



Ministry of Information Technology
& Telecommunication

DIGITAL PAKISTAN

2 YEAR REPORT

AUGUST 2018 – JULY 2020

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MESSAGE FROM FEDERAL MINISTER FOR IT & TELECOMMUNICATION



Syed Amin Ul Haque
Federal Minister

The shift towards “Digital Pakistan” is evolving and Information and Communication Technologies (ICTs) are playing a key role towards Digital Transformation. Efforts are paying off as the IT industry is growing in terms of the number of companies, revenue, exports and workforce every year. Pakistan’s IT exports have increased by many times over the last decade thereby demonstrating a clear confidence in the ability of the local companies to deliver IT solutions and services which meet the expectations of foreign clients.

Technology is transforming our lives at a very fast pace and in this era of Information Technology, we need to leverage it for sustainable development. Our mission is to develop a state of the art, world class ICT Industry that contributes substantial IT export earnings and leads to the digitization/modernization of Pakistan’s economy for the benefit of its masses.

MESSAGE FROM SECRETARY IT & TELECOMMUNICATION



Shoaib Ahmad Siddiqui
Secretary

The Ministry of Information Technology and Telecommunication (MoITT) is entrusted to formulate policies aimed at improving National Information and Communications Technology (ICT) infrastructure and services, to transform Pakistan into a knowledge-based economy by ensuring the provision of reliable and affordable Information and Communications Technology enabled services.

With the advancement and innovation in technology, ICT has become the driving force in the development and economic growth of countries. Government is committed to support all segments of society for affordable and equitable access to the people so that they can get maximum benefits from the available opportunities.

My team and I are committed to unleash the potential of ICT to establish a comprehensive “Digital Pakistan” platform which empowers institutions to implement the principles and guidelines of Quaid-e-Azam in letter and spirit and to work together for a prosperous Pakistan.

Ignite
NATIONAL TECHNOLOGY FUND



PAKISTAN
PSEB
SOFTWARE
EXPORT BOARD



GALLERY



GALLERY



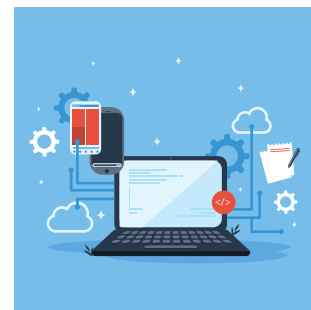
GALLERY



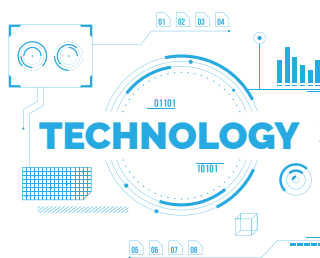
Information and Communication Technology Sector

The dynamically evolving Information and Communication Technologies (ICTs) hold critical importance, as one of the key sectors, in terms of fueling economies, acting as a catalyst of change and enablement across all other sectors.

During the past 2 years, Pakistan's IT sector has made measurable and quantifiable progress due to strong focus of the present government on ensuring sustainable IT industry growth. The results speak for themselves. The number of IT companies have increased to 2354 as of 30th June, 2020 compared to 1762 valid registrations as of 30 June, 2018 and the IT & IT enabled Services (ITeS) export remittances comprising of computer services and call center services are expected to reach US\$1.2 billion by the conclusion of FY 2019-20 compared to just US\$ 831.35 million in FY 2017-18.



Telecommunication Sector has showed tremendous growth in last years. The licenses of Cellular Mobile Operators were awarded for a period of 15 years and 03 of these licenses (Jazz, Zong and Telenor) were due for renewal by PTA in 2019. After extensive consultation by the Committees constituted by the Prime Minister and approval of the Committees' recommendations by the Federal Cabinet, Policy Directive was issued on 9th May, 2019 for implementation by PTA.



The Telecommunication market in Pakistan is open and deregulated, offering level playing field to operators. The sector was de-regulated in 2003 after the promulgation of the De-Regulation policy. Resultantly, two new cellular mobile licenses were awarded to M/s Telenor and M/s Warid through an open auction. Later on, China Mobile acquired Paktel and started providing mobile cellular services. In addition, multiple Long Distance & International (LDI) and Local Loop licenses were granted to local and international companies. Frequency spectrum was also auctioned to different companies for Wireless Local loop (WLL) operations.

1. TELECOM SECTOR

A. POLICY INTERVENTIONS

1. Renewal of Cellular Mobile Licenses and Contribution to National Exchequer

The Ministry of IT & Telecom, after undertaking extensive stakeholders' consultation furnished its recommendations for consideration of the Federal Government i.e. Federal Cabinet, keeping in view the requirements set by the Telecommunications Policy 2015 and the provisions of Cellular Mobile licenses issued in 2005.

Accordingly, the Federal Government issued a Policy Directive on the Renewal of three Cellular Mobile Licenses in 2019 in exercise of powers conferred under section 8(2) read with section 22(3) of Pakistan Telecommunication (Re-organization) Act 1996.

Subsequently, three Cellular Mobile Operators i.e. Telenor Pakistan and Pakistan Mobile Communication Limited (Jazz) and CM-Pak (Zong) have deposited their partial (50%) payments, on account of their respective license renewal fee, amounting to a total of USD 687.8 million equivalent to Rs. 107.6 billion. The remaining 50% is payable in five equal instalments..

It is pertinent to note that the license renewal fee of telecom companies collected by Pakistan Telecommunication Authority (PTA) is a significant source of non-tax revenue for the Federal Government.

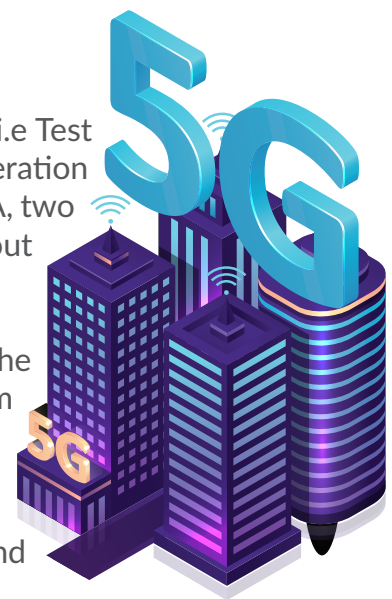
Additionally, USD 11.4 million has been received in the Foreign Currency Account of Pakistan under the Pak-China Optical Fiber Cable Project



2. Measures for introduction of 5G in Pakistan

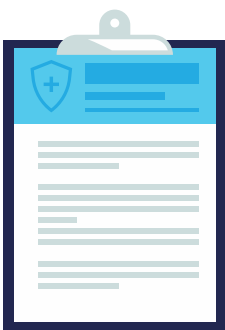
In line with the Policy Directive of the Ministry of IT & Telecom, i.e Test and Development of Future Technologies (particularly 5th Generation Wireless Networks) in Pakistan, and the framework issued by PTA, two Cellular Mobile Operators i.e. Zong and Jazz successfully carried out the 5G trials in Pakistan.

Also, a 5G Pakistan Plan Committee has been constituted by the Ministry of IT & Telecom, comprising of all stakeholders from public and private sectors. The Committee is tasked to develop strategic plan and roadmap for 5G technology in Pakistan keeping in view the aspects of Spectrum Management, Infrastructure Development, Review of Telecom Regulations and 5G applications/use cases.



3. Right of Way

Right of Way is one of the major impediments towards the growth of the Telecommunication sector of Pakistan. Clause 27-A of Pakistan Telecommunication (Re-organization) Act, 1996 (Amendment) 2006; as well as section 7.1 of the Telecommunications Policy 2015 mandate the procurement of Right of Way (RoW) as an inherent right of telecom licensees to build networks. In this regard, Government agencies, civic authorities and private individuals can charge a reasonable fee for granting such RoW and the same may not be denied. However, indiscriminate pricing by various organizations across the country has been a major obstacle in cost effective network deployment. To address this issue, a process to formulate Policy Direction Right of Way has been initiated and all stakeholders were taken on board. The objective of these consultations is to develop a standard mechanism to resolve the issue of RoW. The first draft was further evaluated and reviewed by the Prime Minister's Task Force on Telecommunication, comprising of prominent experts from the Telecom sector. The matter has been referred to Ministry of Law & Justice for vetting and their legal advice on a legal question on charges of fee for RoW.



The Federal Cabinet has nominated and notified the Secretary, MoITT as the appropriate government on behalf of the Federal Government, relating to all Federal and Provincial Authorities in terms of Section 27-A, Sub section (6) & (7) of the Pakistan Telecommunication (Re-organization) (Amended) Act 2006, excluding Cantonment Boards and Defense Housing Authorities. It may be noted that Secretary, Cabinet Division had already been notified as the appropriate government on behalf of the Federal Government for Cantonment Boards and Defense Housing Authorities.

Also, a Policy Directive on Right of Way has been prepared and is submitted to Ministry of Law for vetting.

B. INFRASTRUCTURE DEVELOPMENT IN UNSERVED AND UNDERSERVED AREAS OF THE COUNTRY

Through the Universal Service Fund, this Ministry is committed to minimize the Information and Communication gap between rural and urban communities. To connect the unconnected in the unserved and underserved areas of the country, projects are being designed under different categories each bridging the gap of necessary services and associated systems.

1. Broadband for Sustainable Development (BSD) Programme:

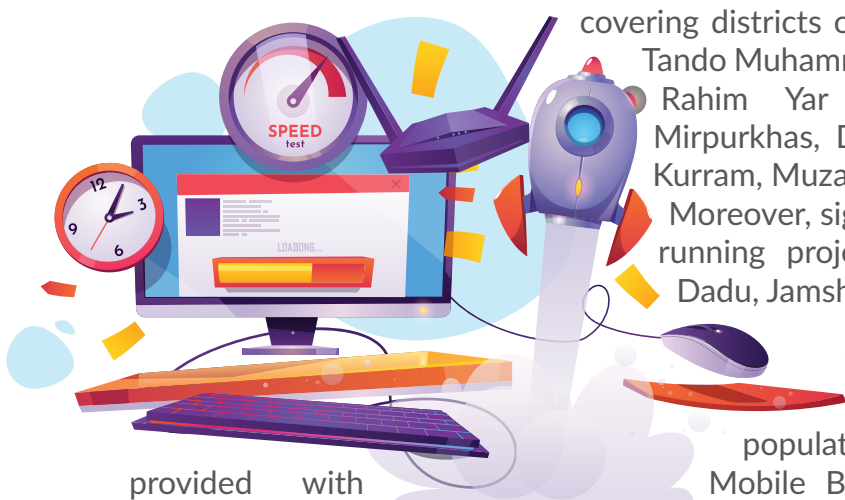
A flagship programme to establish telecommunication infrastructure that provides coverage of Voice and Broadband Internet Services to unserved mauzas across the country. Through the Next Generation Broadband for Sustainable Development Programme, USF is providing Hi-speed Mobile Broadband services to the unserved and underserved mauzas across the country. The projects target provision of High-speed Mobile Broadband and voice telephony services in 5,723 unserved and underserved mauzas benefiting a population of approximately 13.2 million.

In FY 2019-20, 12 new projects were awarded to different telecom operators for providing Hi-speed Mobile Broadband services in Sindh, Punjab and Khyber Pakhtunkhwa provinces, covering districts of Matiari, Tando Allahyar, Hyderabad, Tando Muhammad Khan, Badin, Sujawal, Bahawalpur, Rahim Yar Khan, Bahawalnagar, Tharparkar, Mirpurkhas, DG Khan, Layyah, Umerkot, Sangarh, Kurram, Muzaffargarh and Rajanpur.

Moreover, significant progress was made in already running project of Dadu Lot that encompasses Dadu, Jamshoro and Thatta districts.

provided with projects

completed within 12-18 months. These projects have a significant role in socio-economic prosperity of the locales and are creating valuable opportunities in far-flung areas for their progress and prosperity.



2. Next Generation – Broadband for Sustainable Development (BSD) Program:

BSD programme has now been transformed into NG-BSD programme which targets provision of enhanced Broadband Services (at minimum rate of 512 kbps) along with Voice Services not only to the unserved but underserved mauzas as well.

Projects are gradually being launched in the 46 districts approved by the Federal Government.

Approximately 30 million un/underserved population in these 4 districts will benefit from this programme. Till date projects have been launched targeting 45,538 un/underserved mauzas having an approximate population of 12 million, in 19 districts.

In current FY, contracts for 8 projects, worth approx. Rs. 3.33 billion, have been awarded to provide NG-BSD services in the districts of Matiari, Tando Allahyar, Hyderabad, Tando Muhammad Khan, Badin, Sujawal, Bahawalpur, Rahim Yar Khan, Bahawalnagar, Tharparkar, Mirpur Khas, Layyah, DG Khan, Umerkot, Sanghar, Kurrm. 5057 un/underserved mauzas and 9.2 million population is being targeted.

Tenders for the district of Muzaffargarh, Rajanpur, Kacchi (Bolan), Jhal Magsi, Jaffarabad including Sohbatpur), Nasirabad, Khairpur, Sukkur and Ghotki have also been launched. These projects will target 2035 un/underserved mauzas having and un/underserved population of 5.8 million

3. Next Generation BSD Programme for National Highways and Motorways:

It is a new programme, an evolved form of BSD programme, that has been launched in current Financial Year. The programme targets unserved road segments the National Highways and Motorways across the country. It is estimated that around 7,700 kms of routes are unserved. A salient feature of this programme is National Roaming that facilitates commuters to get seamless coverage irrespective of their originally subscribed networks. These will be first of their kind projects to offer this facility in Pakistan.

In last FY, 3 contracts were signed to cover 1,795 kms of un/underserved road segments along the National Highways N10, N25, N65, N50 and N70. It is expected that more projects under this category will be launched in next FY.

In current FY, till date, USF has completed provision of NG-BSD services along 366 kms of un/underserved road segments.

Rs. 0.89 billion have been disbursed in current FY for NG-BSD Projects including NH&MW.

4. Optic Fiber Cable Programme

USF Optic Fiber Cable programme is concentrating on connecting the unserved Tehsil Headquarters (THQs) and Major town enroute. Till date, 7230 Km of OFC has been laid and 1234 THQs and Towns have been provided with the connectivity.

USF is also working on deep fiberization in the country. Surveys are being conducted in the country to assess the current connectivity status of union councils. In current FY Surveys of 629 union councils have been completed. In subsequent years projects will be designed and launched to increase the OFC connectivity to Union Council level.

2. INFORMATION TECHNOLOGY SECTOR

A. SNAPSHOT

The Ministry of IT & Telecom continues to support all credible private sector initiatives aimed at bolstering the local IT industry and attracting foreign investment. Government realizes that it has an important role in terms of providing a conducive environment to IT industry through infrastructure and HR development. Government's incentives for IT industry include:

SNAPSHOT

Zero income tax on IT exports till June 2025

Three-year tax holiday for PSEB registered IT startups

100% equity ownership allowed to foreign investors

100% repatriation of capital and dividends allowed

Tax holiday for venture capital funds till 2024

Accelerated depreciation of 30% on computer equipment

Foreign currency account permitted for only receipt of export remittances

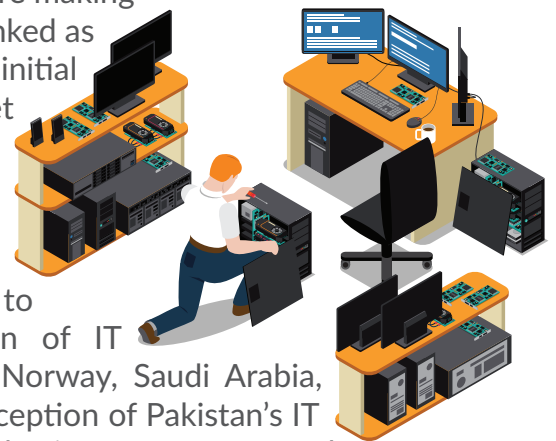
Account Opening for freelancers

Product/Services Codes for IT exports

In line with the present government's focus on IT sector, PSEB has been extending maximum facilitation to the IT Industry and in this context. It shows that Pakistan's IT industry is resilient to headwinds and has a strong IT Industry eco system. Fiscal Year 2019-20 (July 2019 to June 2020) has been a great year for IT & ITeS Export remittances. A record US\$1.231 billion has been recorded in IT & ITeS export remittances at a growth rate of 23.71% as compared to the FY 2018-19.

Pakistan is the 5th most financially attractive location in the world for offshore services, according to A.T. Kearney's Global Services Location Index. Several international companies including Global enterprises like Bentley®, Ciklum®, IBM®, Mentor Graphics®, S&P Global®, Symantec®, Teradata®, and VMware® have established global consulting services centers, research & development facilities, and BPO support services centers in Pakistan.

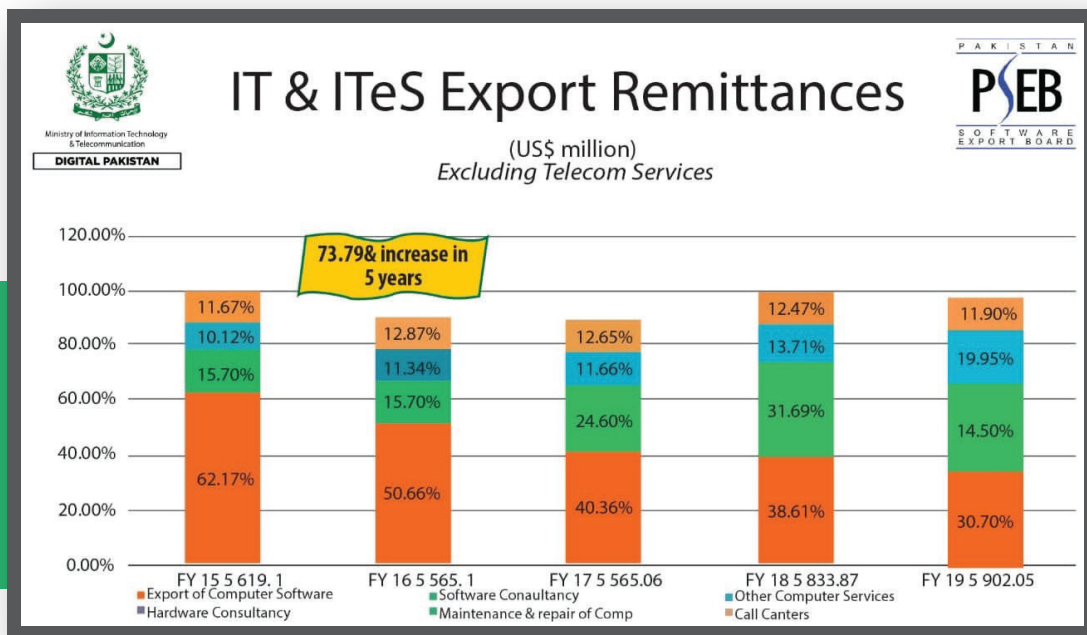
In addition, freelancers and independent consultants are making their own mark in IT enabled services as Pakistan is ranked as the 4th most popular country for freelancing as per initial data for 2019 of Online Labor Index by Oxford Internet Institute (OII).



In line with the efforts of the present government to enhance IT industry exports, PSEB has made significant efforts to provide marketing opportunities to Pakistani IT companies by facilitating participation of IT companies in international events in USA, Canada, Norway, Saudi Arabia, Dubai, and China with the objective of improving perception of Pakistan's IT Sector in the global arena, developing necessary business contacts and exploring collaboration/cooperation possibilities. PSEB along with member IT companies, was to participate in trade events in Europe between Feb-March 2020 but were cancelled by the organizers due to the outbreak of global pandemic.

In local events, PSEB and IT companies have participated in several IT industry specific trade fairs and events in Karachi, Lahore and Islamabad. Furthermore, PSEB organized IT industry two feedback sessions to gather information from IT industry on determining ways and means to enhance IT industry exports and to draft list of international trade fairs for participation by Pakistani IT companies between July 2020 - June 2025.

Pakistan has a highly trained and experienced asset in the form of commercial counselors in important cities around the world. They can contribute significantly in projecting Pakistan's IT & ITeS sector around the globe to enhance Pakistan's IT & ITeS industry foreign exchange earnings. As IT & ITeS industry dynamics are very different from traditional industries, a Commercial Counselors Training session was arranged by PSEB, to apprise them about the facts and potential of Pakistan's IT industry in order to solicit their efforts for projecting Pakistan's IT industry as viable and feasible outsourcing destination in key international markets. For future trainings, PSEB has developed a course outline in consultation with senior IT industry representatives and has shared the same with the Ministry of Commerce.

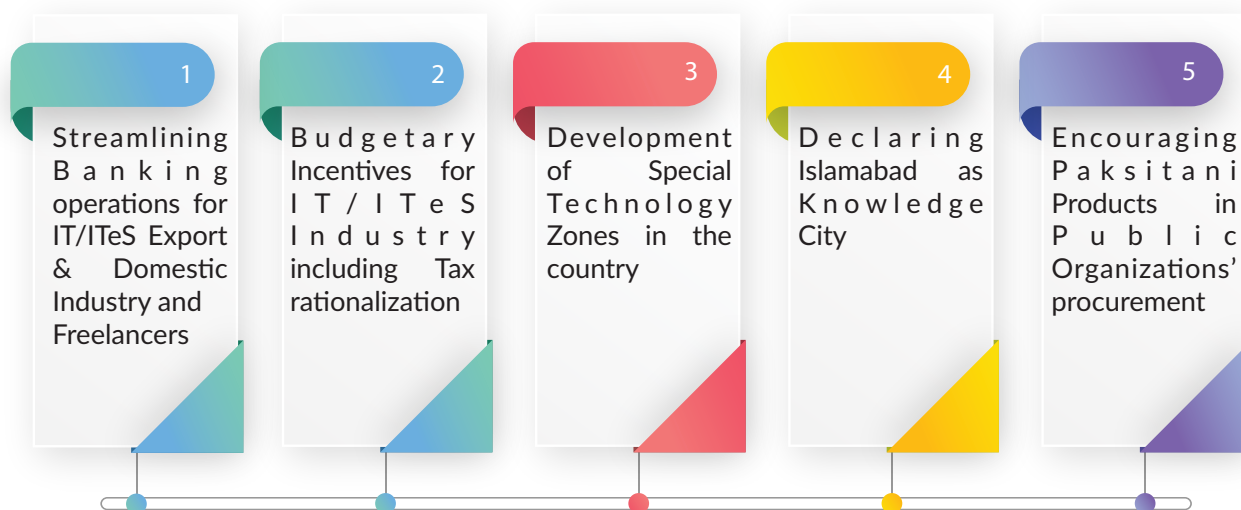


B. POLICY INTERVENTIONS

1. Prime Minister leading Government's IT/ITeS Sectoral Interventions

The rapid adoption of Information and Communication Technology (ICT) is immensely important for the socio-economic development of any country. In the spirit of democratic governance, revolutionary policies and visionary approach, present government's main focus is to enhance the growth of Pakistan's economy. The efforts are paying off as the IT industry is growing in terms of the number of companies, revenue, exports and workforce, thereby demonstrating clear confidence in the ability of the local companies to deliver IT solutions and IT enabled services which meet expectations of foreign clients.

In this regard Prime Minister Office is regularly monitoring MoIT's progress on policy interventions. Prime Minister has directed to take immediate actions against agenda presented to him by MoIT. These interventions include, but not limited to:



MoIT is working closely with Pakistan Software Export Board and IT/ITeS Industry to ensure effective measures in support of growth of IT/ITeS Exports in the country.

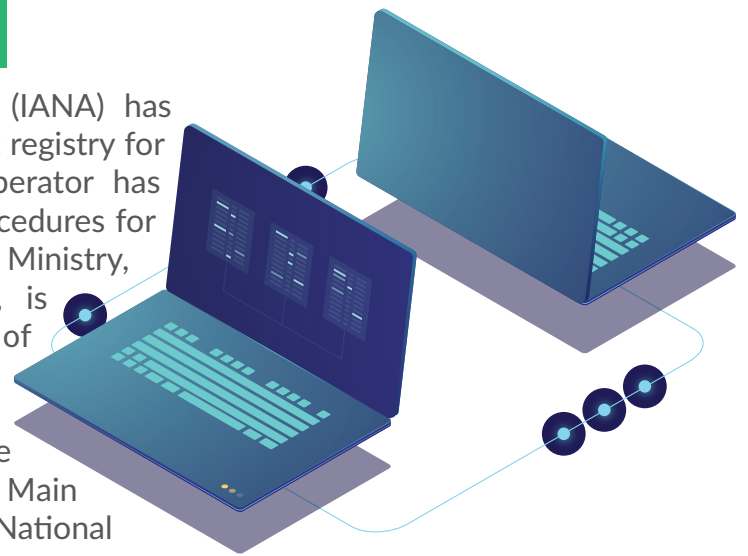
2. Digital Transformation

Taking into account the increasingly transformed role of Information Technology across all sectors of socio-economic development, coupled with accelerated digitization Digital Pakistan Policy 2018 has been approved by the federal Government to rapidly transform the IT and other sectors of economy for an enhanced economic growth.

Digital Transformation will serve as the foundation for the construction of a holistic Digital Ecosystem with advanced concepts and components for the rapid delivery of next generation digital services, applications and content. It will also provide opportunities for local entrepreneurs and firms to acquire core competencies, experience and credibility and become better positioned to compete at the international level. This Ministry is working with stakeholders to ensure implementation of the Digital Pakistan Policy mandate in the country.

3. Establishment of Pakistan internet registry:

The Internet Assigned Numbers Authority (IANA) has approved the Establishment of پاکستان- internet registry for Pakistan. NTC being the پاکستان- registry operator has completed and tested all the operational procedures for setting-up of said registry. This Ministry, in-consultation with relevant stakeholders, is planning to file a case for the re-delegation of national registry “.pk” as per the ICANN aforesaid standard procedures. In this regard, a strategy has been devised and work on the requisite steps through a multi-stakeholders Main Technical Committee on the re-delegation of National Internet Registries has been completed. Furthermore, the case for the re-delegation of National Internet Registry (.pk) has been submitted to IANA.



4. E-Commerce:

E-Commerce is a major tool towards positive development of the Country and Ministry of IT& Telecom, being an enabler towards IT & Telecommunication Sector, has taken the initiative to formulate an Inter-Ministerial Committee (IMC) for a fast-track implementation of this critical policy matter. Accordingly, regulations regarding System Operators (PSO) and Payment System Providers (PSP) have been approved.

MoIT, in-consultation with relevant stakeholders, has formulated the e-commerce regulatory framework for the proliferation of e-commerce eco-system to safeguard the users and merchants' trust and will resolve longstanding barrier to growth of Pakistani e-commerce. Said Policy has been approved by the Federal Cabinet and Ministry of Commerce is the lead Ministry for this subject. Now, this Ministry is providing technical assistance to Ministry of Commerce for implementation of National E-Commerce Policy along-with other stakeholders.

5. E-Governance:

This Ministry, through NITB, is in process of rolling-out the e-Office suite in the Federal Government to ensure efficiency, accuracy, effectiveness, good governance, transparency and accountability in decision making and delivery of efficient and cost effective public services to citizens of Pakistan. In this regard, the access of e-office suite software has been provided to more than thirty-one (31) Ministries/Divisions and fifty (50) attached departments whereby more than ten thousand five hundred (10500) Staff has been trained on the said e-governance system.

E-Office services are being provisioned to these departments through Federal Government's secure and dedicated optical fiber network. Currently, the MoITT, in-consultation with relevant stakeholders, is in process of rolling-out the e-office suite in the provinces. The projects in this regard are as follows:

- Centralized Procurement Plan for Federal Government: A Special Procurement Committee was constituted on 28th December 2018, centralized procurement of the ICT infrastructure to ensure e-Readiness of Federal Government Program. Recently ECC has approved funds amounting to Rs. 100 million for centralized procurement.

- Replication of e-office suite: Under this project, the currently under progress e-office system is to be replicated to remaining ministries and attached departments. NITB is in process of completing this project in the year 2020-21.

6. National Cyber Security Policy (NCSP):

Cyber Security is one of the highest priority areas of the present Government. Keeping in view the criticality of the matter, the newly elected Government, through the Ministry of IT & Telecom, reinitiated the stalled process of policy formulation. Through extensive efforts of the Ministry, the 2nd meeting of Cyber Governance Policy Committee was held on 4th September 2019, under the Chairmanship of the Federal Minister for IT & Telecom, with participation of all stakeholders.

During the meeting, the draft of Cyber Security /Governance Policy was reviewed. Accordingly, it was decided that the Pakistan's cyber security dynamics draft may be amended in view of and be titled as the National Cyber Security Policy (NCSP). Accordingly, the stakeholders' consultations are underway for the first National Cyber Security formulation of Pakistan's Policy.



C. INFRASTRUCTURE DEVELOPMENT FOR IT FACILITATION

i. Establishment of Information Technology Parks

The Software Technology Parks (STPs) are a major factor in facilitating the IT companies and have a vital role in ensuring long term growth of the IT industry. STPs house IT companies and professionals and act as software factories generating software and IT exports for the country every year.

A new state of the art IT Park in Islamabad is being established under financing from Korea Exim bank through the Economic Development Cooperation Fund (EDCF), with more than 61000 Square meter of covered area. It shall be a G+9 structure with two basements for parking. Total land available for IT Park Islamabad is 14.9 acres in Chak Shahzad. Design phase of the project is now in progress. This project shall be completed and operational in 2022.

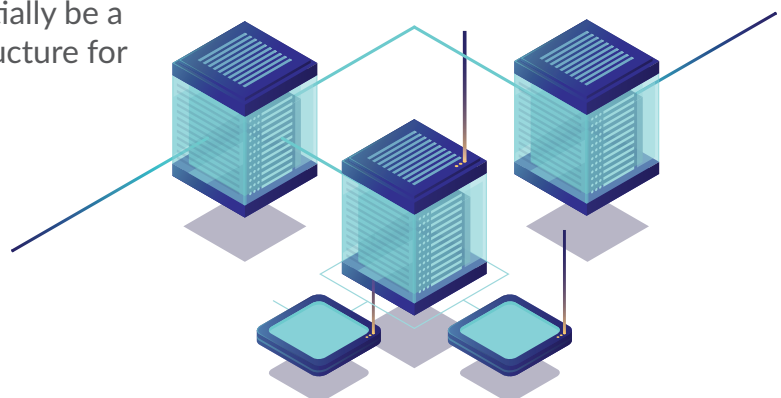
In addition to the above, this Ministry through PSEB, has engaged a consortium of Korean consultants to conduct detailed feasibility study of establishing an IT Park in Karachi. The feasibility study has been completed successfully and the project, worth \$186 Million, is expected to be funded through EDCF of Exim bank of Korea.

ii. Establishment of Disaster Recovery Site for National Data Center (NDC) at Lahore:

National Telecom Corporation being the sole ICT service provider for Government of Pakistan has the responsibility to take care of the ICT needs of the Federal as well as provincial governments. NTC had established state of the art Tier-III ISO certified National Data Center at its Headquarters in Islamabad to cater for growing ICT needs of the GoP.

As GoP is gearing up for Digital Transformation of Pakistan under Digital Pakistan vision of Prime Minister of Pakistan, the need for secure, seamless and uninterrupted ICT services becomes of paramount importance. The National level E-Government platform is running on National Data Center (NDC) at NTC HQ Islamabad, which is compliant to international standards. To further improve the availability and reliability, NTC is establishing a geographically distant Disaster Recovery Site at Lahore to overcome untoward scenarios in the face of natural calamities or national emergencies. The Disaster Recovery Site, with a cost of around Rs. 600 million will be operationalized in the month of April 2020.

This Data Center facility will essentially be a valuable addition to digital infrastructure for the public sector of the country.



3. LEGISLATIVE MEASURES FOR ICTs

Personal Data Protection Bill

The Ministry of IT & Telecom has reinitiated the stalled process of formulation of the country's first Personal Data Protection Bill. The Ministry of IT & Telecommunication last week published a draft of a personal data protection bill, with an invitation to stakeholders for feedback. With a June 15 deadline, the ministry maintained that the privacy of personal data of an individual has become `more relevant and important than ever` at a time when digital measures such as mobile phone tracking are being employed to contain the virus. Comments received are being incorporated in the draft.

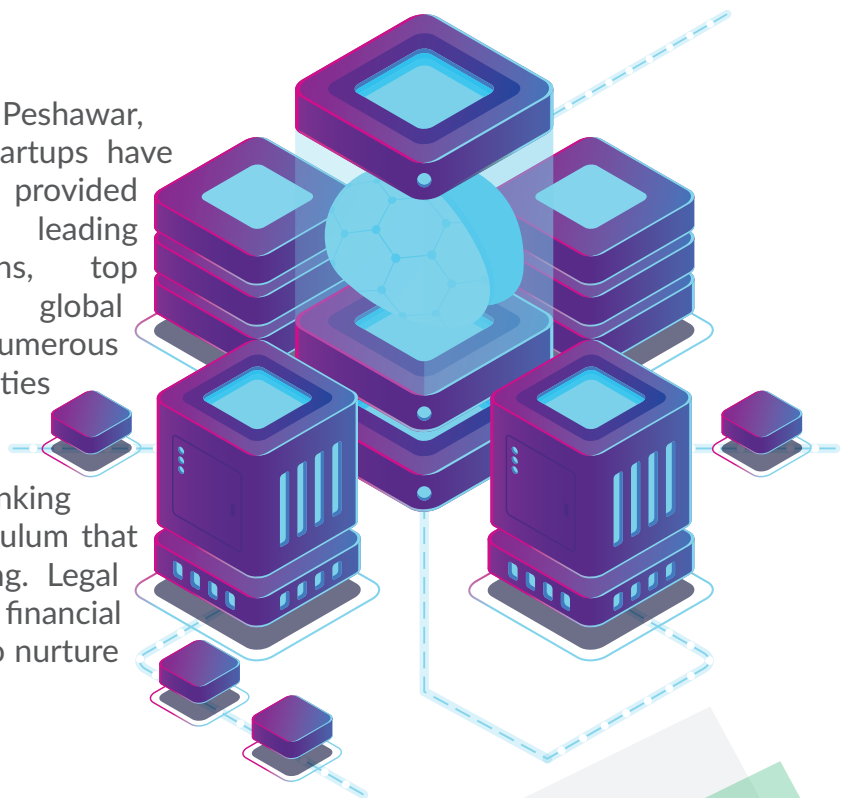
4. NATIONAL INITIATIVES FOR ICTs (IT & TELECOM)

A. INNOVATION AND ENTREPRENEURSHIP IN ICTs

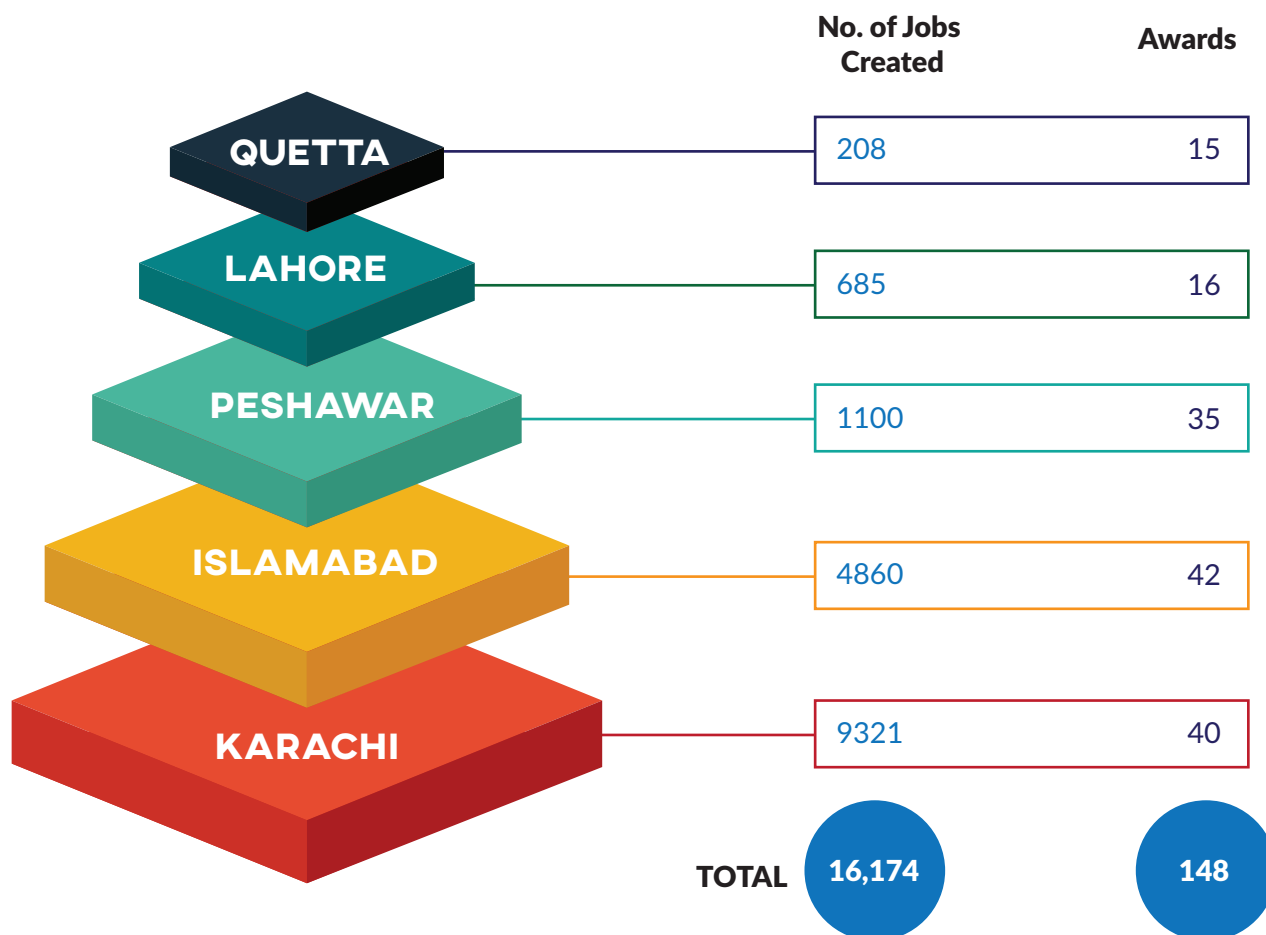
i. National Incubation Centers

The Government has a vision of accelerated digitization and transformation of Pakistan into a knowledge based economy to spur economic growth through innovation and entrepreneurship. Keeping in mind the critical role played by startups in economic growth, job creation, financial inclusion, reducing the income divide, and building a knowledge economy, Ignite under the auspices of Ministry of IT & Telecom, launched a program to build a network of National Incubation Centers (NIC). IGNITE has successfully established 5 National Incubation Centers (NIC) in Federal Capital and all Provincial Capitals of the Country.

Till date in five NICs (Islamabad, Lahore, Peshawar, Karachi & Quetta) 440+ promising Startups have been inducted. Startups have been provided mentorship and networking by leading entrepreneurs, corporate chieftains, top professionals, investors and global entrepreneurial organizations through numerous events and meet-ups. Other facilities includes rent free office space, high speed broadband Internet, makers lab, usability labs, Fintech Lab, Design Thinking Lab etc. These centers also offer curriculum that teaches pitching and learning by doing. Legal assistance, coaches, vertical mentors, financial experts and trainers are also available to nurture Incubatees.



National Incubation Centers



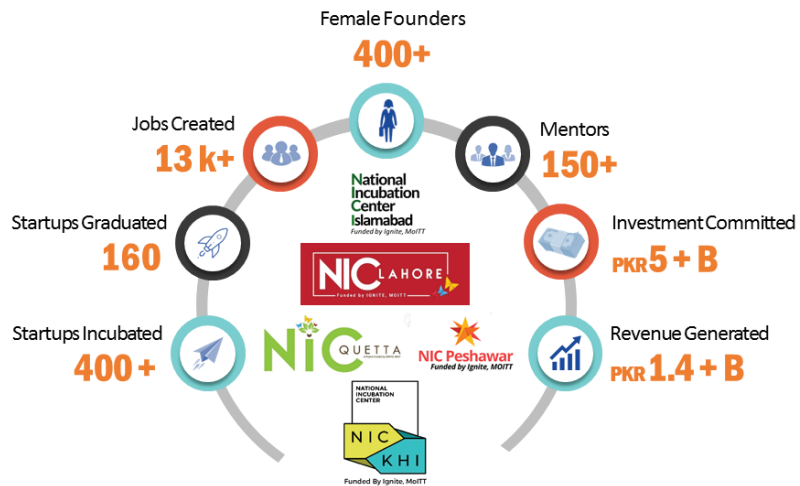
Core Offerings

-  **Inter-NIC and Ecosystem Collaboration**
 - ▶ Alumni Network
 - ▶ Linkage with International accelerators
-  **Special Services**
 - ▶ Marketing, Finance & Legal
 - ▶ Design
 - ▶ Access to Investors, community
-  **Coaching**
 - ▶ Focus on one problem at a time
 - ▶ Focus on one outcome metric at a time
-  **Mentorship**
 - ▶ Vertical mentors
 - ▶ Other mentors
-  **Curriculum**
 - ▶ 360 Degree
 - ▶ Learning by doing
 - ▶ Pitching
 - ▶ Trainers
-  **Co-Working Space**
 - ▶ Free space & Internet
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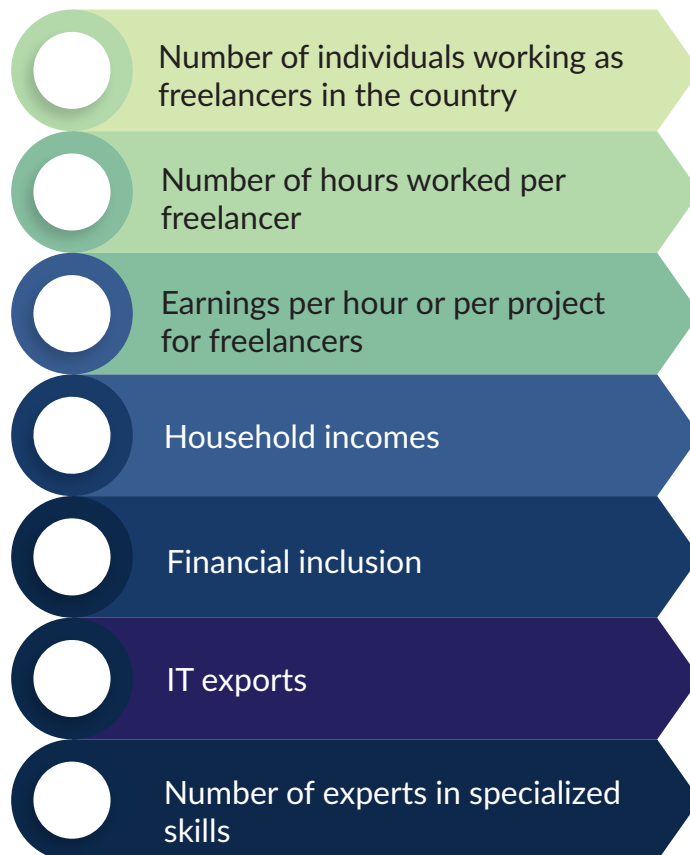


B. PEOPLES DEVELOPMENT PROGRAMS

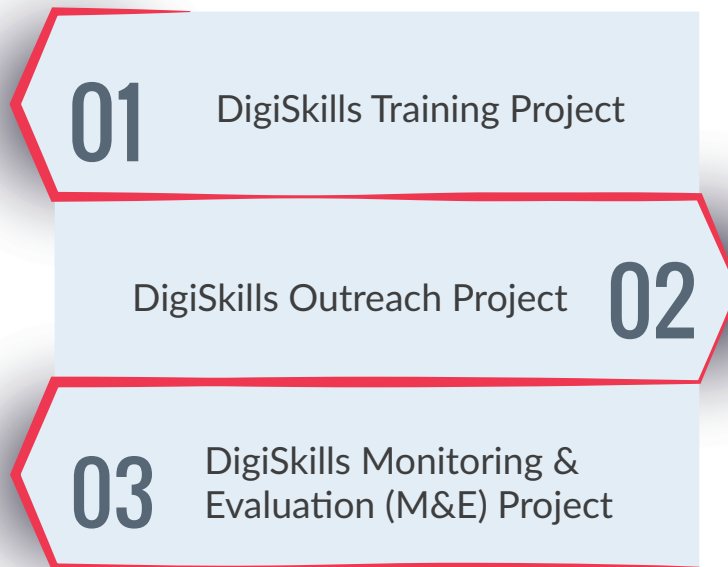
i. Digital Skills Training Program for Freelancing

The DigiSkills training program was inaugurated in August 2018, to provide one (1) million trainings across the country over a period of 2 years. The DigiSkills Program is aimed at equipping our youth, freelancers, students, professionals, etc. with knowledge, skills, tools & techniques necessary to seize the opportunities available internationally in online jobs market places and also locally to earn a decent living. The program aims at not only developing key specialized skills, but also imparting knowledge about various freelancing and other employment and entrepreneurial opportunities available internationally and locally. Due to limited employment opportunities, it is essential for upcoming workforce to have necessary knowledge and abilities to grab such opportunities. This is envisaged to be achieved through a national level program, which will train target audiences in freelancing and other specialized skills.

The program aims to increase:

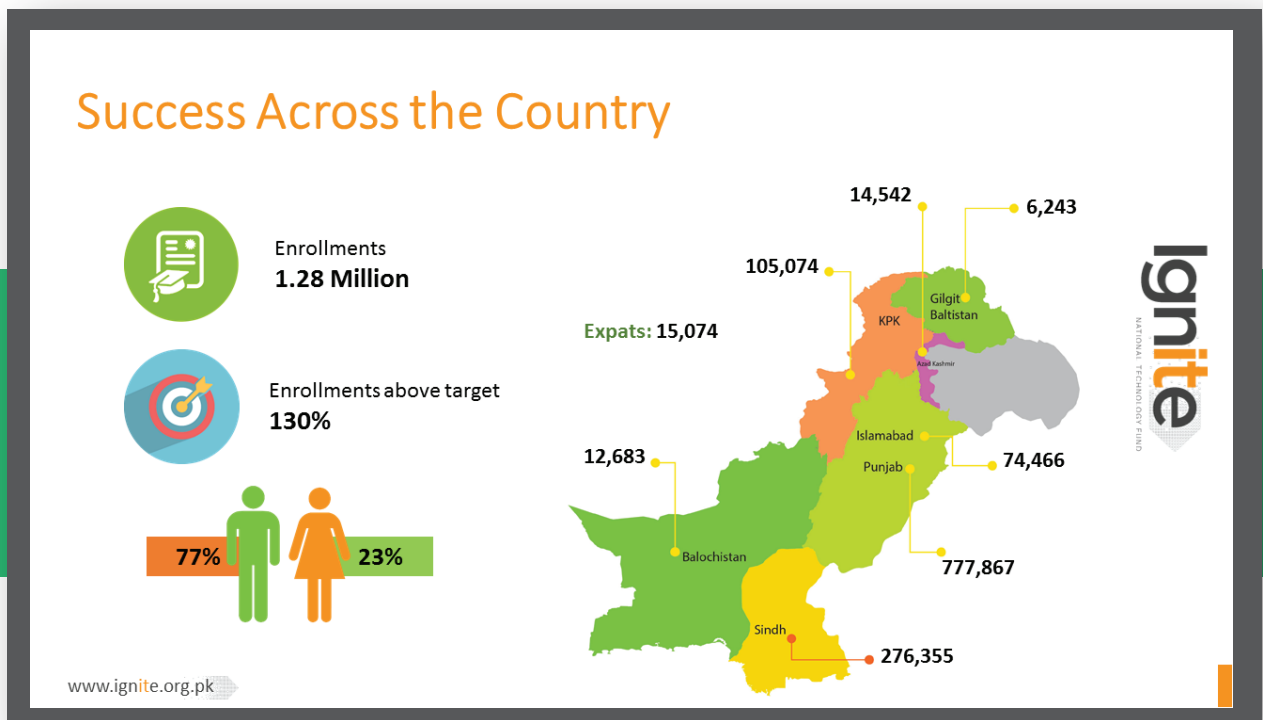


The DigiSkills Program comprises of three interlinked projects:

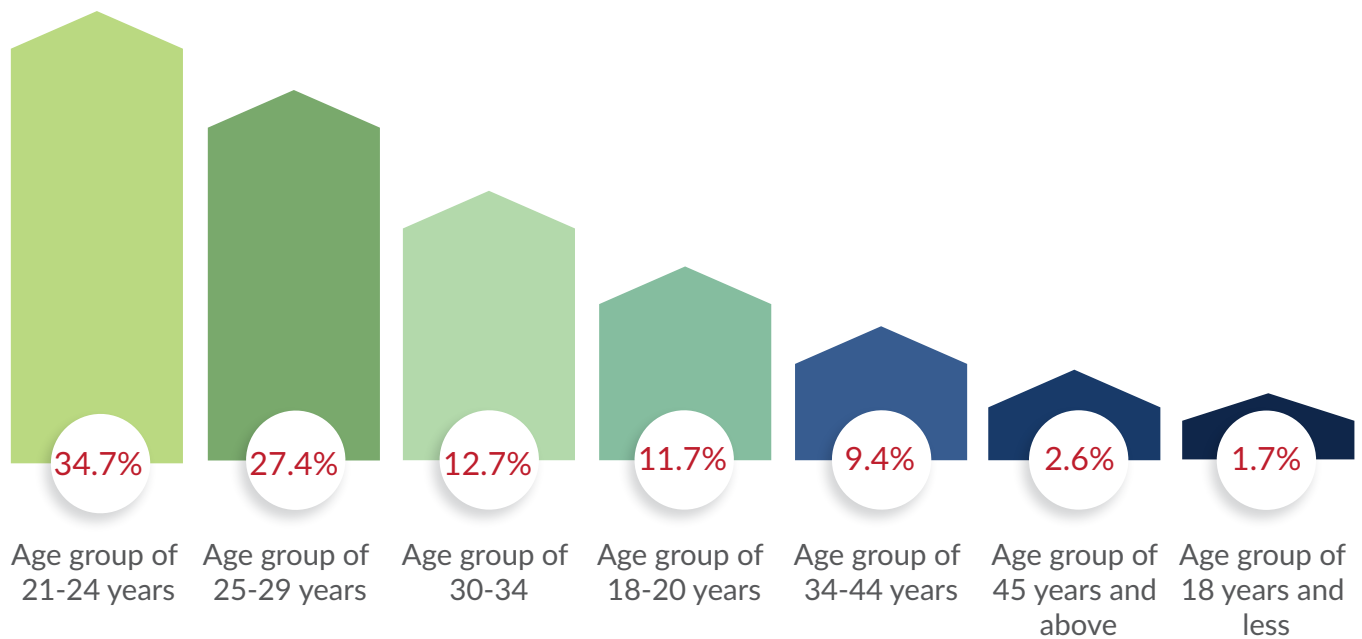


The key scope of this project, is to develop a web-based training platform and Learning Management System, along with development of necessary training content to enable individuals to enroll and take free online training courses. Under this project, trainees are being offered the opportunity to obtain free online training in areas of “Freelancing” and “Specialized Skills” all across Pakistan.

Till date overall number of trainings that DigiSkills Training Program has conducted are more than 1,032,307. The total trainees comprise 77% males and 23% females. The number of overseas Pakistanis trained in the program is around 7,000.



Trainees of DigiSkills Program are from all ages. Percentage-wise enrolments are categorized as follows:



Province-wise trainees break-up is given as follows:

| | |
|-------------|---------|
| Punjab | 635,400 |
| Sindh | 227,445 |
| KPK | 83,635 |
| ISB | 63,014 |
| Baluchistan | 10,234 |
| GB | 4,958 |
| FATA | 620 |

Earning Briefs with **Success Stories**

As per survey conducted among the trainees of Batch-1, 2, 3 & 4 total amount earned is USD 1,507,937 whereas after extrapolating, the amount earned is USD 202M till Batch 7



Maqadas Manzoor
Sialkot

\$7,000

"I have been working on Fiverr since March 2019 and I have earned more than \$5,500 through the web development niche within 3-4 months. I learned a lot through DigiSkills.pk. It is a great platform for learning."



Muhammad Amir Zia
Sheikhupura

\$17,000

"I created an account on Upwork in 2019, but failed. I tried again and worked harder and created another account in April. In just 90 days, I became a top rated freelancer. Alhamdulillah, I have 100% job success and 1050+ work hours on Upwork."



Muhammad Yasir
Jalalpur Pirwala

\$13,000

"I am a disabled person with a speaking problem. I have been doing freelancing for the last 13 months or so. Alhamdulillah I have earned \$8,000 so far. Thanks to DigiSkills.pk for providing such an amazing opportunity to work from home."



Muhammad Shoaib
Jhang

\$14,000

"I'm working as a freelancer on Fiverr and Upwork. I have learned a lot from DigiSkills.pk and now I am working as a part of the team for a small company. I would like to say thanks to DigiSkills.pk."



Rana Muhammad Bilal
Nankana Sahib

\$14,000

"I truly believe that a person with skills cannot be unemployed for a long time. I struggled a lot in the beginning of my career, but I didn't give up. I suggest you to start your freelancing career professionally - there are no shortcuts, be consistent."



Muneeb Hussain
Islamabad

\$15,000

"After completing the freelancing and Wordpress course in batch 2, I started offering my services on Fiverr, Upwork and offline. I have earned \$6,295 in one year only, all credit goes to the instructors and DigiSkills.pk team."

Empowering Women to Earn Extra Income While **Sitting at Home**



Shazia Amanat
Lahore

\$2,000

"I never thought that I would be making a full-time living from basic programming languages, earning ten times what I earned in my conventional job. I now have a successful freelance blogging business too - I had no freelancing experience before this."



Mahwish Shahzadi
Mandi Bahauddin

\$2,200

"I did a graphic designing course on DigiSkills.pk and it has opened up a new world for me to be financially independent."



Rabia Rasheed
Gujranwala

\$7,256

"I have learned Digital Marketing from DigiSkills.pk and have started working online on Fiverr all thanks to this great course."



Alizeh Rangoonwala
Karachi

\$3,000

"I have learned a lot from the courses I took on DigiSkills.pk. I have recently Created my profile on Fiverr and I am learning more and more about being successful at freelancing."

ii. High Impact Boot Camps

Most Universities have been unable to timely update curriculum or mobilize resources to cope up with rapid demand of certain critical new technologies like Cloud Computing, Data Sciences (AI,MI) and Blockchain. A delegation of distinguished and successful entrepreneurs from Silicon Valley was invited by President Dr. Arif Alvi for presenting some concrete recommendations for scaling up Government's efforts to uplift knowledge & skills base. Eventual benefits of such skills development will result in export of high value services required by demanding markets like USA.

1. Description, justification, technical parameters and technology transfer aspects

Project Location

Two (2) Universities in Karachi (Pilot-1, batch of 200)

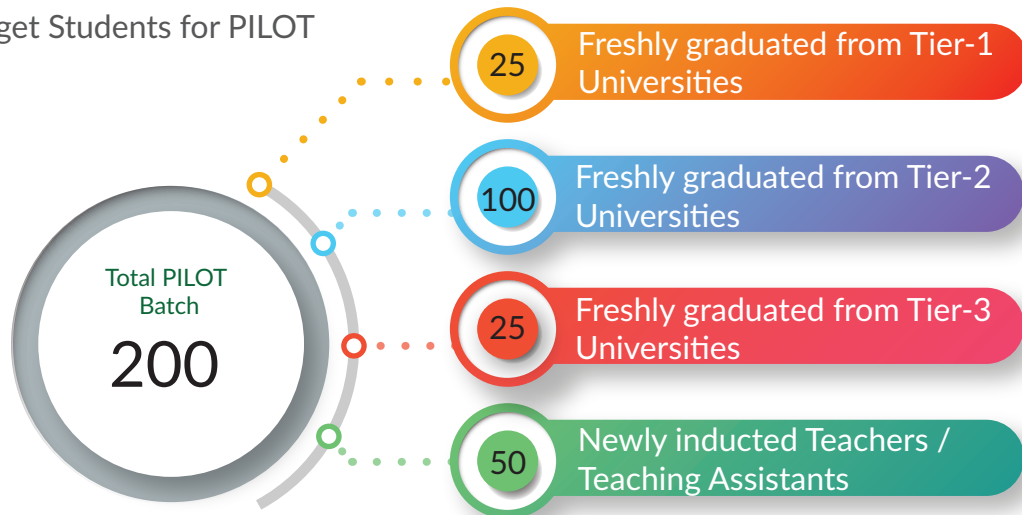
(Similar batches will be rolled out in Lahore, Islamabad and other cities after this pilot project).

Pilot-1 Karachi

Pilot-2 Islamabad

Following training type is based on a very popular and successful model used in USA for bridging the skills gap.

• Target Students for PILOT



• Specialization

Cloud Computing, AI (Artificial Intelligence), Blockchain

iii. Capacity Building of IT Industry

PSEB has assisted quality certification of 05 IT companies at ISO27001:2015, 05 at ISO20000-1, 02 companies on CMMI Level-2, 03 Companies at CMMI Level-3 and 01 companies on CMMI Level-5. Whereas, certification of 10 IT companies is in progress on ISO27001/20001/CMMI/L2/L3/L5.

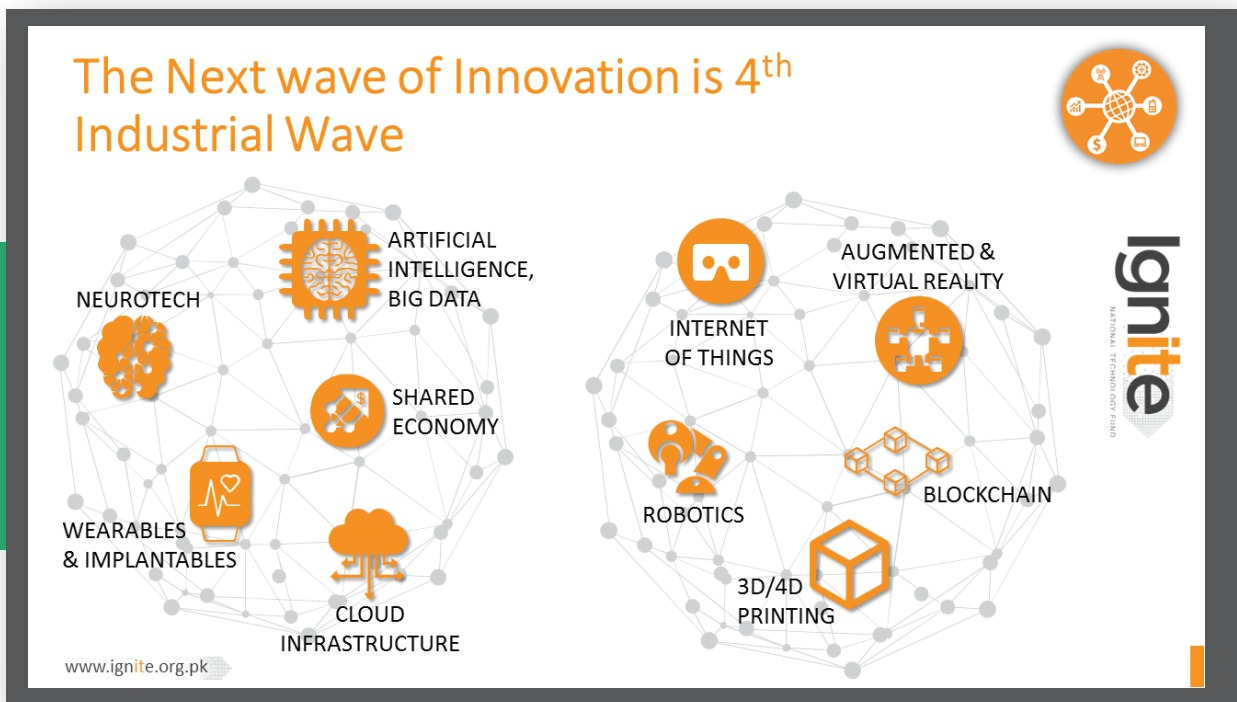
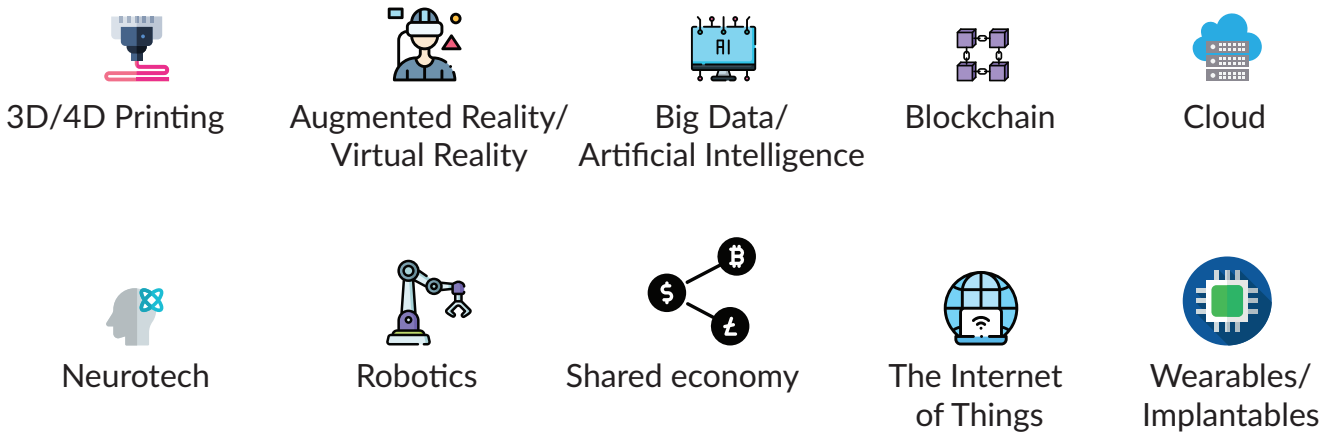
iv. Capacity Building of IT Professionals

PSEB aims to create a highly skilled resource pool within Pakistani IT industry and train 10,000 IT industry professional and IT graduates to match advanced specialized international technologies i.e. Big Data/Cloud Computing, Scrum, SQA, Mean/Full stack development, Python, Cyber Security, CCNA, Oracle, PMP, Prince2 and CMMI. The project has been launched in December 2019 and registration of applicant is in process.

5. SOLICITATION AND FUNDING ACTIVITIES

Technology startups are considered to be the epicenter of innovation and are fueling the growth of economies worldwide by creating new jobs, contributing to the GDP and raising the standard of living. Some of the success models around the world are South Korea and Singapore etc. The Government of Pakistan has also realized the importance of supporting an innovation and entrepreneurship culture in the country and has taken major strides in the past few years. This includes supporting cutting-edge R&D and product development through supporting startups and joint industry-academia collaborations.

Ignite-National Technology Fund, under the Ministry of IT & Telecom has been focusing on 4th Industrial Wave Technologies over the past three years. This includes, but not limited to, the following areas:



Under the unsolicited stream, applications are accepted throughout the year from aspiring applicants both from academia and industry (especially the startups) thus creating the right balance between pure research and product development.

During July 2019 to June 2020, 27 Technical R&D and Innovative Product Development Projects worth PKR 679 million were received for funding. These projects belong to Telecom, Health, Energy, Agriculture, Aviation and Education. The technology areas targeted by these projects include AR/VR, AI/Big Data, Robotics, IoT, Cloud and Shared Economy.

Four Technical R&D and Innovative Product Development projects worth PKR 65.1 million were approved by Ignite. These projects belong to Health, Energy, Agriculture and Information Security. Technology areas targeted by these projects include AI/ML, Big Data, and IoT.

Ignite organized a one-day pitching event, in which 25 startups of NIC Program pitched their business idea and products/services to Japanese companies working in Pakistan under the auspices of JETRO (Japan External Trade Organization that promotes foreign direct investment into Japan). Earlier a Design Thinking Workshop was also organized in collaboration with JETRO and NIC Karachi. The idea was to give an opportunity to local startups to work on real world problems and come up with innovative solutions, to get international perspective through auspices of JETRO, to provide opportunity to startups to raise next round of funding and last but not least to gain recognition in the startup community through various channels.

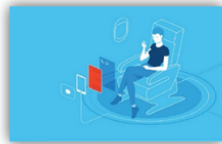
A Memorandum of Understanding (MoU) was signed between National Center in Big Data and Cloud Computing (NCBC) and Ignite-National Technology Fund at Lahore University of Management Sciences (LUMS). The MOU will allow both entities to identify areas of potential collaboration in Artificial intelligence, Big Data and Cloud Computing. The bilateral collaboration will identify and establish linkages with corporations, industry, start-ups and research groups working on products and services related to Healthcare, Education, Agriculture, Energy and other allied verticals. Both entities together will work on the National Data Portal and will also jointly host a Data Science competition for the awareness of Big Data and allied disciplines.

Ignite organized a workshop titled “AgriSurge Stakeholder Workshop”, at MNS University of Agriculture Multan on October 9th, 2019. The stakeholders from industry, academia, public sector and social sector were invited to attend the event. The event was helpful in fostering collaborations and relations among academia, agri-based industries and farmers. DICE Agriculture and Food Science arranged an Innovative Competition and Industrial Expo during the event. Ignite funded startups namely Bakhbar Kissan and Qumaq also setup their stall and showcased the solutions developed by them.

Serving the Bottom of the Pyramid

FLY HIGH WITH WI-FI

- ▶ Low cost internet service provision to under-served areas in Balochistan, Interior Sindh and FATA through drones



MERA MAWESHI

- ▶ Increasing dairy production and cattle life with AI based bovine disease diagnostics
- ▶ **500+ farmers using Urdu mobile UI apps. Currently deployed in 3 tehsils of Mianwali.**



Ignite
NATIONAL TECHNOLOGY FUND

www.ignite.org.pk

Saving Lives

FAST TRACK DIAGNOSTICS EASE TB DANGERS

- ▶ Non-invasive optical sensor for TB diagnosis without the aid of specialized laboratory personnel which can be portable to remote areas
- ▶ End product to be completed by Feb 2020.



BYONYKS

- ▶ Innovative Peritoneal Kidney Dialysis Machine aims to reduce cost, time and pain of kidney patients. Pakistan will be able to export globally as it will be FDA (USA), CE (EU) approved device
- ▶ Project started in Feb 2019; designing phase in progress



Ignite
NATIONAL TECHNOLOGY FUND

www.ignite.org.pk

7. National Grassroots ICT Research Initiative (NGIRI)

The program is aimed to promote R&D and Innovation at grassroots level by providing financial support to selected Final Year Projects (FYP) of undergraduate students, enrolled in ICT related disciplines of public & private sector institutions.

NGIRI 2020 was launched on 6th January 2020. Within a trivial duration of forty (40) days only for submission of FYP applications, 2,832 FYP Applications were submitted which is 33% higher than NGIRI 2019. Moreover, 196 Institutions participated in the program from all provinces including Azad Jamu & Kashmir & Gilgit Baltistan which is 27% higher than NGIRI 2019. More than 1,040 FYP Applications will be funded during first half of FY 2020-21.

FYP Fund Ignites University Innovation



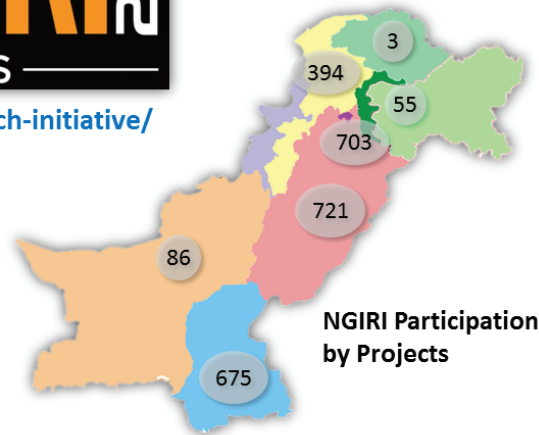
<https://ignite.org.pk/national-grassroots-research-initiative/>

 **7,162**
Projects submitted

 **2,637**
Projects approved

 **89** Institutions
participated

 **2,265**
Projects funded



NGIRI Participation
by Projects

ignite
NATIONAL TECHNOLOGY FUND

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8. APPLICATIONS
DEVELOPMENT



APPLICATIONS & DEVELOPMENTS

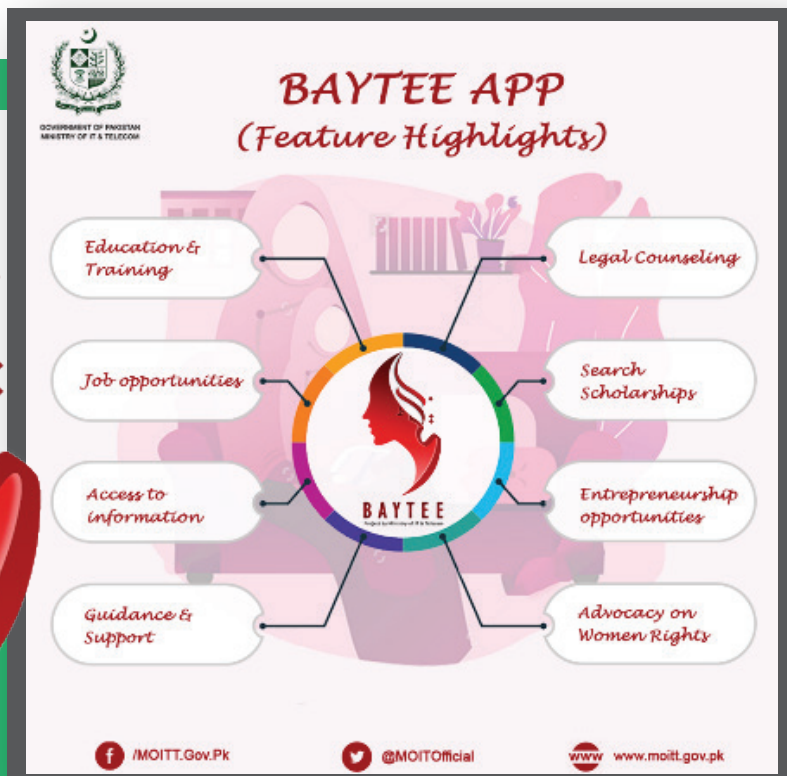
BY NITB



ICT CITY APP

i. ICT CITY APP:

An initiative towards the Prime Minister's vision for Digital Pakistan. ICT City App in collaboration with ICT Administration, which is bringing the government directly to the common person's doorstep & all city departments together. City Islamabad App is the government service provider smart app exclusively for the citizens of Islamabad. It is an innovative platform offering a number of public services of ICT Administration and its attached departments. At present, online services offered by this app include Domicile Certificate, International Driving Permit, Token Tax Payment and Vehicle Registration. Moreover, citizens can also verify/check the authenticity of Domicile, Arms License, International Driving Permit, and Vehicle details using this app.



BAYTEE

ii. BAYTEE APP:

A unique “Women Empowerment” initiative of the MoITT. “Baytee” is intended to promote females by providing resources for educational awareness on women’s rights, laws, regulations, health services, for providing job opportunities, training and development, as well as connection with other women through threaded discussions.



COVID-19 GOV PK APP

iii. COVID-19 GOV PK APP:

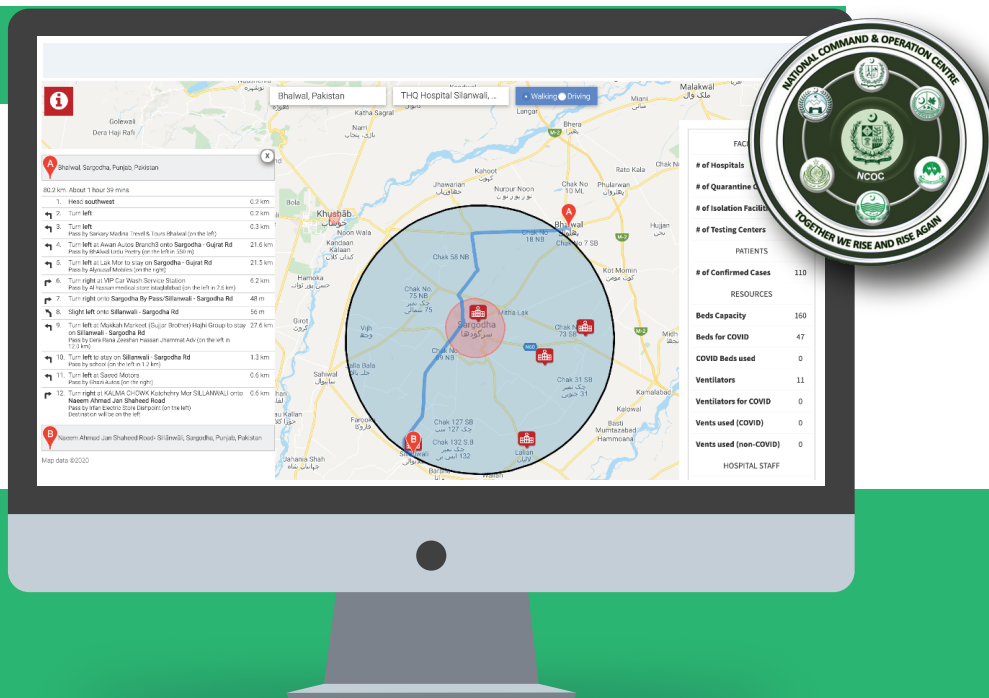
The application functions include; Dashboard for current status of COVID-19; Location based tracking of Corona positive patients; Covid Tracker, Alarms for washing hands; Chat bot for awareness.



DURUST DAAM APP

iv. DURUST DAAM APP:

App is beneficial for citizens of Islamabad as they are able to know updated prices of essential commodities like poultry, vegetables, fruits and other items. The citizens can register their complaints which will contribute towards transparency and good governance.

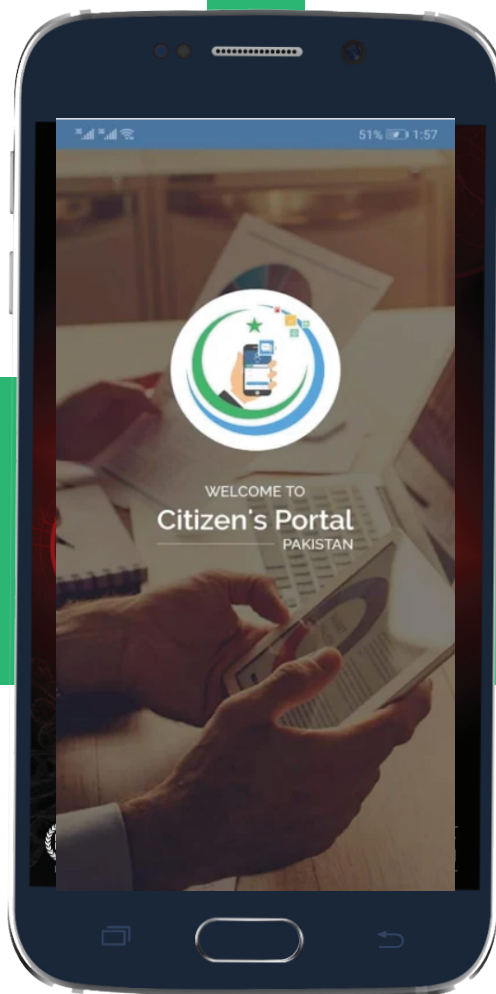


DIGITAL SUPPORT TO NATIONAL COMMAND AND OPERATIONS CENTRE (NCOCC) THROUGH NITB

v.DIGITAL SUPPORT TO NATIONAL COMMAND AND OPERATIONS CENTRE (NCOCC) THROUGH NITB

Digital support is being provided to NCOCC by NITB under the supervision of Ministry of IT & Telecom.

Pak Neghayban App: A joint collaboration of the National Command & Operation Center and National IT Board, 'Pak Neghayban' helps the citizens of Pakistan in locating the nearest lab/ hospital in the vicinity and checking the availability of beds/ vents.



Pakistan Citizen's Portal

vi. Pakistan Citizen's Portal

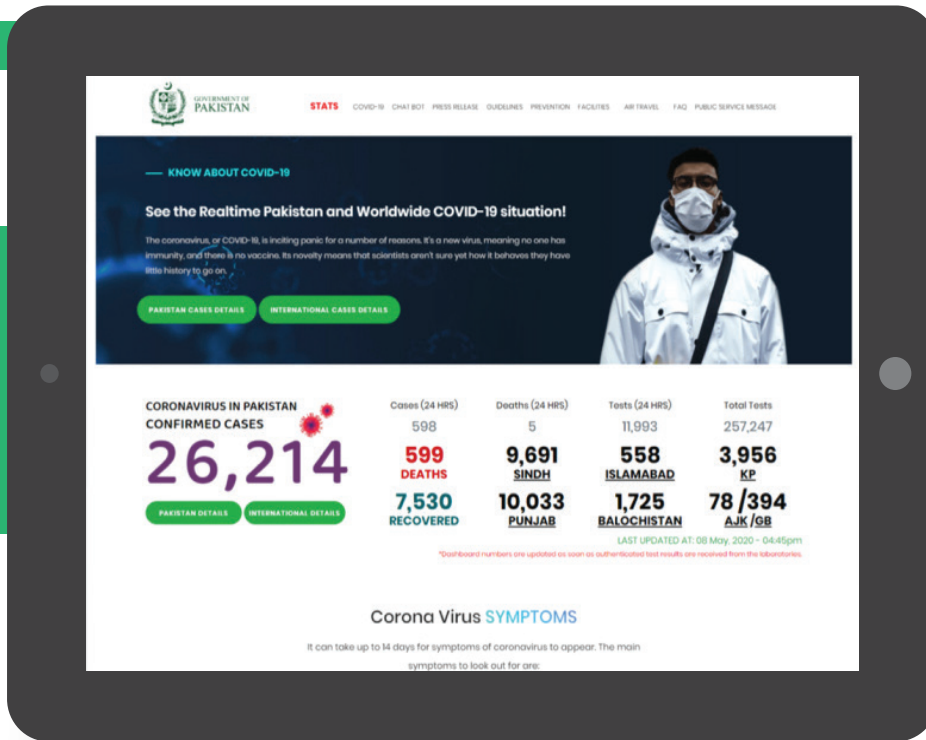
A revolutionary step towards digital ease, PCP is a Citizen Grievance Redressal system connecting all government organizations both at federal and provincial levels. It serves as a complementary channel between citizens and the government. National IT Board is providing management services to Pakistan Citizen Portal in operation, maintenance, and execution. The staff of 17 personnel from NITB manages the PM Citizen Portal. Services include upgrading Citizen Portal, bug fixations etc. Since launch, 535,134 individuals have used this app, out of which 493,705 are in Pakistan, 39,946 are overseas and 1,482 are foreigners. Overall feedback of PCP is 57% nationwide.



Kamyab Jawan Portal

vii. Kamyab Jawan Portal

Kamyab Jawan foresees building institutional synergies and collaborations for promoting gender equality, rights-based youth empowerment, and development. For making the government's dream come true, NITB plays a dynamic role in developing and maintaining Kamyab Jawan portal. NITB offers its matchless technological assistance along with its expertise of the technical team to date. From the development of the portal to the well-timed maintenance, NITB is always readily available to cater to any queries to avoid any server delays.



2.2
MILLION
TOTAL VISITS
in last 30 Days

3.2
MILLION
TOTAL WEBSITE
VIEWS

COVID-19 Information Platform

viii. COVID-19 Information Platform

Designed, Developed, and maintained by National IT Board in collaboration with the Ministry of Health covid.gov.pk. Is an official web portal presenting real-time stats of COVID-19 cases in Pakistan, as well as World-wide. This website also serves as an awareness tool providing information related to COVID-19 symptoms, prevention guidelines, quarantine centers, hospitals, and testing facilities along with a chatbot for self-assessment. The website can be accessed by the URL www.covid.gov.pk



Yaran-e-Watan Platform

ix. Yaran-e-Watan Platform

An initiative of the ministry of overseas and ministry of health, the National IT Board playing its role in providing digital platforms nationwide and across geographic boundaries. National IT Board is offering complete back-end support along with the designing and developing Yaran-e-Watan Portal that connects Overseas Pakistanis health professionals with the authorities and provides them with volunteering opportunities in Pakistan. Its URL is www.yaranewatan.gov.pk



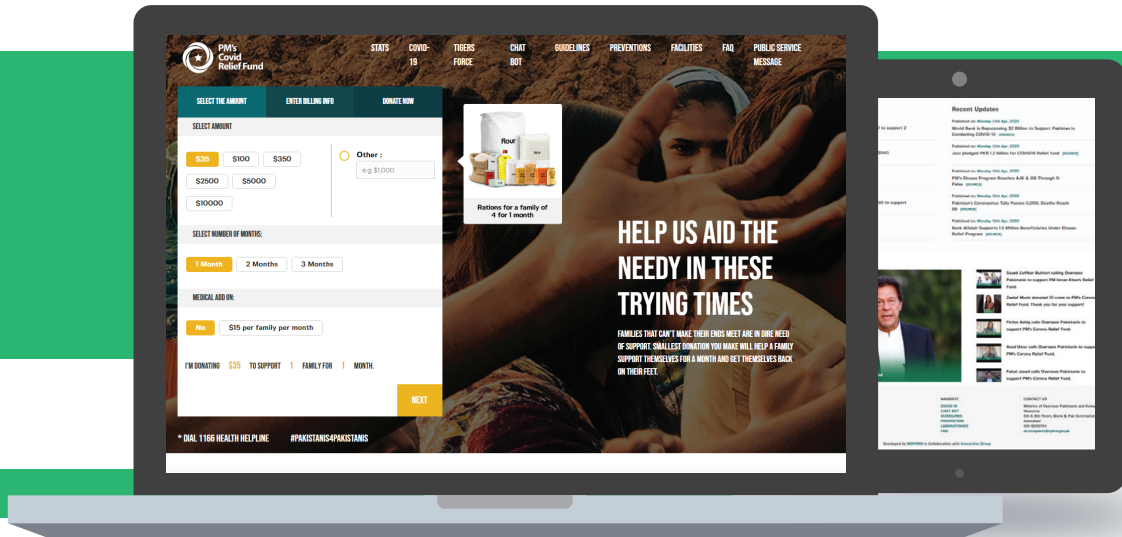
TTQ Technology

Call Center

x. TTQ Technology Call Center

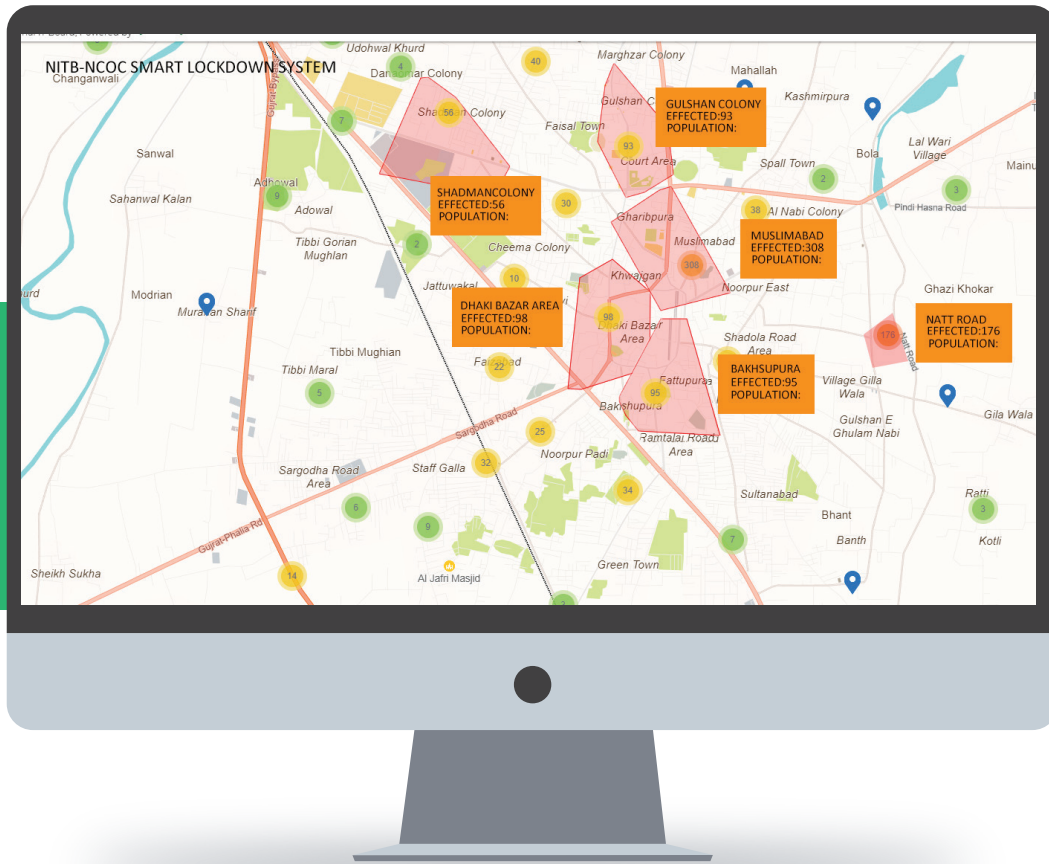
National IT Board, Developed a call center for National Command & Operation Centre based on Tracking, Tracing and Quarantine (TTQ) technology ensures an effective tracking and tracing of corona-affected people.

It is responsible for monitoring and evaluating all possible ways to quarantine corona patients.



Portal for Prime Minister's COVID-19 Relief Fund

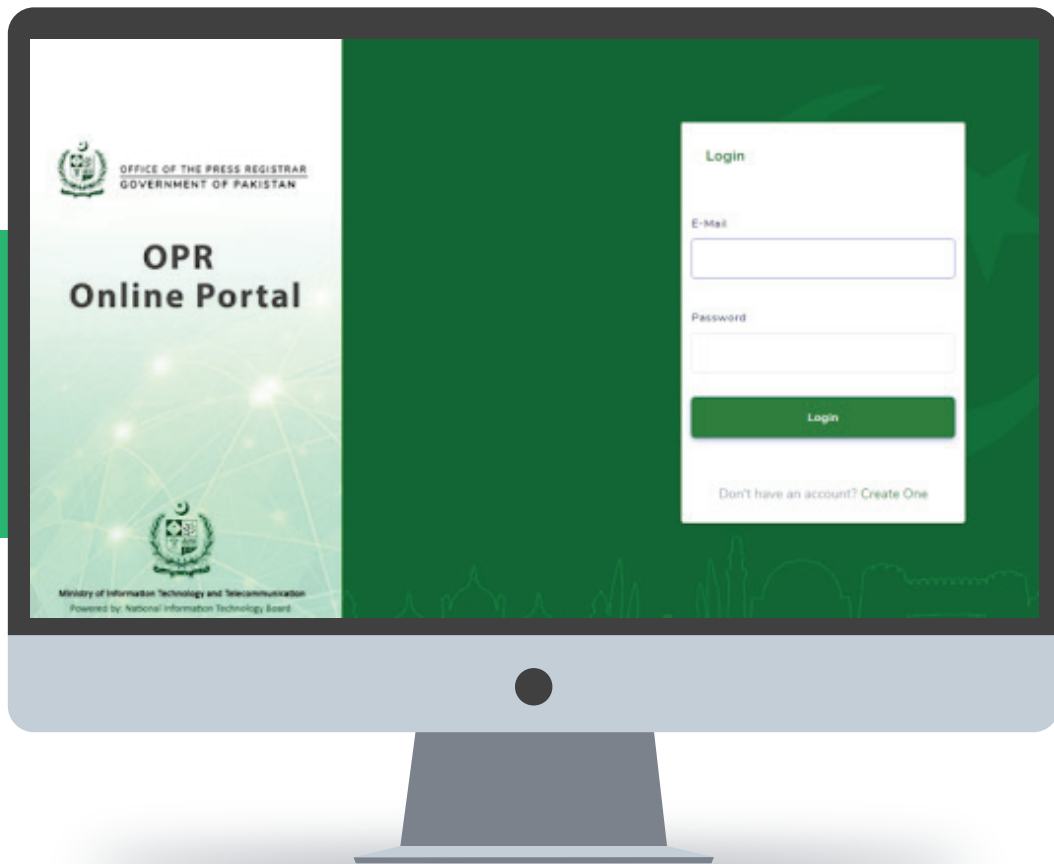
xi. Portal for Prime Minister's COVID-19 Relief Fund
NITB provides complete backend support and technical
facilitation for Prime Minister's COVID Relief Fund
collection portal www.pmcrcf.covid.gov.p



NITB Smart Lockdown Solutions

xii. NITB Smart Lockdown Solutions

Designed, Developed, and maintained by National IT Board in collaboration with TPL Trakker Inc, NITB Smart Lockdown Solutions helps the Government in devising key strategies of locking down the areas where COVID-19 cases are in higher intensity, resulting in a decreasing number of positive cases.



MOIB Online Registration Portal

xiii. MOIB Online Registration Portal

Ministry of Information & Broadcasting (MIOB) Online Portal, developed by NITB, caters office of the press registrar to provide ease for applicants to apply online for NOC, change of Publication, Change of Language etc.



We Care Portal

xiv. We Care Portal

Designed and developed by the National IT board in collaboration with the Ministry of Health, “We Care” is a digital platform for highlighting government’s initiatives which have been taken for protecting and supporting the frontline health workers in the context of COVID-19.

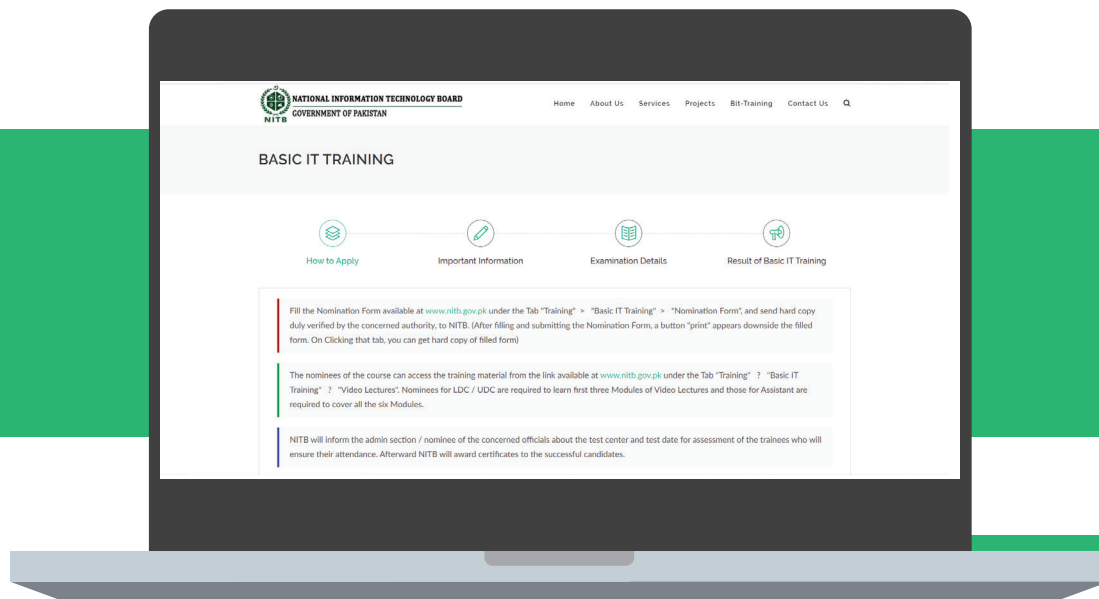
This platform also shares information for creating awareness among citizens.



National Job Portal

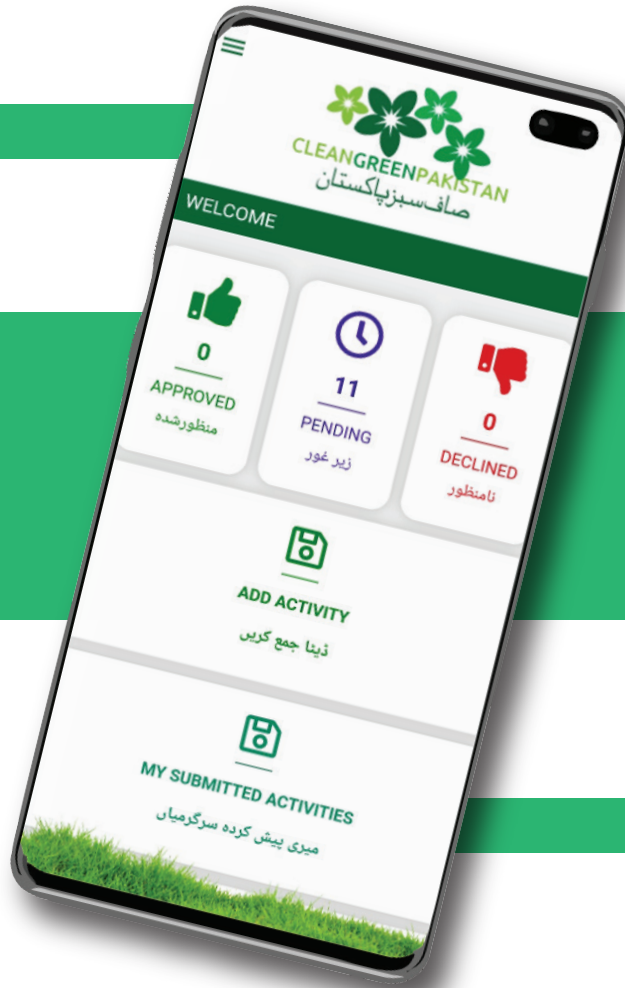
xv. National Job Portal

First time ever in the history of Pakistan, the National IT Board developed a National Jobs Portal for job seekers to have a chance to work with the Government of Pakistan Ministries and its attached department. Access URL www.njp.gov.pk



Basic IT Training Registration Portal

xvi. Basic IT Training Registration Portal
National IT Board's initiative, is offering batch management of all IT training and courses is developed allowing candidates to enroll themselves for the IT training programs and be aware of the notification against examination and result.



Clean and Green Pakistan

xvii. Clean and Green Pakistan (Monitoring App for OGRA)

To monitor cleanliness activities in public washrooms across the country, NITB is working on the development of mobile applications "Clean and Green Pakistan".



Rabta Aasaan Chatbot

xviii. Rabta Aasaan Chatbot

Another Digital Ease for the Citizens, National IT Board developed Rabta Aasaan chatbot is available on every website ending with ".gov.pk" where citizens can ask their queries and auto-reply will be given.



NATIONAL LOCUST CONTROL CENTRE

9. NATIONAL LOCUST CONTROL CENTRE

National IT Board, transforming all government websites on 3G Template, National IT Board designed & developed a website for National Locust Control Centre, A website articulating national efforts against locust for decision making and effective implementation, it has the modules on handling regional and country threat map on daily basis, managing and displaying stats of survey and control areas of country in terms of maps, charts and tables, on daily basis.

10. SPECIAL COMMUNICATION ORGANIZATION

SCO is providing Telecom & IT services to both public and private sectors (general populous) in Azad Jammu & Kashmir and Gilgit Baltistan. It has a unique distinction of providing all brands of telecom services from voice to data under one platform. SCO provide to our valued customers include landline telephony (PSTN), Wireless Local Loop (WLL), Cellular Mobile Service (GSM), Broadband Internet (DSL), Digital Cross Connect (DCC), Long Distance International (LDI), Domestic Private Leased Circuits (DPLC) and co-location facilities to telecom industry players operating in Azad Jammu & Kashmir and Gilgit Baltistan.

SCO contributes to exchequer by receiving 11.4 million USD in Foreign Currency Account of Pakistan under China OFC project.



