

# INDEPENDENT QUALITY OF SERVICE SURVEY REPORT

## INTRODUCTION

1.1. In order to measure the performance and service quality of Cellular Mobile Operators (CMOs), an independent Quality of Service (QoS) Survey has been carried out in Eleven (11) x cities of Punjab, Sindh, Khyber Pakhtunkhwa (KPK) and Balochistan during 1<sup>st</sup> quarter i.e. January ~ March 2022. The name of cities along with survey dates are mentioned in **Table 1.1: QoS Survey Cities & Dates:**

S. #.	Province	City	Days	Survey Dates
1.	Punjab	Sadiqabad	2	08 ~ 09 February 2022
2.		Kharian	2	14 ~ 15 February 2022
3.		Khanpur	3	14 ~ 16 February 2022
4.		Sialkot	2	07 ~ 08 March 2022
5.		Wazirabad	2	16 ~ 17 March 2022
6.	Sindh	Kotri	3	08 ~ 10 February 2022
7.		Jacobabad	3	15 ~ 17 February 2022
8.		Dadu	3	18,22 & 23 February 2022
9.		Tando Allah Yar	2	22 ~ 23 March 2022
10.	Khyber Pakhtunkhwa	Dera Ismail Khan	3	21 ~ 23 February 2022
11.	Balochistan	Gwadar	4	07 ~ 10 March 2022

Table 1.1: QoS Survey Dates and Samples

## DRIVE TEST DETAILS

2.1. The QoS survey was carried out using Automated QoS Monitoring & Benchmarking Tool i.e. "SMARTBENCHMARKER". Drive test teams selected survey routes in such a manner to cover main roads, service roads and majority of sectors/colonies. During the survey, mobile handsets for Voice Calls, SMS and Data Sessions, were kept in auto detect mode.

## MOBILE NETWORK COVERAGE

3.1. **4G / LTE SIGNAL STRENGTH.** During the survey, while conducting data test in auto mode, 4G/LTE signal strength samples were recorded on survey routes. As per Next Generation Mobile Service (NGMS) licenses awarded, licensees are required to meet the threshold of -100dBm or above of Reference Signal Receive Power (RSRP) with 90% confidence level. The Confidence Level and Compliance of signal strength is shown in **Table 3.1: 4G Signal Strength -100dBm with 90% Confidence Level**.

<b>4G Signal Strength -100dBm with 90% Confidence Level</b>								
<b>City</b>	<b>Confidence Level</b>				<b>Compliant (Yes/No)</b>			
	<b>Jazz</b>	<b>Telenor</b>	<b>Ufone</b>	<b>ZonG</b>	<b>Jazz</b>	<b>Telenor</b>	<b>Ufone</b>	<b>ZonG</b>
<i>Khanpur</i>	98.59%	95.37%	<b>66.74%</b>	99.94%	Yes	Yes	<b>No</b>	Yes
<i>Sadiqabad</i>	99.81%	96.50%	<b>73.40%</b>	99.88%	Yes	Yes	<b>No</b>	Yes
<i>Kharian</i>	96.57%	<b>88.68%</b>	<b>84.02%</b>	92.24%	Yes	<b>No</b>	<b>No</b>	Yes
<i>Wazirabad</i>	99.55%	<b>88.65%</b>	95.91%	96.30%	Yes	<b>No</b>	Yes	Yes
<i>Kotri</i>	98.47%	97.42%	<b>63.19%</b>	98.65%	Yes	Yes	<b>No</b>	Yes
<i>Jacobabad</i>	96.88%	<b>88.82%</b>	94.73%	98.91%	Yes	<b>No</b>	Yes	Yes
<i>Dadu</i>	94.53%	93.22%	<b>53.98%</b>	99.90%	Yes	Yes	<b>No</b>	Yes
<i>Tando Allah Yar</i>	98.75%	95.31%	<b>80.18%</b>	99.31%	Yes	Yes	<b>No</b>	Yes
<i>Sialkot</i>	99.23%	98.21%	98.14%	98.98%	Yes	Yes	Yes	Yes
<i>Gwadar</i>	94.30%	<b>89.80%</b>	99.83%	96.92%	Yes	<b>No</b>	Yes	Yes
<i>D.I Khan</i>	95.87%	98.89%	98.15%	97.92%	Yes	Yes	Yes	Yes

Table 3.1: 4G Signal Strength -100dBm with 90% Confidence Level