

Digital Connectivity Bulletin

July - December 2019

Message from Federal Minister for IT & Telecom Dr. Khalid Maqbool Siddiqui

It is a fact that with the emerging digital era, Information and Communication Technologies (ICTs) are considered by countries all over the world as critical for achieving progress in economic and social development. Under the Federal Government's vision of Digital Pakistan, the Ministry of IT & Telecom is taking concrete steps to spread the benefits of digitalization to the masses through advanced innovation, efficiency, and value creation methods. The first of the five pillars of the digital vision, the 'Access and Connectivity' would ensure every Pakistani has access to Internet as a fundamental right to make available universally and especially to the underserved populations.

In this scenario, ICT is a major driver for prosperity and continuity and Digital Pakistan Vision is expected to build capacity, create new jobs, generate demand for new skills and overall raise productivity of the current work force. It is also laying foundation for accessing services in health, education, agriculture and financial sector.

Considering the importance of ICTs, the Government of Pakistan is focusing on the intersection of technological innovation and public policy by enabling access and connectivity through Universal Service Fund. The Ministry of IT & Telecom truly supports and encourages USF in its endeavors by constantly remaining involved in USF's programmes, working extensively as an advocate for sustainability of the ICT sector by providing infrastructure in unserved and underserved areas. The availability of hi-speed Broadband in mauzas across the country and



on National Highways and Motorways, is bridging the digital divide between urban and rural communities and the Optic Fiber connectivity to the Union Councils in future will pave the way for access to digital apps. Through USF, Pakistan is building the country's digital infrastructure in order to keep pace with global advancements in artificial intelligence and 5G technology.

The Ministry of IT and Telecom ensures to strategically deploy available resources in a productive way and looks forward to catalyze more value creation in the IT and Telecom sector. Most importantly, we seek to make greater contributions to Pakistan's economy by promoting prosperity, progress and empowering industries.

Message from Chairman - USF Board Federal Secretary - IT & Telecom Shoaib Ahmad Siddiqui

It is with great pride that USF presents the second edition of the Digital Connectivity Bulletin for the period July to December 2019. USF has accomplished various landmarks never achieved before in the Information and Communication Technologies sector of Pakistan. The leading pace of USF has always been accredited to its technological competence with a deep understanding that in order to improve the lives of the unserved and underserved population of Pakistan we must stay committed to the vision of Digital Pakistan. This objective of USF is completely in line with the very first pillar of vision of Digital Pakistan i.e. Access and connectivity.

USF's unrelenting focus on bridging the digital divide has created a technological revolution in the country. Looking back at the progress of the last six months, USF has not only achieved its targets in the current programmes but is also actively working to launch future-centric projects. One of the major achievements in this period has been award of contract for Broadband of Sustainable Development in South Waziristan project which will altogether change the way of life there. Despite every intangible challenge, USF has taken the initiative to rehabilitate the infrastructure by providing hi-speed broadband services and has successfully made a difference. This has opened doors of opportunity and created a sense of hope for the people of interior Sindh and parts of Punjab. By expanding Internet access to Rahimyar Khan, Dera Ghazi Khan, Tharparkar, Malir, Bahawalpur, Hyderabad and Dadu; USF is encouraging economic activity in these areas.

Moreover, USF has been deploying manpower in difficult conditions in Balochistan under Broadband Coverage on National Highways and Motorways programme. The programme is the first project in which national roaming will be enabled by the operator for subscribers from other operators to receive service while travelling along the highway.



With the sole commitment to maximize the socio-economic progress of the people at grassroots level, USF's forthcoming programme, 'Optic Fiber Cable to Union Councils' will extend fiber deeper into Union Councils of Pakistan. Extending fiber deeper into rural communities is a critical economic driver, promoting competition, increasing connectivity for the rural and underserved areas. Therefore, by bridging the digital divide, USF will be paving the way for an all-inclusive 5G revolution in Pakistan.

Our mission would not have found its way where it is today, without the support from the Prime Minister of Pakistan and Federal Minister for IT & Telecom. We are extremely grateful to them. The Minister has been constantly providing guidance and motivation to do more for the people and expand connectivity. With the Digital Pakistan Vision set in motion, USF's strategic role of providing access and connectivity to all Pakistanis becomes even more significant than before. I expect USF Board, Management and the whole team to stay committed in making Digital Pakistan Vision a reality with every commencing year.

Message from A/CEO-USF Haaris Mahmood Chaudhary



I am extremely pleased with the tremendous progress made by USF in the past six months. The organization's vision of enhancing the overall well-being of the people of Pakistan is being achieved through its unrelenting focus on enabling ICT infrastructure and commitment to ethical service delivery.

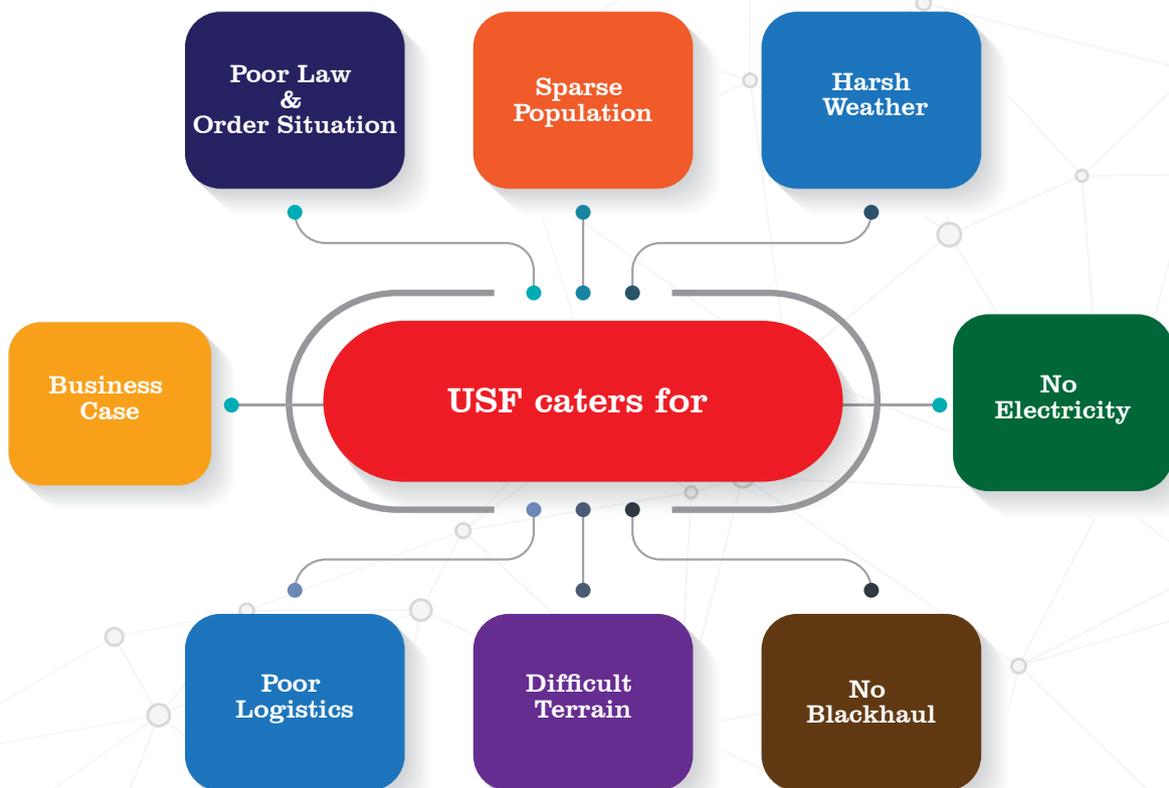
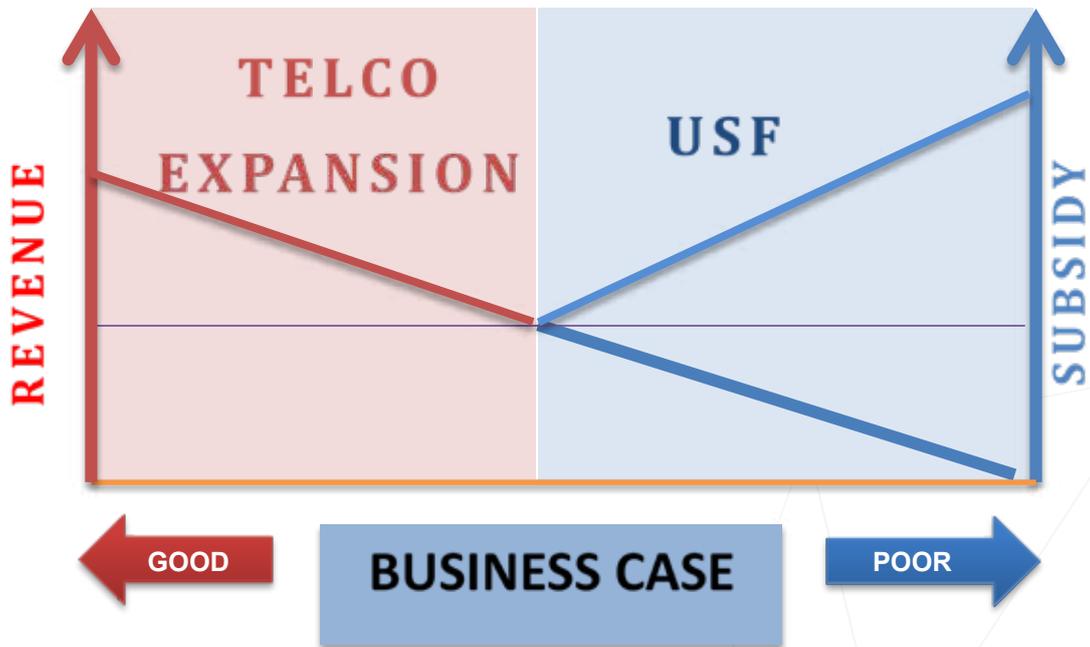
As USF maintains its leading position in the ICT industry of Pakistan, it gives me great pleasure to announce the launch of 'Optic Fiber Cable to Union Councils' programme. The Programme paves the way for improving access to broadband in un-served and underserved areas of Pakistan and aims to facilitate gradual transition to 5G technology. Similarly, USF programme 'Next Generation - Broadband for Sustainable Development' Programme is enhancing and diversifying people's digital experience through better connectivity and opportunities for e-commerce. Adding to its ongoing work to enhance digital connectivity in Pakistan, the 'Broadband Coverage on National Highways and Motorways Programme' is spreading the digital web across the road network in Pakistan, facilitating ease of travel and connectivity.

Today, USF has developed an agile approach to achieve sustainable development based on strong fundamentals and a commitment to the people of Pakistan. It is ready to face the challenges of a new digital age through a strong commitment to its vision,

experience, strategies, and lessons learned. This would not have been possible without the enduring support of the Ministry of IT & Telecom, the Board of Directors, and hardworking and extremely competent team of USF.

We will remain committed to bridging the digital divide in the days to come as well by evolving to meet new challenges in innovative ways that deliver on ground and exceed expectations. This is and will continue to be our mission!

Why USF!!



USF Happenings

BROADBAND COVERAGE FOR SOUTH WAZIRISTAN

USF and Jazz signed contract of the project 'Broadband Coverage for South Waziristan' at a local hotel in Peshawar on September 12, 2019. Federal Minister for IT & Telecom, Dr. Khalid Maqbool Siddiqui graced the occasion as Chief Guest. USF awarded contract worth PKR 90 Million to Jazz to provide services to a population of 0.64 million people in 411 Mauzas. The contract was signed by Acting CEO, USF, Mr. Haaris Mahmood Chaudhary and Vice President Corporate and Economic Affairs, Jazz, Mr. Ibrar Khan.



BROADBAND COVERAGE ON NATIONAL HIGHWAYS & MOTORWAYS (BALOCHISTAN) & NEXT-GENERATION – BROADBAND FOR SUSTAINABLE DEVELOPMENT PROJECTS IN DADU & HYDERABAD



USF awarded contracts worth PKR 1.328 billion to Telenor Pakistan for projects in Balochistan and Sindh. Federal Minister for IT & Telecom, Dr. Khalid Maqbool Siddiqui inaugurated the project at the Telenor office on July 22, 2019. The contracts were signed by the Chief Executive Officer, Universal Service Fund, Rizwan Mustafa Mir with CEO Telenor Pakistan and Head of Telenor's Emerging Asia Cluster, Irfan Wahab Khan.

Broadband coverage will be provided to 650 kms of road segments on N25 (Uthal-Quetta) and N65 (Quetta-Dera Allah Yar) and 451 kms of segments on N50 (Kuchlak to Sherani) & N70 (Qilla Saifullah to Rakhni). Moreover, mobile broadband coverage will be provided to 481 muzas in Dadu lot serving 1.2 Million Population and 964 mauzas serving 2.6 Million population in Hyderabad lot.

USF Happenings

67TH BOARD OF DIRECTORS' MEETING

The Board of Directors Meeting was convened on Friday, October 25, 2019 in the Ministry of Information Technology and Telecommunication office, Islamabad. The Secretary IT for Ministry of Information Technology and Telecommunication; Mr. Shoaib Ahmad Siddiqui chaired the meeting. The Board approved award of contracts to Telenor Pakistan for Tharparkar and Malir Lots and to PMCL (Jazz) for DG Khan Lot under NG-BSD (Next Generation Broadband for Sustainable Development) Programme. Through these projects, 1.8 Million population in Tharparkar (Districts of Mirpur Khas and Tharparkar and 462 mauzas; area of 20,149 sq/kms), around 11,000 in Malir (26 mauzas, area of 844 sq/kms) and 1.17 Million people in DG Khan (Districts of DG Khan and Layyah and 819 mauzas; area of 12,174 sq/kms) will be benefitted. USF Management also informed the Board about Optic Fiber Cable to Union Councils programme. The Board members discussed how Optic Fiber connectivity is essential for bridging the digital divide in Pakistan and is considered digital highway across the globe for paving the way to provide ICT services.



FEDERAL MINISTER FOR IT & TELECOM'S VISIT TO USF OFFICE



Federal Minister for Information Technology and Telecommunication, Dr. Khalid Maqbool Siddiqui visited USF's office on Dec 05, 2019. He laid emphasis on Prime Minister's vision of Digital Pakistan. Furthermore, he appreciated USF's initiatives for socio-economic uplift of masses and acknowledged USF's strategic role in achieving digitally progressive and inclusive Pakistan. The Federal Minister hoped that USF will keep on achieving milestones in future as well for progress and prosperity of Digital Pakistan as the infrastructure will pave the way for digital apps in the country.

USF Happenings

ITCN ASIA EXPO 2019

Universal Service Fund exhibited at the 19th ITCN ASIA Exhibition and Conference in Karachi Expo Centre from 17th-19th September 2019. The exhibitor team included Mr. Haaris Mahmood Chaudhary, Mr. Asif Kamal, Ms. Noshin Masud and Ms. Madeeha Masood. Brochures were handed out to all visitors to increase awareness

about USF objectives of bridging the digital divide between rural and urban communities. Moreover, maps were put on display to inform the audience about the reach of Hi-Speed Broadband and Optic Fiber in FATA, South Punjab and KPK. Also, an exchange of information took place with other exhibitors for future endeavors.



PINKTOBER



Along the world, Universal Service Fund celebrated Pinktober/ Breast Cancer Awareness Month on Monday October 28, 2019. USF team members showed support by wearing pink ribbons to recognize the struggle that sufferers face when battling Cancer. Cares Committee

arranged a session with the renowned Radiologist of Islamabad, Dr. Sadia Shafqat to create awareness amongst their female employees about the Breast Cancer disease. Issues such as prevention, early detection, research and support regarding the cause were discussed.



USF Happenings

KASHMIR HOUR

USF team members gathered at Constitution Avenue, Islamabad on Friday, August 30, 2019 for 'Kashmir Hour' to show solidarity in the wake of India revoking the

special status of the Indian-Occupied Kashmir (IoK). All employees were full of national patriotism and enthusiasm.



CRICKET GALA 2019

USF CARES Committee organized a Cricket Tournament as part of 13th Anniversary of USF celebration on Saturday, Dec 07, 2019. The event kicked off with high team spirits and good energy. Team Blue won the tournament by winning 02 out of 03 matches. The Gala was followed by a prize distribution ceremony where the winning team was presented with a trophy.



BROADBAND FOR ALL

Broadband services for the unserved, underserved, rural and remote areas and Highways and Motorways

Availability of Highspeed Backhaul - Creating Information Superhighways

Voice and Broadband services

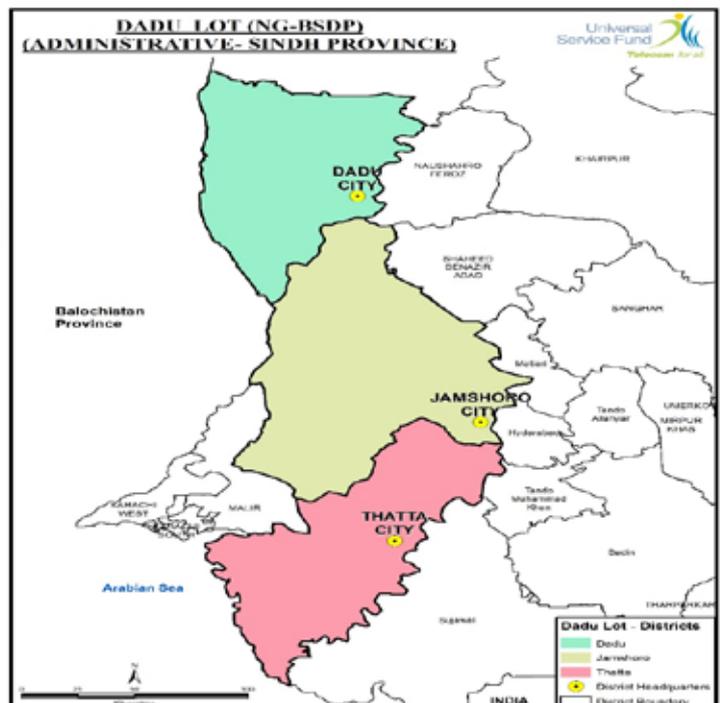
Optical Fiber Programme

- Bridging the Digital Divide
- Digital Transformation-Smart Societies
- Economic Growth & Job Creation
- Multitude of e-Services for better governance (e-Health, e-Agri, e-Govt, FinTech etc.)
- Readiness for 5G

Next Generation Broadband for Sustainable Development Projects

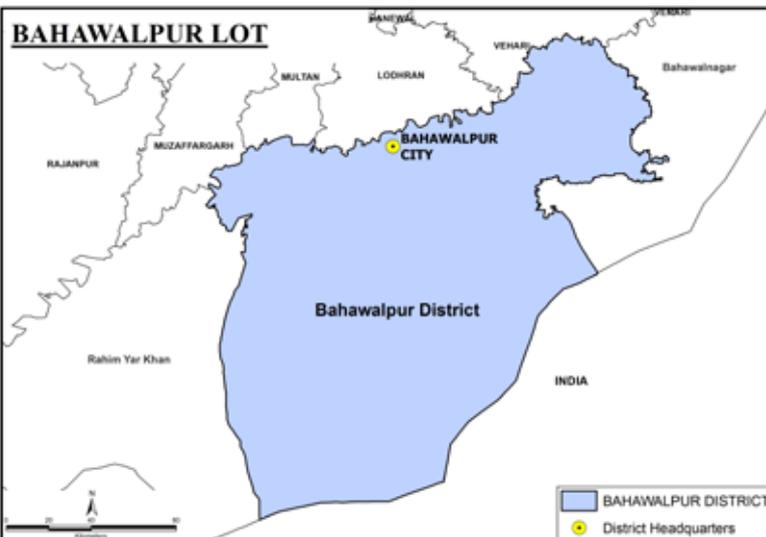
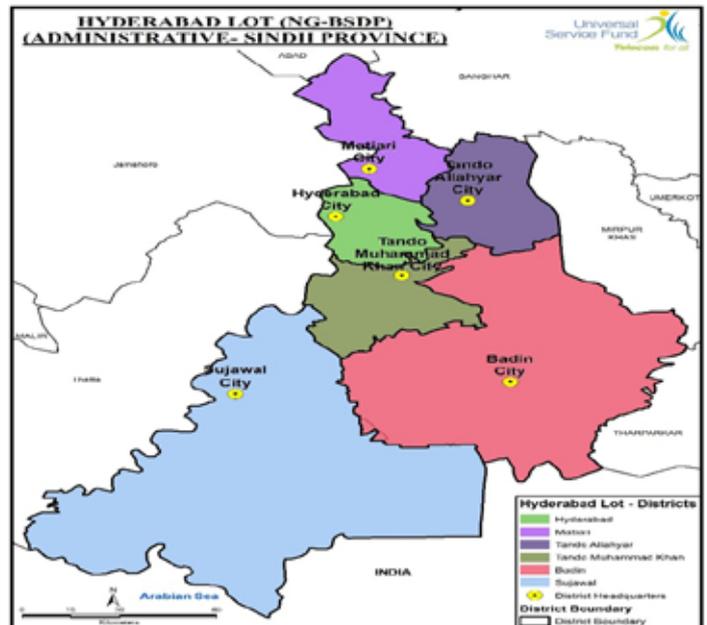
Dadu Lot

- Approx. Population: 1.2 Million
- Mauzas: 481
- Consists of districts of Dadu, Jamshoro and Thatta



Hyderabad Lot

- Approx. Population: 2.6 Million
- Mauzas: 964
- Districts: Matiari, Hyderabad, Tando Allah Yar, Tando Muhammad Khan, Badin and Sujawal



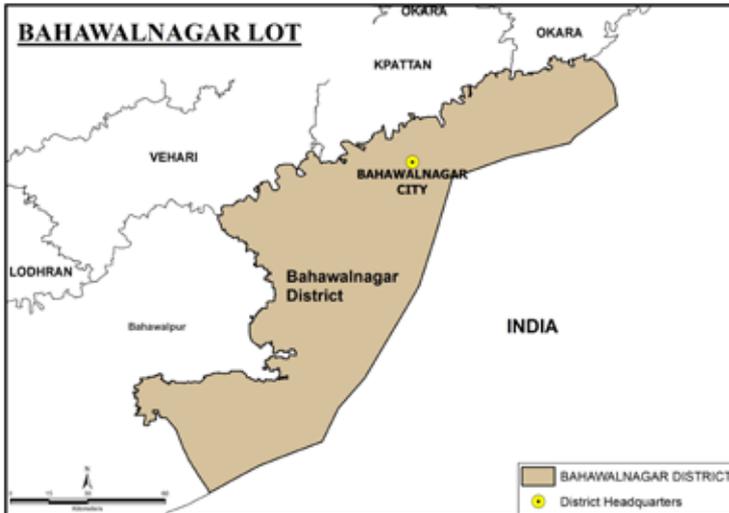
Bahawalpur Lot

- Approx. Population: 1.38 Million
- Mauzas: 842
- Tehsils: Bahawalpur, Ahmadapur East, Hasilpur, Khairpur Tamewali & Yazman

Rahimyar Khan Lot

- Approx. Population: 1.2 Million
- Mauzas: 741
- Tehsils: Khanpur, Liaquat Pur, Rahim Yar Khan and Sadiqabad





Bahawalnagar Lot

- Approx. Population: 0.9 Million
- Mauzas: 505
- Tehsils: Bahawalnagar, Chishtian, Fort Abbas, Haroonabad & Minchi-anabad

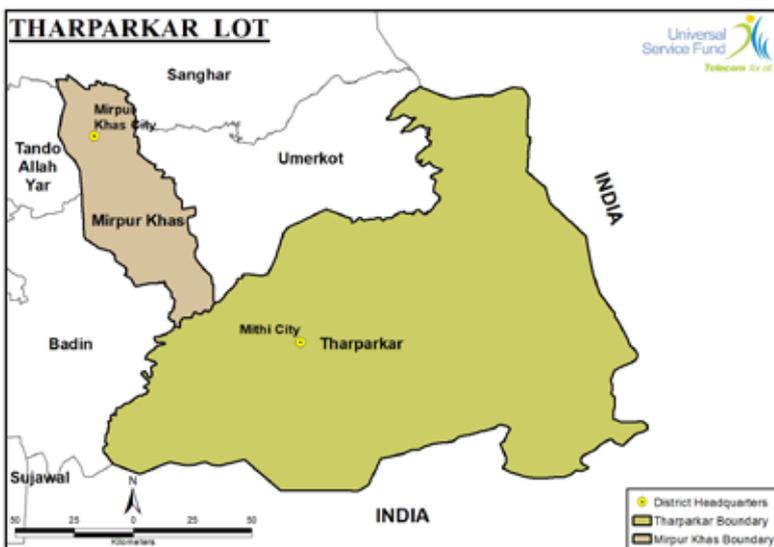
Dera Ghazi Khan Lot

- Approx. Population: 1.17 Million
- Mauzas: 819
- Districts: Dera Ghazi Khan and Layyah



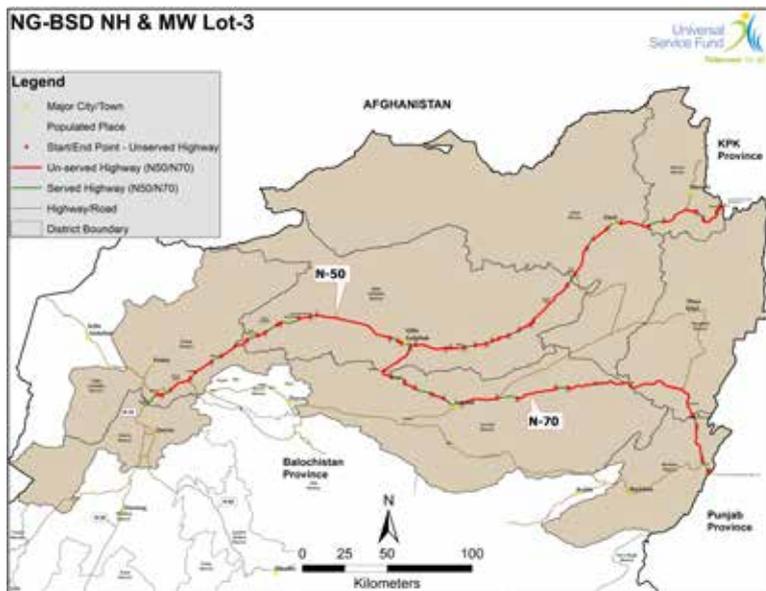
Tharparkar Lot

- Approx. Population: 1.8 Million
- Mauzas: 462
- Districts: MirpurKhas and Tharparkar



South Waziristan Lot

- Approx. Population: 0.64 Million
- Mauzas: 411
- Districts: South Waziristan Agency & FR Tank



Broadband Coverage on National Highways & Motorways (Balochistan) - Lot 3

- Area 451 kms of segments on N50 (Kuchlak to Sherani) & N70 (Qilla Saifullah to Rakhni).

Broadband Coverage on National Highways & Motorways (Balochistan) - Lot 2

- Area: length of 650 kms of NH 25 (Uthal-Quetta) and N65 (Quetta to Dera Allah Yar)



Emerging Tech News

DIGITALIZATION of Pakistan – A Foreseeable Future

In the present world, Information and Communication Technologies (ICT) is a rare occurrence whose speed is worth keeping with. The moment an economy adopts digitalization, it allows sustainable business models to be developed that cut through the whole economy. Pakistan, a country with a population of 200 million is taking deliberate measures towards a digitalized economy. Information and Communication Technologies (ICT) are changing Pakistan's society by giving new opportunities for businesses, governments and citizens in a wide range of sectors including industry, finance, health, social media, services, governance, data, commerce, etc.

For businesses small and large, investment in information and communications technology (ICT) is a great matter of importance for success. The businesses that have digitally transformed are prospering in Pakistan. The process of creating, marketing, buying, selling and distribution have become simpler due to the digital economy. Furthermore, the social networking websites are also providing a worldwide platform to interact with millions of potential clients at no cost, thereby increasing the market size. This has impacted positively on poor and low-income households as well as micro, small, and medium firms. Large businesses have also been reaping benefits from ICT for over a decade now as these organizations adopted efficient communication solutions to cut down on their labour costs and raise their production levels. As a result they experienced a huge increase in their profits and employee satisfaction levels.

The Government sector also recognizes the need for public services to be delivered faster, better and more efficiently to citizens and businesses. Intelligent, targeted use of Information and Communications Technologies (ICTs) and e-governance models are key

enablers for these improvements. E-governance in Pakistan is the most recent movement in the domain of governance processes. It is responsibly moving from computerization of institutions to initiatives that epitomize the objectives of Governance, such as citizen



centricity, service orientation and transparency. Digitalized public platforms will be serving as a layer on which multiple public and private sector organizations can build new or better services, solutions, and applications. Government institutions in Pakistan are now leveraging this platform to transform front-end service delivery and back-end processes to improve convenience for users, reduce costs, increase efficiency and eventually, to achieve macroeconomic goals. Moreover, ICT can also help strengthen the legal framework that promotes democracy and enable information exchange between institutions.

The digital economy which encompasses a wide range of new applications of information technology in business models and products, can spur economic growth, productivity and employment and, with appropriate policies to mitigate inherent risks, has a potential to support inclusive outcomes.

User Testimonials

Digitally Transforming Pakistan

We have discovered the positive role of Information and Communication Technologies (ICT) in people's lives by delving into the digital experiences of people from different rural communities located in northern and southern Pakistan that now have access to hi-speed broadband. It is evident on an individual-level that isolated rural communities that are open to new experiences have recognized the value of Internet for

education, information, and business opportunities. Internet access has revolutionized the way most people live in these areas, altering their political, economic and social lives. A few testimonials by local residents from peripheral areas of Sindh, Khyber Pakhtunkhwa, Punjab and Balochistan provide a snapshot of the positive impact of hi-speed Internet on the lives of people across Pakistan.

16 years old, Areeba, student of a rural high school in Gartal, a village in Qambar Shahdadkot district (Sindh), stated

"I could not possibly be happier than I am today. My life has changed in various ways in just one year. I feel that I can finally achieve all my dreams that seemed impossible earlier. My willingness to learn has always encouraged me to acquire more knowledge about the world through reading books. Not only do I have access to free e-books now and all the other

information that the Internet has to offer, but I also managed to setup an online page on Facebook for my mother's hand-embroidered shawls business. She has a much bigger clientele now and people are appreciating her work. Internet access has truly raised our family's standard of living."

65 years old, Shinwari, a pensioned officer shares his experience from Tarnawai, a village in Kohistan district (Khyber Pakhtunkhwa)

"I have lived in Tarnawai for over 40 years now. My son left for the UAE with his family five years ago and I have been living alone since then. My grandson came into this world three years ago and to this day; I have not seen him in person. Life without Internet was very difficult. I had to travel all the way to Islamabad to meet my son. These trips were expensive, and given my age, tiresome too. It would take me days to recover from traveling. After four years, 3G services were

launched in my area and thanks to the Internet I can finally see and chat with my grandson on video call any time of the day. It gives me immense pleasure to experience moments of my grandson's life and to converse with my son every day. I cannot thank the Government enough for making this possible. I truly feel I am a part of their life even though I am so far away."

40 years old, Bacha, a security guard from Behdi in Kharan district (Balochistan), expresses his feelings in the following words

“My wife has been suffering from epilepsy for many years now. Up until last year, there was no way to seek medical help in case of an emergency. However, with 3G services, times have changed for the better. Broadband Internet is a blessing in disguise for me and my

family as I have better access to emergency health services and I can call ambulances whenever needed.”

24 years old, Haroon, a taxi driver narrates his story from Khairpur Daha, a village located in the district of Bahawalpur (Punjab)

“The use of Google Maps has forever transformed my work. It is so easy to find any location now, without taking any wrong turns. I end up saving time which allows me to cater more passengers than before. My income has also doubled ever since I have started working with Careem. I believe that with the power of high-speed Internet in Bahawalpur, we can achieve anything we want. Sky is the limit.”



ICT infrastructure has benefitted these low-income rural communities by overcoming geographic isolation, promoting access to resources and opportunities, and encouraging social interactions and community attachment, which would lower the possibilities of out-migration and stimulate economic development.

