network experience, which is impossible to measure via controlled testing
- Ability to discover cross-border connection points and match operator network flow with what was initially submitted during licensing — to understand and improve points of operator interconnection

Outcome

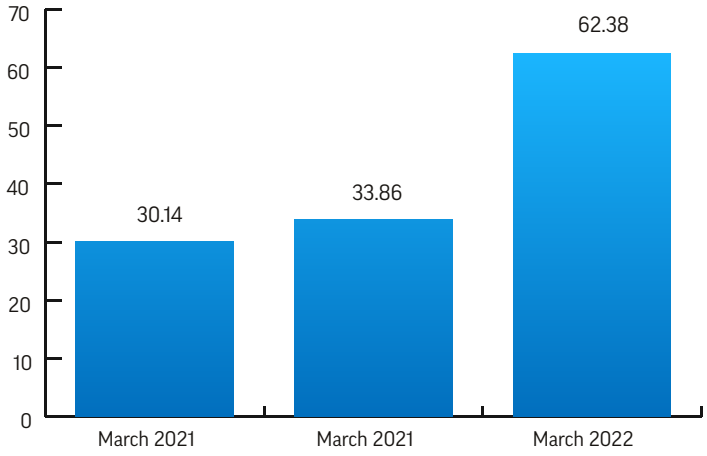
By integrating crowdsourced data into its daily operations, TRC saw both cost and time savings from the traditional benchmarking methods used previously. Virtual benchmarking has allowed for continuous data collection of higher sample counts — at a lower cost and with no hardware maintenance issues.

As a result, Jordan's speeds have improved significantly year over year. As you can see in the charts below, the median download speed nearly doubled on both fixed and mobile from March 2020 to March 2022.

Jordan's Mobile Median Download Speed (Mbps)
Speedtest Intelligence® | March 2020 – March 2022



Jordan's Fixed Median Download Speed (Mbps)
Speedtest Intelligence® | March 2020 – March 2022



For several months, Jordan has been in the top 50 fastest nations for fixed speeds on the Speedtest Global Index. The work that TRC has done with Ookla to improve nationwide connectivity has helped Jordan achieve global recognition for its innovative approaches using crowdsourced data to provide superior connectivity to constituents.