

How Batelco Makes Strategic Network Improvements in Bahrain with Ookla Data

Benefits



Enhanced both indoor and outdoor network coverage across the Kingdom to address growing demands



Identified areas where spectrum bands could be repurposed from 3G to 4G to increase network capacity



Improved customer network quality of experience metrics with enhanced content delivery methods

For tier-one operators like Batelco, part of Beyon group, continuous innovation is required to meet the rising user demands and deliver exceptional service quality across the Kingdom as well as positioning itself among the best networks globally. To achieve its goal, Batelco not only relies on its expertise and traditional methods it also leverages on data from Ookla [Cell Analytics™](#) and [Consumer QoE™](#) to identify areas for strategic network optimization and enhance the end-user network experience.

Situation

For telecommunications operators, prioritizing the right investments can be challenging, especially when the ultimate aim is to continue delivering the best customer experience and driving service improvements for users.

Batelco tackled this challenge using Ookla data as the foundation for informed decision-making. This data enabled Batelco to implement innovative solutions including coverage enhancements, enhanced content delivery methods, and the refarming of existing 3G spectrum to improve the consumer network experience.

“At Batelco, we are revolutionizing the way traditional telcos operate by placing customer service at the heart of our operations. By leveraging crowdsourced data, we enhance our understanding and responsiveness to customer needs. Ookla’s data and solutions have empowered us to make informed decisions, transforming our network capabilities to improve coverage and optimize performance. This ensures our customers always enjoy the best connectivity experience.”

— Mr. Rashid Mohamed, Chief Technology Officer, Batelco

Solution

Batelco's approach to network enhancement showcases how data-driven decision-making can transform network performance and customer experiences. By utilizing Ookla's solutions, several strategic initiatives were developed and implemented to enhance Batelco's network infrastructure. These upgrades ensured efficient use of resources while delivering meaningful improvements to customers. Let's take a closer look at some of these initiatives:

Coverage Enhancements for Optimized Coverage

Batelco continues to expand and improve its network coverage across the Kingdom to address growing demands and a constantly evolving connectivity landscape that needs innovative coverage solutions.

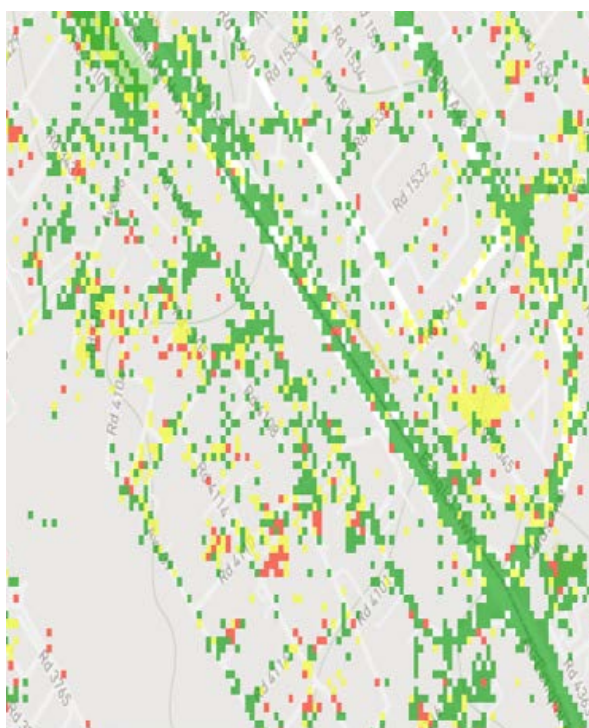
As part of these coverage enhancements, Batelco has extended its coverage in 30+ residential and landmark areas including Diyar Al Muharraq, Dilmunia, and Juffair. Batelco has expanded its mobile coverage in industrial, commercial, and educational areas.

In Riffa and Hamad Town, Bahrain's second and third largest cities, targeted efforts throughout 2023 and 2024 led to a significant +90% improvement in coverage and quality in key areas, helping Batelco deliver enhanced connectivity experiences across the Kingdom.

Batelco's LTE RSRP in Riffa, Bahrain

Cell Analytics™ | Q1 2023 vs. Q4 2023

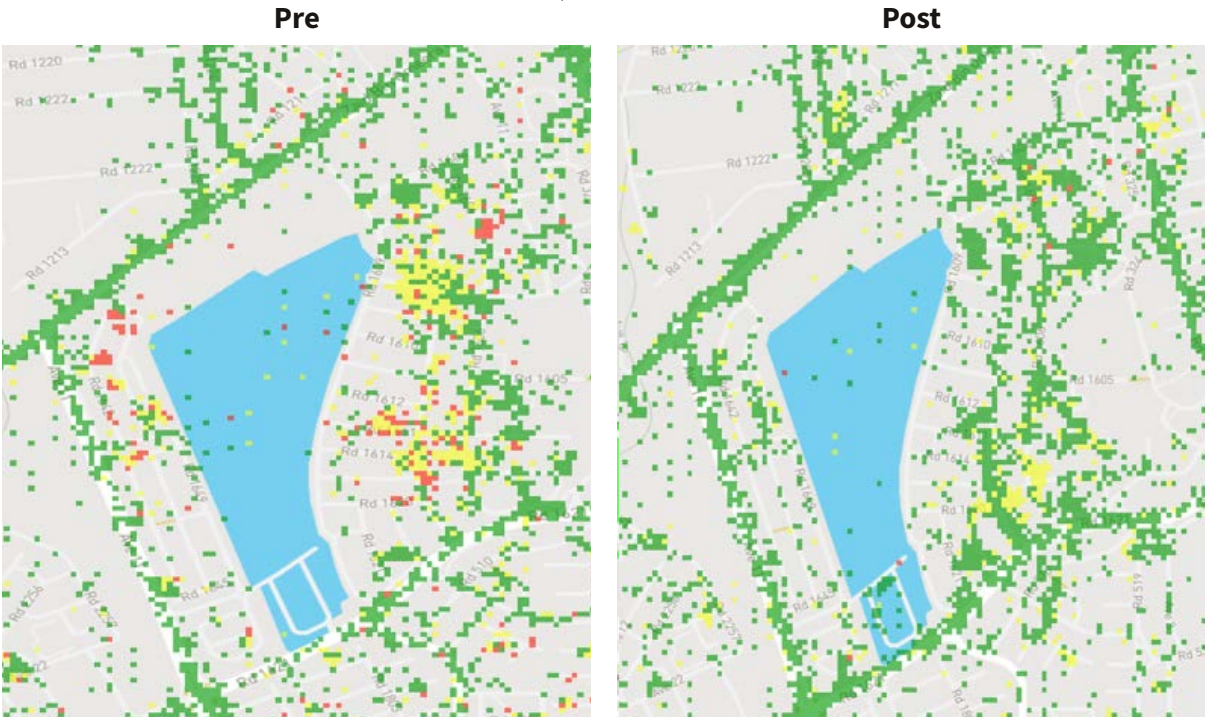
Pre



Post

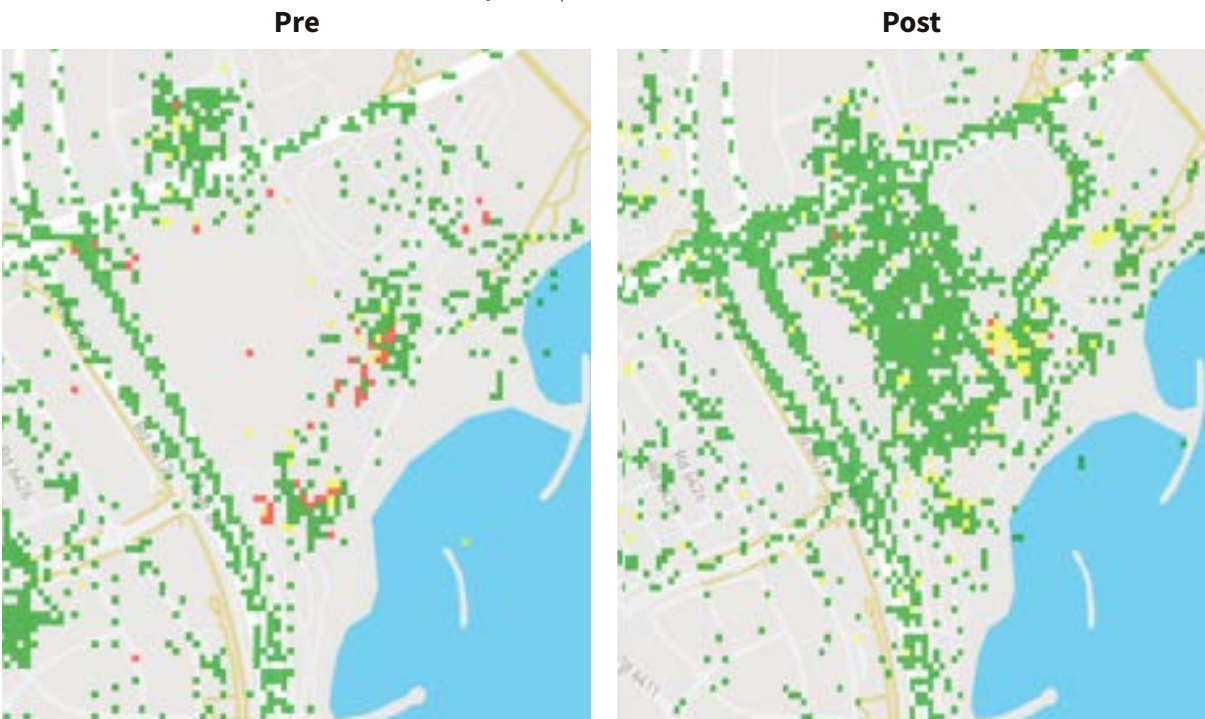


Batelco's RSRP in Lawzi Housing – Hamad Town, Bahrain
Cell Analytics™ | Q1 2023 vs. Q4 2023



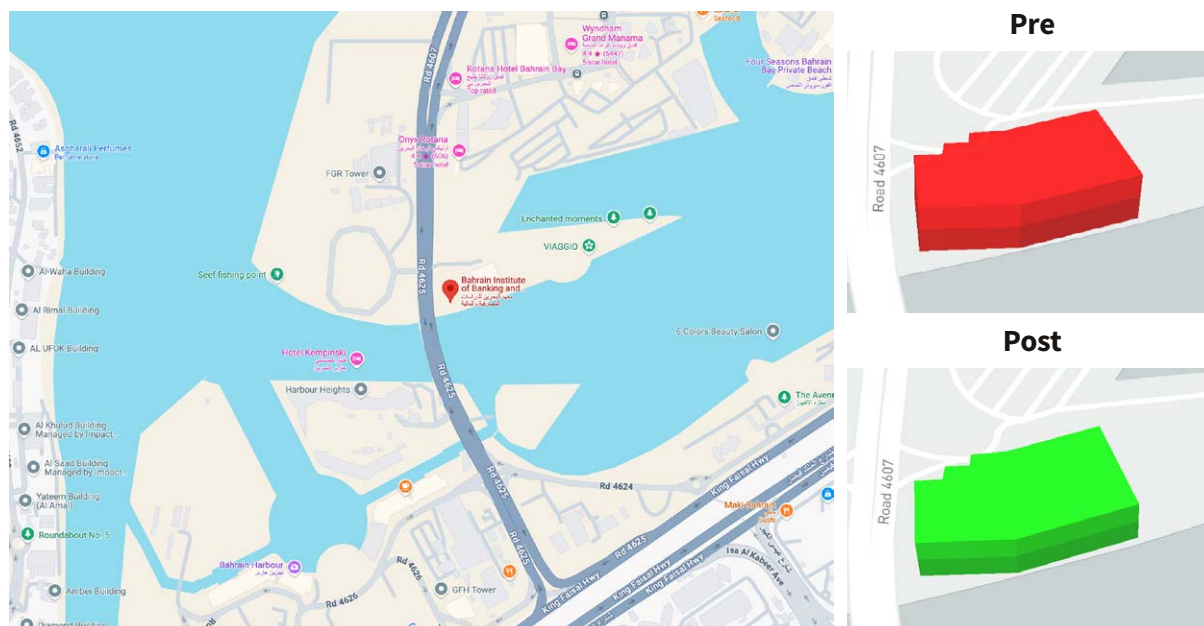
Similarly At Marrasi Galleria Mall, targeted efforts during 2023 and 2024 led to 90% coverage improvements as shown below.

Batelco's LTE RSRP at Marassi Mall
Cell Analytics™ | Q1 2023 vs. Q2 2024



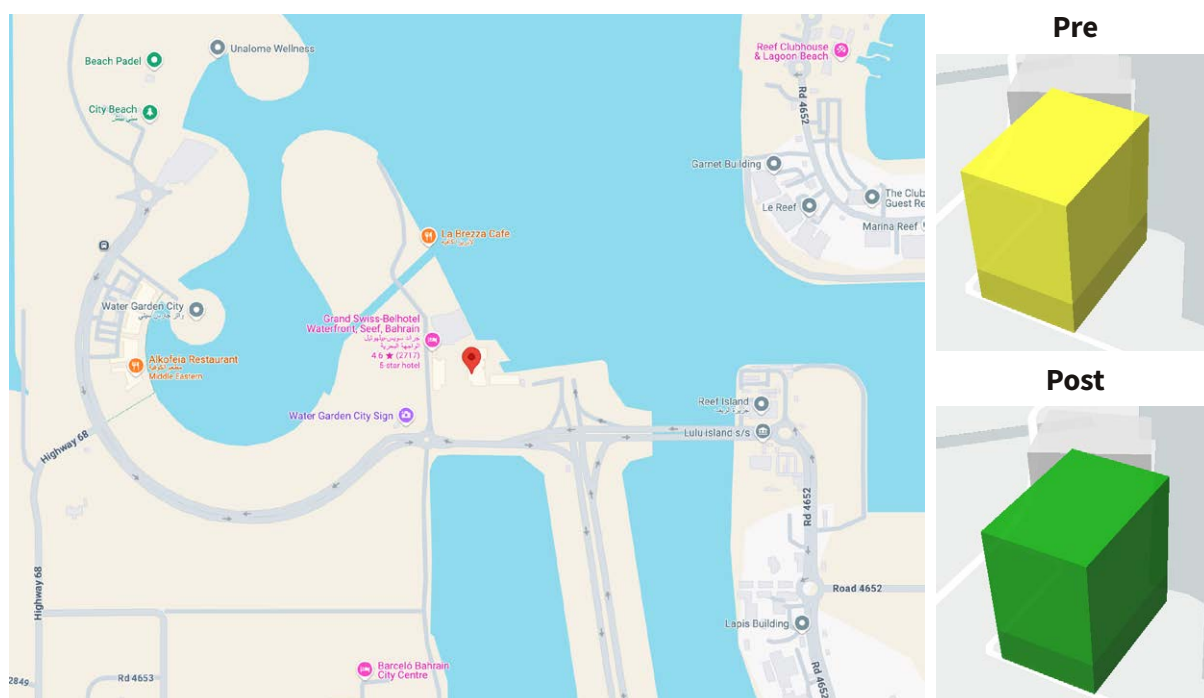
Batelco's Indoor Coverage Improvements at the Bahrain Institute of Banking and Finance (BIBF)

Cell Analytics™ | Q1 2023 vs. Q1 2024



Batelco's Indoor Coverage Improvements at the Swiss Bell Hotel

Cell Analytics™ | Q4 2022 vs. Q2 2024

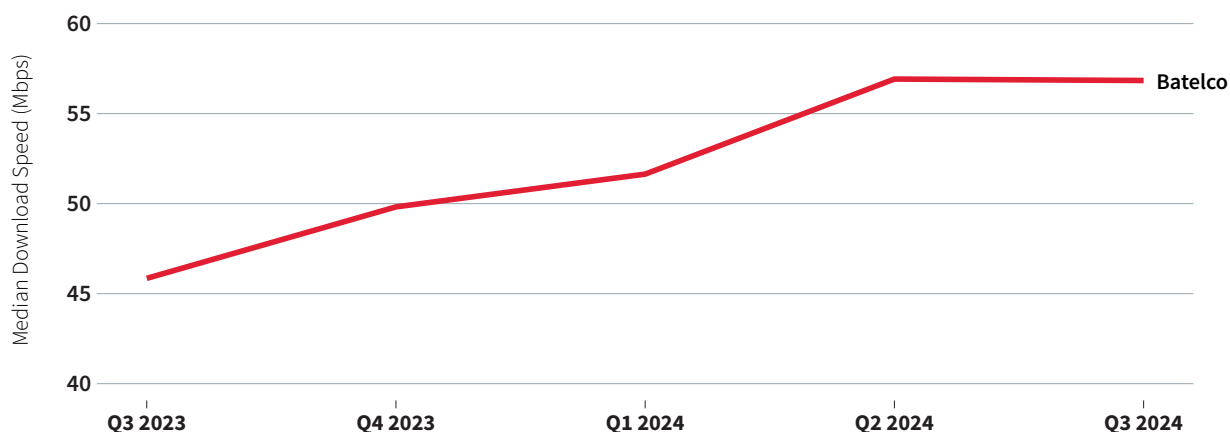


Strategic 3G Spectrum Refarming

To meet growing demands for advanced technologies such as 4G and 5G, Batelco also utilized [Cell Analytics](#) to identify areas where spectrum bands could be repurposed from 3G to 4G (LTE 900) to increase network capacity and the availability of 4G service. As a result of this spectrum refarming, Batelco delivered a 17% increase in 4G download speed from Q3 2023 to Q3 2024 in Capital Governorate, Bahrain as an example, demonstrated on the chart below.

4G Download Speed in Capital Governorate, Bahrain

Speedtest Intelligence® | Q3 2023 vs. Q3 2024



Enhanced Content Delivery Methods and User Experience

Improving network KPIs like download speed and signal strength are of course critical, but Batelco also leveraged Ookla's Consumer QoE dataset to ensure these improvements translated into a better experience for the daily activities that matter most to users.

Using [Consumer QoE](#), Batelco evaluated multiple key metrics to better understand the end-user experience, including latency, web page load times, gaming, social media, video rebuffering, and video resolution. Based on this data, Batelco implemented strategic improvements to enhance its content delivery by designing data paths to reduce hops and optimize network efficiency, address high-latency routes to improve performance, and expand content caching and improve routes for top-tier content providers.

Making customer voices heard through crowdsourced data

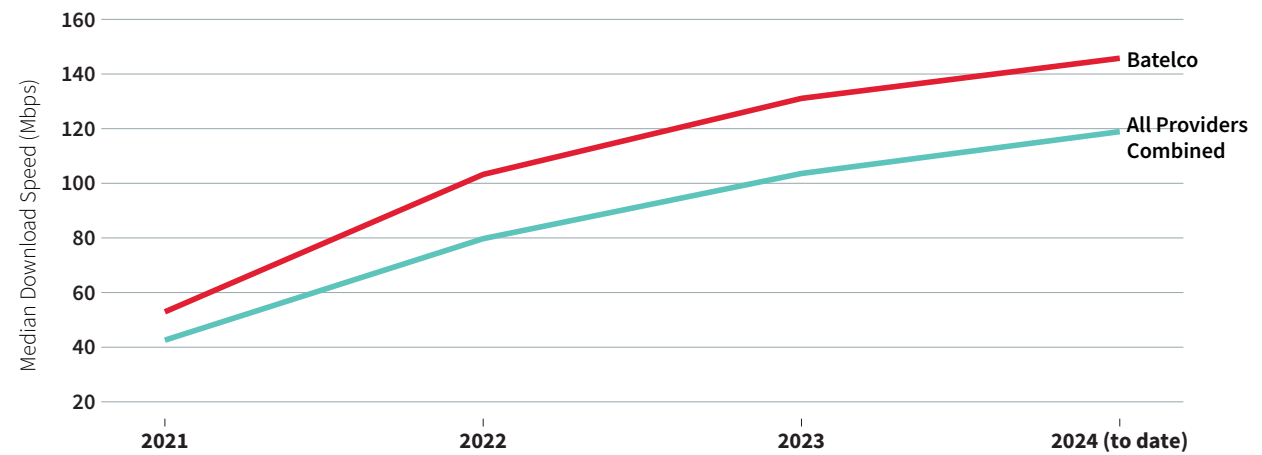
Additionally, Batelco gathers customer feedback through surveys, questionnaires, social media, and customer comments to ensure customer voices are being heard. For those who don't report network issues directly, crowdsourced data provides a clear picture of real-world network performance. This approach allows Batelco to identify and address underlying issues, such as packet loss and retransmissions, that often go unnoticed by users. By using real-world metrics to assess network quality, availability, and performance, Batelco proactively enhances coverage in areas with lower connectivity or throughput—resolving potential challenges before they impact customers.

Outcome

Batelco’s strategic use of Ookla data has delivered impressive results, improving both traditional speed metrics and essential quality-of-experience indicators.

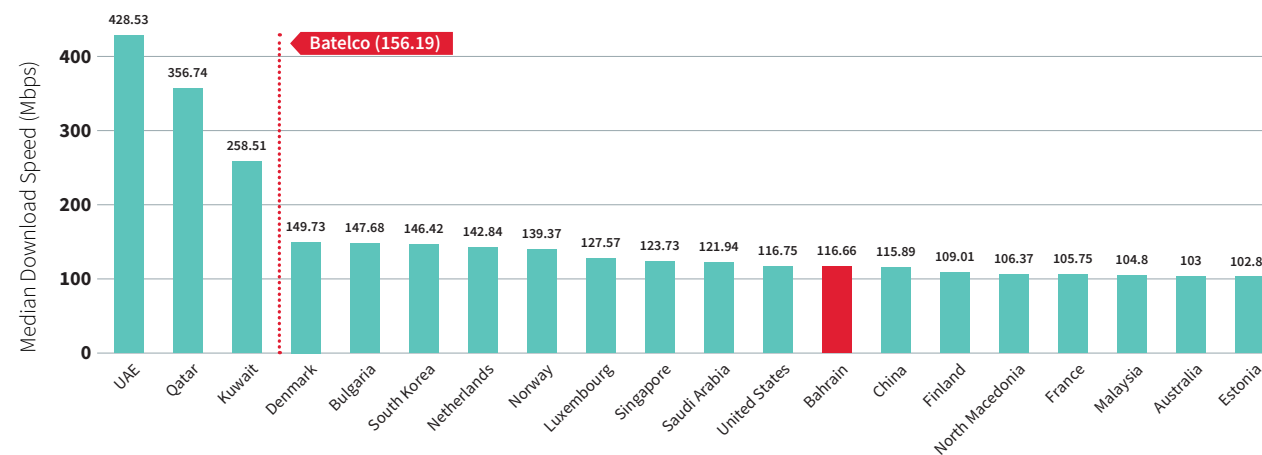
While speed remains important, the telecommunications industry is increasingly focused on quality of experience metrics that directly impact user experiences – from gaming to web browsing to video streaming. Batelco’s comprehensive approach led to significant gains in both QoE and speed, positioning them among the top networks globally. Batelco consistently delivers faster median download speeds than the median download speed for All Providers Combined in Bahrain as shown below.

Batelco vs. All Providers Combined Median Download Speed
Speedtest Intelligence® | 2021 – 2024



This achievement has been a key factor in Bahrain’s consistent ranking among the top 15 countries for mobile speed throughout 2024, as reported by the [Speedtest Global Index™](#). In the graph below, you can see where Bahrain lands on the index, as well as where Batelco’s median download speeds compare to the top-performing country speeds.

Top 20 Fastest Countries on Mobile
Speedtest Global Index™ | October 2024



Enhanced Quality of Experience

Batelco has significantly enhanced internet browsing, video experience, and more — ensuring seamless connectivity and user satisfaction.

94%

Customers enjoying
high-definition videos

(+10% improvement
Q3 2023 to Q3 2024)

75%

Reduction in
Video Rebuffering

(Q3 2023 to Q3 2024)

50%

Decrease in
Video Start Time

(Q3 2023 to Q3 2024)

13%

Improvement to
Web Page Load Time

(Q1 2024 to Q3 2024)

Network Speed Gains

Batelco has improved overall download speeds, 4G download speeds, and 5G download speeds significantly over the past year.



Overall download
speeds increased by
42%
(from 102 Mbps in
Q3 2023 to 145 Mbps
in 2024 YTD)



4G download speeds
rose by
45%
(from 34 Mbps in
Q1 2023 to 54 Mbps
in 2024 YTD)



5G download speeds
improved by
26%
(from 311 Mbps in
Q3 2023 to 392 Mbps
in 2024 YTD)

These efforts have been recognized by the TRA, as Batelco achieved “Excellence” in the recently concluded TRA Mobile Quality of Service (QoS) and Experience (QoE) benchmark. Batelco has consistently upheld its leadership in delivering 100% 5G network coverage for 4 consecutive years and reaching 5G network speeds surpassing 3.3 Gbps for the first time in the Kingdom’s mobile industry in the latest TRA benchmark, setting a new benchmark for exceptional performance.

Batelco is dedicated to continuously enhancing the customer experience across multiple touchpoints. This commitment involves improving network performance, investing in robust infrastructure, and adopting cutting-edge technologies. Batelco’s continuous improvement of their customer experience has cemented their position in this competitive market and has played a leading role in contributing to the Kingdom of Bahrain’s position in the global landscape for network speed and quality of experience.