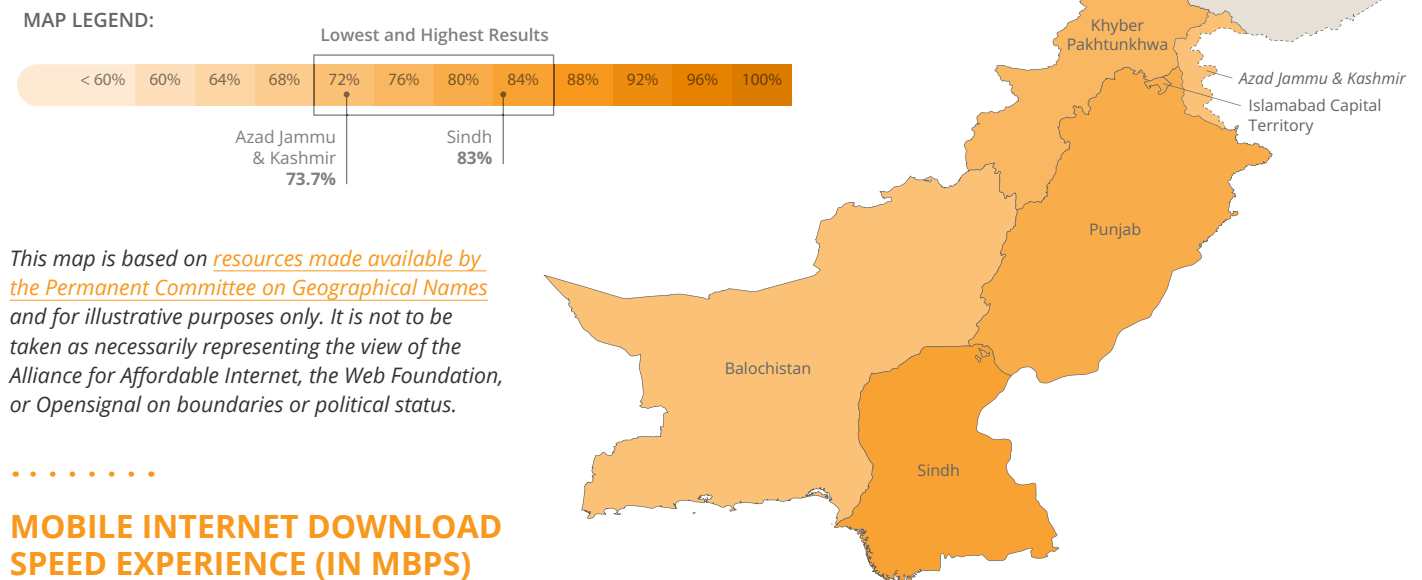# 4G for Meaningful Connectivity
Pakistan

We have meaningful connectivity when we can use the internet every day using an appropriate device with enough data and a fast connection. The Alliance for Affordable Internet (A4AI) published these targets in 2020 to help policymakers set targets for higher quality and more affordable internet access.

This brief focuses on a fast connection — one of the four pillars to measure meaningful connectivity — and the availability of 4G across Pakistan. It uses data collected from mobile analytics company Opensignal to test the amount of time users have a 4G signal that they're able to use on their phone.

This kind of connectivity — at 4G, rather than 3G or earlier technologies — offers higher speeds and greater potential for users to work, play, learn, and communicate online. As governments set visions for their post-Covid recovery with the digital economy as a driver for innovation and economic growth, the meaningful connectivity targets ensure this growth is inclusive and has the foundations to grow to scale.

4G AVAILABILITY IN PAKISTAN
% time, 1 October – 31 December 2021

MAP LEGEND:

Lowest and Highest Results

| < 60% | 60% | 64% | 68% | 72% | 76% | 80% | 84% | 88% | 92% | 96% | 100% |

Azad Jammu & Kashmir **73.7%**

Sindh **83%**

This map is based on [resources made available by the Permanent Committee on Geographical Names](#) and for illustrative purposes only. It is not to be taken as necessarily representing the view of the Alliance for Affordable Internet, the Web Foundation, or Opensignal on boundaries or political status.

Map labels: Gilgit-Baltistan, Khyber Pakhtunkhwa, Azad Jammu & Kashmir, Islamabad Capital Territory, Punjab, Balochistan, Sindh

MOBILE INTERNET DOWNLOAD SPEED EXPERIENCE (IN MBPS)

Overall	3G	4G
9.25 (±0.13)	**4.1** (±0.1)	**11.1** (±0.13)

+/- numeric values represent confidence intervals. [Read why confidence intervals are important.](#) © 2022, Opensignal Limited

OPENSIGNAL

What is meaningful connectivity?

A FAST CONNECTION

Our internet speeds make or break our online experience. We all know the frustration of a buffering movie or an unstable video call. And without fast speeds, services like telehealth and real-time online learning cannot happen.

A **4G mobile connection** is the minimum threshold that can give us the speeds we need for the experience we want.

AN APPROPRIATE DEVICE

To experience the full power of the internet, we need the right device for the task at hand.

A **smartphone** gives us the functionality to create and consume content in a way that basic phones don't — and the portability to use the internet anywhere. Ideally we will have access to a range of device types.

ENOUGH DATA

While some people have unlimited data packages, others experience severe data scarcity, preventing them from doing certain online tasks or forcing them to wait until they can connect to public Wi-Fi.

An **unlimited broadband connection** at home, or place of work or study gives us reliable internet access in our daily lives to use the full breadth of the internet's potential.

REGULAR INTERNET ACCESS

We benefit most from the internet when we can use it regularly. As our societies grow more digital and the internet is integrated into our daily lives, connecting occasionally is not enough.

Daily access to the internet is the minimum we need to see real benefits for work, education and communication.

Why 4G for meaningful connectivity?

Video content is what people want to access and is also data intensive. Field research conducted by A4AI/Web Foundation confirms YouTube, Facebook, WhatsApp, and Instagram as the most popular online applications — all of which thrive on visual content. This matches with other research which includes photos and video as prominent features in a user's online experience and studies of the changing dynamics of internet traffic globally.

These are data-intensive activities and require a far greater bandwidth than text-based communication alone. While 3G was designed with no lower limit to its bandwidth and not expected to carry much more than 10Mbps, 4G offers greater technological capacity for users to do more online at faster speeds.

Who has 4G, and what kind of internet do they have?

Pakistan has generally high rates of 4G coverage in many parts of the country. However, disparities do exist in different areas in coverage and in availability, as measured by consumer time on a 4G signal. This difference is in particular felt by users in the most rural areas, which have some of the lowest rates of 4G Availability.

These disparities in 4G Availability have consequences for average speeds and therefore also user experiences with voice, video, and gaming applications. As Pakistan looks to grow its digital economy, it requires a strong foundation in mobile infrastructure that provides reliable, high-quality connectivity to all.

REGIONAL COMPARISONS:
4G Availability within Pakistan, 1 October – 31 December 2021

Top Three Regions	4G Availability (% time)
Sindh	**83.0** (±1.01)
Punjab	**81.2** (±0.72)
Islamabad Capital Territory	**79.8** (±2.21)

Bottom Three Regions	4G Availability (% time)
Khyber Pakhtunkhwa	**77.1** (±1.69)
Balochistan	**74.1** (±3.18)
Azad Jammu & Kashmir	**73.7** (±4.72)

+/- numeric values represent confidence intervals. Read why confidence intervals are important.   © Opensignal Limited
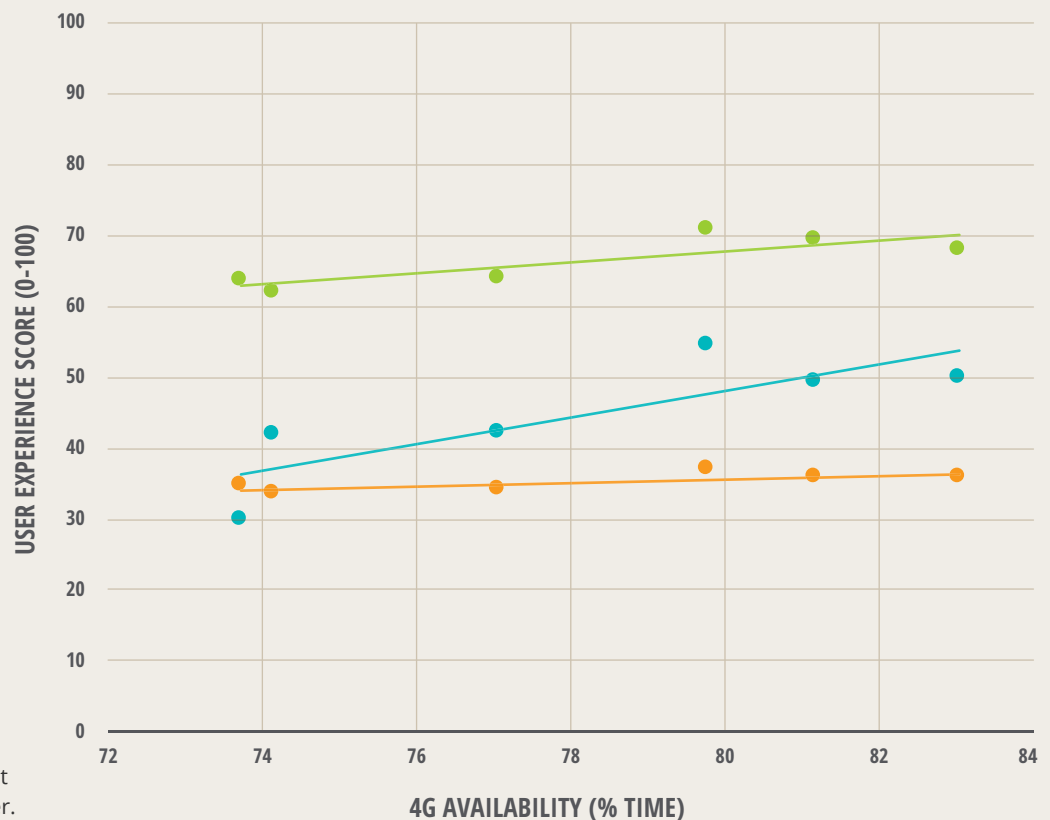
4G AVAILABILITY & USER EXPERIENCE IN PAKISTAN

1 October – 31 December 2021. Data © 2022, Opensignal Limited

Each region is represented by a trio of dots vertically aligned along 4G Availability and represent the user experience in that region.

USER EXPERIENCE:
- Voice App Experience
- Video Experience
- Games Experience

* Each user experience score is measured and evaluated separately and not dependent from one another.

What's next for affordable and meaningful connectivity in Pakistan?

Every year, the Alliance for Affordable Internet publishes the **Affordability Drivers Index (ADI)**, which is an assessment of policy indicators and market factors that correlate with more affordable internet prices in low- and middle-income countries.

In 2021, Pakistan scored 68 out of 100 on the Index, in 20th place, next to Nigeria (69/100) and Fiji (67/100). Within the region, the country trails just behind India (10th, 72/100) and far outperforms Afghanistan (62nd, 35/100).

There's immense potential for Pakistan to improve its score and to reach affordable and meaningful connectivity for everyone. Here's how:

RECOMMENDATION 1

Use spectrum to spur infrastructure and investment

With limited participation in the country's 2021 spectrum auction process and lengthy litigation regarding the 2019 renewals for two of the country's largest operators, the spectrum allocation process in Pakistan has been more of a hurdle towards further investments in better coverage rather than a tool to spur competition as the process brings financial uncertainty to operators' balance sheets.

RECOMMENDATION 2

Complete work on a public rights of way framework

In the 2020 policy review as part of the Affordability Report, the country's lack of a clear, national rights of way framework was one of the lowest policy indicators for Pakistan. The lack of a clear framework increases the cost of doing business for mobile operators and reduces appetite for investment, particularly in rural and remote areas where return on investment may be more difficult to obtain.

RECOMMENDATION 3

Reduce sector-specific tax burdens on ICTs

Pakistan's tax regime on ICTs is one of the highest in the region. While this has short-term gains for revenue raising, the high tax burden has a long-term cost in reduced investment and higher prices for consumers in mobile tariffs and more acutely in handset costs. These costs, including taxes, have a disproportionately heavy impact on women in Pakistan, with one of the world's largest gender pay gaps.