



**Government of Pakistan  
Ministry of Information Technology and Telecommunication  
(IT and Telecom Division)**

**Year Book  
2016-2017**

## **FOREWORD**

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 provision of reliable and affordable Information and Communications Technology enabled services.

Rule 25 of the Rules of Business, 1973 requires every Division/Ministry of the Federal Government to prepare a Year Book on its activities and achievements during the year. The Year Book is prepared for information of the Cabinet as well as general public. The annual publication of this Year Book is also recognition of the public's right to information.

The Ministry of Information Technology and Telecommunications therefore in compliance with its responsibility has prepared its Year Book for the year 2016-17. The primary objective of this Book is to keep the public informed on the important activities undertaken by this ministry and organizations/companies/departments etc. under its administrative control.

It is hoped sincerely that this Year Book will serve as a useful reference for public, researchers, and scholars interested in activities carried out by MOITT in this year.

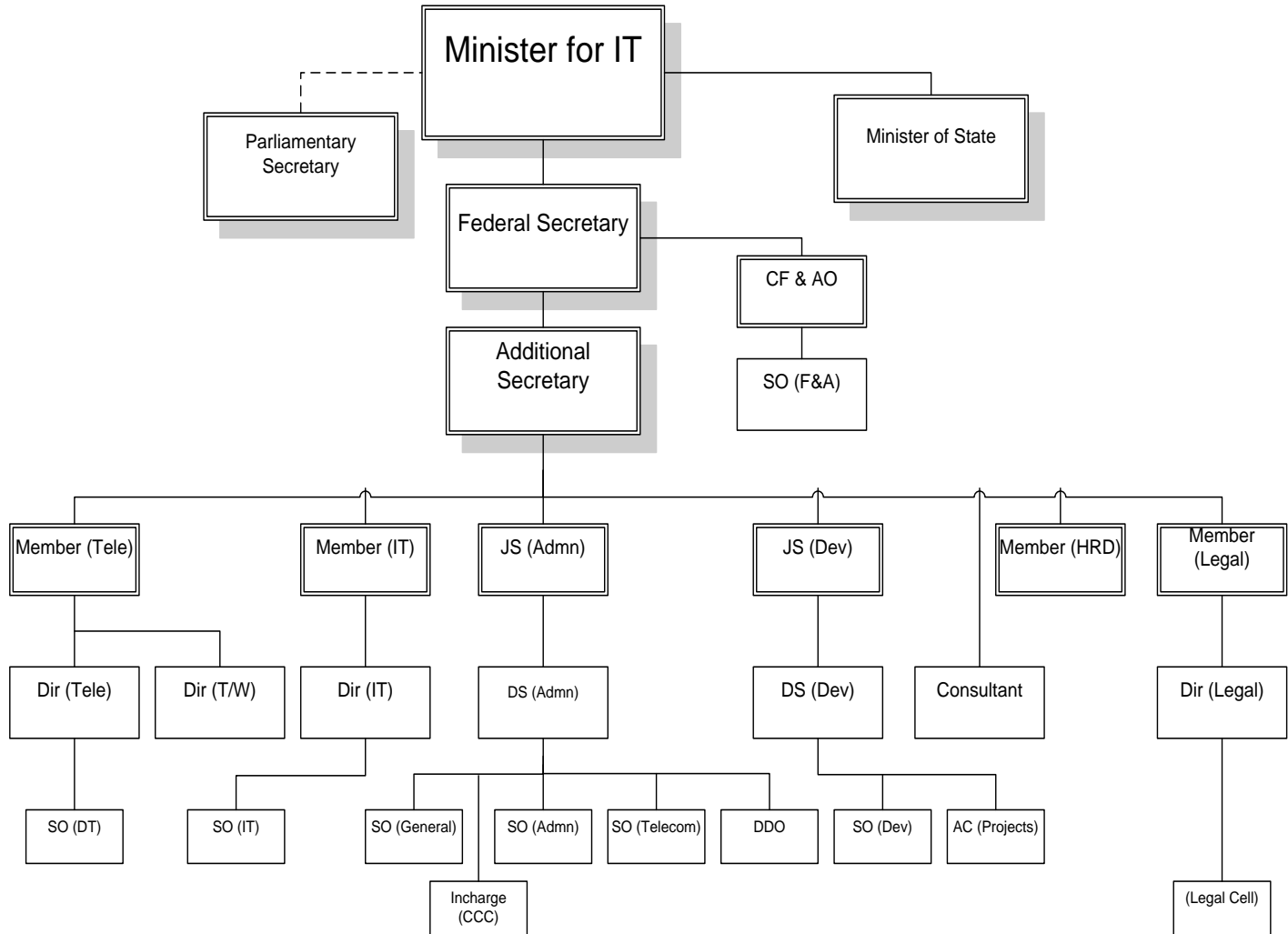
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## **Organizational Chart and Functions of the Ministry of Information Technology and Telecommunication**

# ORGANIZATIONAL CHART



# **Functions of the Ministry of Information Technology & Telecommunication**

The Rules of Business 1973 (Schedule-II) have allocated the following functions to the Ministry of Information Technology and Telecommunications:

1. Preparation of an overall integrated plan as well as formulation of policy for the development and improvement of Information Technology and Telecommunications, including related infrastructure, in Pakistan.
2. Co-ordination with the Provincial Governments, autonomous bodies, private sector, international organizations and foreign countries in respect to information technology and telecommunications.
3. Human resource development in the field of information technology and telecommunications.
4. Promotion of information technology applications.
5. Providing guidelines for the standardization of software for use within the Government.
6. Planning, policy making and legislation covering all aspects of telecommunication excluding radio and television and issuance of policy directives.
7. Matters relating to National Information Technology Board and Pakistan Software Export Board.
8. All matters relating to National Telecommunication Corporation (NTC), Telecommunications Foundation (TF), Special Communications Organization (SCO), Virtual University (V.U) and Electronic Certification Accreditation Council (ECAC).
9. The administration of the Prevention of Electronic Crimes Ordinance 2007, and the rules made there under.
10. Safeguard interest of Government of Pakistan in entities having public shares or government equity like PTCL, USF Co & Information and Communication Technology R&D Co.

## **Activities during 2016-17:**

### **Introduction of e filing system and Automation**

During this year, MOITT achieved a major milestone when it switched over to e-filing and adopted the most important module of the e office application/suite. Training of staff members was carried out and a motivated environment was created to encourage all employees – IT skilled and un-skilled, to participate in this new work culture to improve and make efficient file submission and disposal system in the Ministry. Related support hardware for automation was provided to offices in this regard.

### **Administrative and Financial Measures**

Administration wing also reviewed/upgraded the delegation of financial powers document for efficient and transparent exercise of delegated powers. It also carried out re-structuring within the Wing and established a General Branch which did not exist earlier in MOITT to look after logistics and other services of the Ministry in a dedicated manner. A new “Council and Coordination Cell” (CCC) under the direct supervision of Deputy Secretary Administration was established to look after Parliamentary Business and other coordination issues in a dedicated manner. Vacancies of the post of Member HRD and Member Legal were filled along with vacancies of non-gazetted staff.

## **Administration Wing**

Information Technology and Telecom Division has a total sanctioned strength of **151** officers and staff. The Division comprises Administration Wing, Telecommunication Wing, Information Technology Wing, Development Wing, Legal Wing, International Coordination Wing and National Information Technology Board (NITB).

The Administration Wing is headed by Joint Secretary (Admn) who is assisted by Deputy Secretary (Admn), three (03) Section Officers, one DDO, In-charge (CCC) and Coordinator (PAC Cell), Administration Wing provides support services to operational wings of Ministry of IT and Telecommunication and is primarily responsible for personnel management and general administration of the Ministry. The Administration Wing also handles work relating to Parliamentary Business of IT and Telecommunication in the National Assembly and Senate of Pakistan.

### **Parliamentary Business**

Parliamentary business included reply of starred and un starred question of National Assembly and Senate and briefs for meetings of standing committees and related sub committees were handled in this year by this Wing. Total 48 questions were received and replied during 2016-17. Out of 48 questions, 05 Un-starred questions and 19 starred questions were received from National Assembly Secretariat, whereas 24 starred questions were received from Senate Secretariat during 2016-17. Moreover, 06 meetings of the National Assembly Standing Committee (Main Committee) and 03 meeting National Assembly Standing Committees (Sub Committee) were held during 2016-17 including 19 meetings of the Senate Secretariat (Main Committee) and 15 meetings of Senate Secretariat (Sub Committee). These meetings were handled/coordinated by the Administration Wing.

### **Inter /Joint Ministerial Committees**

Inter-Ministerial meetings for preparation of agenda for Joint Ministerial Commissions (JMC)/Sessions between Pakistan and other countries is also dealt by Admin Wing through Foreign Affairs Division, Economic Affairs Division and Board of Investment. Proposals/MoUs/Agreements and other documents were submitted/signed/under process with different Countries in the field of Information & Communication Technology (ICT), Coordination with more than 70 Countries. Matters relating to Prime Minister's Directive, President Directive, and Secretaries Committee's meeting, Council of Common Interest (CCI) were also dealt by Admin Wing.



## **DEVELOPMENT WING**

Development Wing is headed by a Joint Secretary, and assisted by a Deputy Secretary, One Section Officer, and an Assistant Chief Projects. This Wing is responsible for processing of Development projects with various fora like Departmental Development Working Party (DDWP), Central Development Working Party (CDWP), and Executive Committee of National Economic Council (ECNEC). Development Wing processes release of funds to the executing agencies and follows up their utilization as well as dealing the administrative matters of National Information Technology Board (NITB), Pakistan Software Export Board (PSEB) and Virtual University (VU). During the year 2016-17, two (2) meetings of DDWP were organized and seven (07) projects were placed for consideration and three (03) projects were approved at a total cost of Rs.175.397 million. However, (03) schemes of SCO were recommended by DDWP to be approved by the CDWP. In PSDP 2016-17 funds to the tune of Rs.1134.619 million were allocated. Out of these, Rs.406.040 million were allocated to nine (09) projects in Information Technology Sector and Rs.728.579 million against six (06) projects in Telecom Sector. Development Wing also processed the case of release of PSDP funds. Out of PSDP allocation of Rs.1134.619 million, the funds to the extent of Rs.880.094 million were got released during the financial year 2016-17.

In addition to above, the Development Wing also deals with the administrative and coordination matters of the following:

**Attached Departments /Organizations:**

- i. National Information Technology Board (NITB);
- ii. Pakistan Software Export Board (PSEB);
- iii. Virtual University (VU);
- iv. Special Communication Organization (SCO);

**This Wing deals with the PSDP Projects of Autonomous Organizations/  
Companies / Corporations**

- 1) National Information Technology Board (NITB)
- 2) Pakistan Software Export Board (PSEB)
- 3) Special Communication Organization (SCO)
- 4) IT & Telecom Wings of Ministry of Information Technology & Telecommunication.
- 5) Technology Development Park Phase-I, Islamabad is a flagship project of Ministry of Information Technology & Telecommunications. Development Wing is entrusted to deal with the administrative matters pertaining to this project. This wing also facilitates the Project Director in a number of activities pertaining to execution of Technology Park Development Project until establishment of functional Project Management Unit (PMU).

## **TELECOM WING**

Telecom Wing is a technical wing of IT & Telecom Division, providing input and support to the Ministry on all matters pertaining to telecommunications. The specific responsibilities of Telecom Wing are as follows:

- Formulation of telecom sector rules, policies and implementation frameworks.
- Evaluation of all proposed PSDP funded telecom projects submitted by attached departments of the Ministry before onward submission to DDWP/CDWP/ECNEC.
- Technical matters/issues pertaining to National Telecommunication Corporation (NTC), Special Communication Organization (SCO), Telephone Industries of Pakistan (TIP), Pakistan Telecommunication Employees Trust (PTET) and Telecom Foundation (TF).
- Evaluation/Resolution of technical matters/issues pertaining to telecom industry in collaboration with Pakistan Telecommunication Authority (PTA).
- Evaluation/Resolution of Frequency Spectrum matters/issues in collaboration with Frequency Allocation Board (FAB).
- Telecommunications related matters pertaining to International Telecom bodies like International Telecommunication Union (ITU), Asia Pacific Tele-community (APT), International Mobile Satellite Organization (IMSO), International Telecommunication Satellite Organization (ITSO), etc.
- Monitoring of Universal Service Fund (USF) and Ignite (formerly National ICT Research & Development Fund) companies.
- Represents Government of Pakistan in joint Ministerial Conferences organized by various International bodies of the telecommunications sector.

Telecom Wing has taken a number of initiatives and made considerable progress during the FY 2016-17. A major portfolio of the projects by the Ministry of Information Technology & Telecommunications (MoITT) is being implemented through PTA, FAB, Ignite, Universal Services Fund Company, Special Communication Organization, and National Telecommunication Corporation. These projects are discussed in detail under respective sections.

### **Policy Matters**

The Telecommunications Policy 2015 was approved by the Economic Coordination Committee (ECC) of the Cabinet in December 2015, under the provision of Section 8 of Pakistan Telecommunication (Re-organization) Act, 1996 (Amended 2006). The vision articulated in the policy is availability of universal, affordable and quality telecommunication services provided

through open, competitive and well managed markets which can be used by people to the benefit of the economy and society.

During the fiscal year 2016-17, in pursuance of the vision of the Telecom Policy the following work was undertaken:

### **Review of Existing Licensing Framework**

A significant policy measure outlined in the Telecom Policy 2015 is the review of the existing licensing framework to improve the existing licensing regime and make provisions for introduction of new and innovative telecommunication services in the country. In this regard, due process for hiring of consultant has been initiated by Pakistan Telecommunication Authority. It is expected that the activity will be completed in the coming fiscal year.

### **Spectrum Rolling Strategy**

MoITT in coordination with PTA and FAB and with the assistance of ITU has completed the first 5-year rolling Spectrum Strategy. The Spectrum Strategy in accordance with 2015 Telecom Policy is a roadmap for spectrum allocation as well as spectrum-related policy reviews that are anticipated to take place between 2017 and 2021. The first Spectrum Strategy is in the final stage of approval and it will be updated once every year providing a roadmap for the following three years.

### **Spectrum Trading Framework**

Spectrum trading is a process that allows the holders of certain wireless licenses to transfer or lease the license rights to another within the same category of license. The first draft of Spectrum Trading framework was completed and it is under review. Framework will be completed in the coming fiscal year.

### **Development of Framework for Right of Way (RoW)**

Telecom licensees have the right to share any Public Right of Way or Private Right of Way (RoW) in order to install, establish and/or maintain its telecommunication equipment/ system under Section 27(A) of the Pakistan Telecommunication (Re-Organization) (Amendment) Act 2006.

RoW is a challenging and complex topic as it involves almost every resident and every organization in the country. Currently, there is no uniform mechanism for obtaining permits to acquire RoW, charging of fees and resolution of disputes. The framework to address RoW is currently under process and it is expected to get completed in coming fiscal year.

### **Pakistan Emergency Telecommunication Regulatory Framework (PETRF)**

Provision for formulation of National Disaster Telecommunications Plan was included in the Telecommunications Policy 2015. In this regard, ITU assisted MoIT&T and PTA in formulation of the Pakistan Emergency Telecommunication Regulatory Framework (PETRF) draft for development of Disaster/ Emergency Business Continuity Plans (BCPs). The draft is presently being processed by PTA in light of the inputs received from the Telecom sector. Further consultations with relevant stakeholders such as National Disaster Management Authority (NDMA) will be undertaken by PTA before finalization.

## **Spectrum Auction**

### **2016-17 Next Generation Mobile Services Spectrum Auction**

MoITT in collaboration with PTA and FAB successfully executed the third Next Generation Mobile Services (NGMS) Spectrum Auction during this fiscal year. A 10x10 MHz block in 1.8 GHz frequency band which remained unsold from the 2014 auction was put up for auction to cater the growing demands of the consumers and to further strengthen the Telecom Industry. PTA received a single bid by the due date from M/s PMCL (Jazz). After reviewing all the technical / legal / financial aspects, PTA proceeded with the award in accordance with the prescribed process. NGMS license for use of 10 MHz frequency spectrum in 1.8 GHz band was formally awarded to M/s Jazz on 29<sup>th</sup> June, 2017 at the base price of USD 295 Million for a 15-year period. Due to the award of this needed spectrum block to the telecom industry the pace of broadband adoption in the country as well as the associated socio-economic benefits will gain further momentum.

## **Information Technology Wing**

- Finalize initial draft of Digital Pakistan (former National IT Policy) has been prepared. The consultation with relevant stakeholder will be contacted in forth.
- Crafted concept papers and policy frameworks documents with regard to new initiatives relating to the IT sector.
- Formulation technical input documents on behalf of the Government of Pakistan for International forums like ITU, for Internet Corporation for Assigned Names and Numbers ICANN etc.
- Analyze and give technical input to the PSDP projects of IT sector in consultation with respective take holders on draft PC-1s for the approval of the DDWP/CDWP/ECNEC.
- Assist National Information Technology Board (NITB) and Pakistan Software Export Board (PSEB) on issues related to sourcing and procurement besides providing guidance on architecture, standards and other matters.
- Provide strategic technical input to other Government departments in regards to their respective IT projects.

### **Activities during 2016-17**

IT Wing has made significant strides during 2016-17. The brief snap is as under:

- Worked on E-Commerce Regulatory framework document in consultation of relevant stockholders.
- Preparation and Evaluation stages of ccTLD پاکستان. (Country Code Top Level Domain) Registry as per ICANN International Domain Names (IDN). Fast Track Program was successfully completed in the preceding years. In 2015-16, a meeting of the main technical meeting was convened, whereby; NTC has been given the mandate of registry manager for the پاکستان. Registry operations. The complete case for the nomination of NTC, being the IDN, ccTLD, Manager, in consultation with relevant stakeholders including community has been submitted to IANA/ICANA for their approval.
- Approval of ccTLD پاکستان internet registry from ICANN bed.

- Consultation meeting with relevant stakeholder for the preparation IDN, ccTLD پاکستان. Operational policy guidelines to be reformed by the IANA.
- Overseeing of e-Office suite implementation across Federal Ministries/Divisions. This software has been implemented in MoIT, Establishment Division, Cabinet Division, Board of Investment, Science and Technology, Civil Aviation and is ready to be rolled out in other Federal Ministries/Divisions in a phased manner. Currently, e-Office Suite is being rolled-out in Twenty-five (25) Federal Ministries / Divisions, which include Prime Minister's Office, National Assembly Secretariat, Ministry of Planning Development and Reform, Finance Division and others.
- Established Information and Communication Technology Knowledge Transfer Platform (IKTP) forum to interact with IT Industry. Different session on IT matters was held.
- Provided support to GOP's major initiatives on Information and Communication Technology for development in various sectors like education, health & National security and presented the Government of Pakistan's standpoint on IT, at bilateral and multilateral International Forum.
- Studied, evaluated and delivered input on various proposals received from the private sector or government agencies.
- The Server Room of Ministry of IT has been strengthened in order to provide 24/7 IT services to the Ministry Officers/officials.
- Consultation with multi-stakeholders as Re-Delegation of “.pk”.
- Preparation of the formulation National execution Council Forum to boost IT/ITes Exports.
- Worked with PSEB to furnish and Award IT Companies based on their performance.
- Worked with NITB to prepare policy statement to roll-out e-office suite in provinces.
- Consultation with private sector, inter-division and Digital Pakistan Policy final draft is in progress.

## **LEGAL WING**

Legal Wing at the Ministry of Information Technology & Telecommunications includes the following:

- Member (Legal)
- Director (Legal)
- Dy. Manager (Legal)
- Law Officer
- Support Staff

Legal Wing is headed by Member Legal who is responsible for all legal matters including drafting of new laws and rules and upgrading of existing ones by making appropriate amendments in accordance with the policies declared by the Federal Government from time to time.

The Legal Wing is also responsible for drafting and vetting of contracts on behalf of Ministry of IT and its attached department/organizations, preparing draft comments regarding pending court cases for and against Ministry of IT and it's all attached departments/organizations and giving legal opinions on different legal issues and propositions. Further, Legal Wing also provides assistance to the Attorney General Office, AAG Office and DAG office to defend MoIT in different cases in all courts across Pakistan including the August Supreme Court of Pakistan.

Another responsibility of legal wing is to give inputs on the laws drafted by other Ministries and Divisions directly or indirectly related to IT and Telecom, such as laws being drafted by Intellectual Property Organization (IPO), Trade Facilitation Unit WTO Wing of Ministry of Commerce, State Bank of Pakistan and Securities and Exchange Commission of Pakistan (SECP) etc.

MoIT has also finalized the draft Prevention of Electronic Crimes Bill, 2016. In numerous cases Legal Wing has defended MoIT specifically legal wing got vacated stay granted by Sindh and Lahore High Court in International Clearing House (ICH) case by filing CPLA in Supreme Court of Pakistan.

All court cases, legal policies matter, acts and bills are dealt by Legal Wing of MoIT. Legal Wing used to deal court cases of its attached departments and in recent past financial year ended on 30-06-2016. Cases of the following departments/organizations were dealt in different courts across the Country, where MoIT was mainly a Performa representative:



- i. National Information Technology Board.
- ii. National Telecommunication Corporation.
- iii. Telephone Industries of Pakistan (Pvt) Limited.
- iv. Universal Service Fund Company.
- v. Research & Development Fund/ GMT.
- vi. Telecom Foundation.
- vii. Pakistan Telecommunication Company Limited.
- viii. Pak Data Com Ltd.(PDCL)

### **Courts Wise Breakup for the Year 2016-17**

<b>Sr. No.</b>	<b>Courts</b>	<b>Cases Registered</b>	<b>Status at MoIT</b>	<b>In Progress</b>
1	Supreme Court of Pakistan	41	21	20
2.	Islamabad High Court	116	90	26
3.	Lahore High Court	75	50	25
4.	Sindh High Court	70	53	17
5.	Peshawar High Court	17	07	10
6.	Baluchistan High Court	08	03	05
7.	Gilgit Baltistan Chief Court	03	01	02
8	Others Court Cases	76	29	47
<b>Total</b>		<b>406</b>	<b>254</b>	<b>152</b>

## **HRD WING**

### **“ICT for Girls” Program**

The program “ICT for Girls” being executed by Ministry of IT & Telecom (MoITT), Government of Pakistan is a direct outcome of policy objective of promoting inclusiveness and empowerment of girls/ young women to enable them contribute to and benefit from the value chain of ICTs. The program dimensions include:

1. To provide access to ICT infrastructure and ICT tools.
2. Access to Customized ICT Education for Specific Skill Development
3. To provide access to mentorship and funding for potential startups & entrepreneurs.

#### **1.1 Target Audience**

The target audience for this program are girls /young women from the impoverished segment of the society and far flung areas of Pakistan with limited or no access to digital infrastructure and/or education. Under specific streams of the program, the target audience is defined as follows;

1. First stream of this program offers access to basic digital infrastructure and customized digital skills to primary/secondary school girls under the age of 15 years.
2. Second stream of this program equips girls/young women aged between 15-25 years belonging to impoverished segment of the society from remote areas of Pakistan, with pertinent ICT tools such as coding and computing to enhance probability of employment and entrepreneurship. This part of the program is also built on top of providing digital infrastructure.
3. The third stream of the program is aimed at nurturing the entrepreneurship potential of young women by providing them enabling environment through mentorship and all required facilities and infrastructure where they could practically test their ideas and convert them to commercially viable businesses.

#### **1.2 Major Objectives & Activities**

Following major objectives of the program are set forth;

1. Enhance participation/ Inclusion of girls/ young women in ICT ecosystem.
2. Skill Development of targeted audience.
3. Enhance probability of self-employment and entrepreneurship for financial empowerment.

In context of the objectives, following activities/projects are being implemented under the “ICT for Girls” Program;

***a. ICT for Girls-Women Empowerment Centers***

MolTT has very successfully implemented this project countrywide for the impoverished segment of society by establishing state-of-the-art Digital Labs at Women Empowerment Centers (WECs) of Bait-UI-Mal (an autonomous organization contributing toward poverty alleviation through providing assistance to the destitute, widows, orphans, invalids and other needy persons). At these centers the girls with minimal education and very limited access to ICT infrastructure are being trained on Microsoft’s delivered 4Cs program including Coding, Computing, Communication and Coaching. Through this program thousands of girls (approximately 5000 per year) from remote and geographically disadvantaged areas of Pakistan are benefitting.

***b. ICT for Girls-Islamabad Schools***

MolTT has embarked upon establishing, state-of-the-art digital infrastructure at 226 Girls’ schools of Islamabad combined with provision of comprehensive digital skills program under the auspices of Microsoft. The content of the course has been designed by Microsoft on 4Cs including, Computing, Coding, Communication and Coaching skills to uplift the employability scope at a very young age.

***c. Women Entrepreneurship***

The National Incubation Centre, established by MolTT at Islamabad provides state-of-the-art facility and mentorship to startups and entrepreneurs. Innovative ideas/projects are cultivated and enriched to give them commercial viability. Special quota of 30% has been reserved for women entrepreneurs to help bud their entrepreneurial skills. Every year 40 teams comprising 4-5 members will be inducted to the program.

### 1.3 TANGIBLE RESULTS

The “ICT for Girls” Program has yielded tangible results so far in its implementation and every initiative under this program has shown promising results from the target audience nationwide.

The success stories achieved under this program against each of its initiatives are elaborated as follows;

#### ***a. ICT for Girls-Women Empowerment Centers***

The first phase of this initiative has been completed and operational with establishment of 100 digital labs at Women Empowerment Centers (WECs) of the Bait-ul-Mal. Under this project over 5000 girls per year will be trained on Microsoft’s 4Cs skill program. This initiative entails formulation of customized course content, training of master trainers and ultimate delivery of the courses to young girls at WECs. Some of the girls have already been hired for teaching and other ICT related jobs at their respective places. Many of the girls are using online tools for remote education and other commercial purposes.

This program has fundamentally transformed the Digital landscape of these areas by providing tools to the young girls and women for financial autonomy. The Senior Management of the Ministry of IT visits the centers periodically for continual oversight. An overwhelming appreciation has been received by the participants of the program as evidenced in attached video testimonials. The success of this initiative in form of tangible results has prompted several Parliamentarians to request MoITT to replicate this program in their respective constituencies. This program has been widely hailed in press and social media.

It is worth mentioning that graduating girls will be included on Microsoft’s employability portal which will enhance the probability of securing employment and opportunity of freelancing. Also, the graduating girls will be provided opportunity to further enhance their competence under “Digi-Skills” program of the MoITT focused on training IT personnel’s with the prospects of freelancing.

### 1.3.1

#### ***b. ICT for Girls-Islamabad Schools***

In the first phase, 107 out of 226 targeted schools have been equipped with Digital labs. For this initiative over 200 teachers are being hired who are being trained on Microsoft's designed customized Digital Skills Program focusing on 4Cs. The teachers who have completed the training have started imparting courses in schools.

#### ***c. Women Entrepreneurs***

Under this initiative 40 startups/incubates comprising of 4-5 team members are admitted to National Incubation Centre for one year. A special quota of 30% women is allocated for women. As a result, 30% inclusion of women is ensured while more can participate on open merit. Currently, 15% startups under incubation are led by women CEOs.

## **1.4 EXPANSION**

Ministry of IT & Telecom in consideration of the very encouraging response has decided to further scale and ramp up the activities under "ICT for Girls" program. In fact, all streams of the program have entered into the second phase and execution is underway.

#### ***a. ICT for Girls- Women Empowerment Centers***

The project has already entered its second phase of implementation in which 50 more Women Empowerment Centers are being rolled out nationwide. It is expected that after completion of second phase approximately 7000-8000 girls/ young women will graduate every year.

Another feature planned under this activity is state-of-the-art gadgets will be provided to graduates, so that they continue to excel their expertise and be better equipped to seize opportunity of being self-employed. The activity will soon be launched

### ***b. ICT for Girls- Islamabad Schools***

In the second phase, another 119 primary/secondary girls schools will be covered under this initiative. After the completion of this phase, approximately 110,000 girls will benefit from this initiative.

### ***c. Women Entrepreneurs***

Ministry of IT & Telecom is further expanding the initiative by the establishment of 4 additional Incubation Centers in public-private partnership in provincial capitals. The 30% quota for women will remain intact for the upcoming centers. The outreach of the project will increase multifold once the said centers will be completed. Tendering process and selection of suitable partners is already under process. It is expected that additional centers will be established in 2018.

## **1.5 EXECUTION and CHALLENGES**

The entire program is unique in Pakistan which is pragmatically and objectively designed with a view to develop optimized skillset amongst the targeted audience. However, keeping in view the environment and constraints, significant innovation has been integrated into (i) Formulation of customized course contents and; (ii) Promoting contemporary skills and ownership through community inclusion in ICT for Girls-Women Empowerment Centers' initiative.

The customized course has been designed in consultation with “Microsoft” considering the constraints and limitations of target audience. The idea was to make trainees proficient in computer skills in minimal time period. The contents of the course mainly revolves around the concept of “4Cs”- Computing, Coding, Coaching and Communication. Results so far have indeed testified that course contents and its design have struck right balance between learning curve of the trainees and gradient of difficulty level. The concept was to start with basics of computing and coding, followed up by escalation through hands on programming skill development and enhanced communication skills within a short span of seven months which is a remarkable achievement.

WECs, where the said initiative has been implemented used to provide skill development courses related to knitting, handicrafts and similar traditional arts. MoITT envisioned catalyzing this opportunity of an established environment for training of dis-

advantaged women to transform the traditional skillset to more relevant and market oriented ICT skillset. In this regard, MoITT entered into this program with Bait-ul-Mal and Microsoft. The Ministry was cognizant, that while there may be less resistance to women being trained in traditional skills, modern skill teaching which entailed access to internet may face stiffer resistance. Realizing that, continuity could only be achieved by participation and ownership by the local community, MoITT took measures for building local ownership of the program such as inauguration of digital labs by local elders and leaders, where they were briefed about the potential benefits of the program. As a result, sense of ownership for this initiative has been promoted among the local communities which has also overcome social barrier for girls /young women to a great extent enabling them to pursue with the program.

## **2 Major Partners**

“ICT for Girls” Program is indeed based on pertinent partnerships and high level of cooperation among various organizations. Every partner has played effective role in integration of this program. Ministry of IT and Telecom and organizations under its control have played pivotal role in conceiving and implementing the program while joining hands with organizations whose expertise were required.

### **2.1**

#### ***a. ICT for Girls- Women Empowerment Centers***

The organizations stated below have teamed up for bringing this initiative to life:

##### **i. Ministry of IT & Telecom**

Ministry of IT & Telecom is spearheading the initiative through its organization, Universal Service Fund Company (USF Co.). The project was conceived in Ministry of IT & Telecom. Ministry of IT & Telecom is directly monitoring the project and maintaining close liaison with Bait-UI- Mal and Microsoft for smooth execution of the project.

On behalf of Ministry of IT & Telecom, USF Co. is establishing Digital labs at WECs of the Bait-UI-Mal scattered across Pakistan.

##### **ii. Bait-UI-Mal**

Bait-UI- Mal has been running WECs, however they were not equipped with ICT infrastructure and services. Ministry of IT & Telecom after conceiving this project offered

Bait-UI-Mal to establish digital labs in WECs which Bait-UI-Mal agreed. In turn, Bait-UI-Mal is providing premises to establish digital labs within its WECs.

### **iii. Microsoft**

Microsoft under its Corporate-Social-Responsibility program is playing a critical role in formulating course contents in close consultation with Ministry of IT & Telecom keeping in view the objective of the program. Microsoft is also imparting training to the master trainers.

### ***b. ICT for Girls- Islamabad Schools***

#### ***i. Ministry of IT & Telecom***

Ministry of IT & Telecom is executing this initiative through Universal Service Fund Company (USF Co.). USF Co. is responsible to establish digital labs in the designated schools by the Federal Directorate of Education. The USF Co. is also hiring master trainers/resource for training the students under this initiative. Ministry of IT & Telecom has dedicated senior level officials to monitor overall execution of the project.

#### ***ii. Federal Directorate of Education***

Federal Directorate of Education (FDE) is responsible for operating and managing federally administered primary and secondary educational facilities. The role of FDE is to arrange for housing Digital Labs in their schools.

#### ***iii. Microsoft***

Microsoft under its Corporate-Social-Responsibility program is designing the course contents for students. It also provides training to master trainers and provide necessary soft tools for hands on training.

### ***c. Women Entrepreneurs***

The roles and responsibilities of organizations clustered in this initiative are as follows:



#### **i. Ministry of IT & Telecom**

The Ministry of IT & Telecom has conceived this program and is executing through its organization “Ignite- National Technology Fund”. In order to establish incubation centers, tenders are floated and after a thorough evaluation and selection process, a suitable partner from private sector is selected who manages the operation of center while funding is provided by the Ministry. As mentioned earlier, so far one such center has been established at Islamabad in partnership with largest cellular mobile operator of Pakistan (Jazz). The contracts for Lahore and Peshawar, capitals of Punjab and KPK provinces respectively have been signed with private sector partners while process of selecting suitable partners in Sind and Baluchistan provinces is underway.

**ORGANIZATIONS/COMPANIES /  
DEPARTMENTS OF MINISTRY OF  
INFORMATION TECHNOLOGY AND  
TELECOMMUNICATION**

# **NATIONAL INFORMATION TECHNOLOGY BOARD**

National Information Technology Board (NITB) is mandated with broad range of technical guidance and consultancy services to the public-sector organizations for identification of key areas/services for automation; including design, development, and implementation. In addition, NITB provides technical assistance and subject matter experts to various Ministries/Divisions for their respective IT operations, infrastructure, general purpose and application specific trainings and e-Government projects. Federal Ministries, Divisions, and Departments are having due advantage of NITB's technical services, consultancy and advice. Provision of these services to government organizations across Pakistan has resulted in bringing efficiency and transparency for the public organizations and contributed in quick delivery of information and services to public at a large scale.

## **Vision, Mission, and Mandate**

Our vision is to become a strategic enabler, by making the full use of ICT, for an accelerated digitization eco system, aiming to expand knowledge based economy and spur socio economic growth.

Improve Pakistanis Citizen's quality of life and economic well-being by ensuring availability of accessible, affordable, reliable, universal and high-quality ICT services.

- Provide technical guidance for embedding e-Governance in the Federal Ministries/Divisions and promoting efficient and transparent governance
- Facilitating and executing efficient and cost-effective implementation of e-government programs in the Federal Ministries/Divisions.
- Carry out training need assessment, design and implement IT capacity building programs for employees of the Federal Ministries/Divisions.
- Review the status of e-government readiness on a regular basis to ensure sustainable, accelerated digitization and ICT human resource development.
- Identify the areas where IT interventions can be helpful and to suggest measures for the automation of these areas through Business Process Re-engineering (BPR).
- Provide Standards for software and infrastructure in the field of Electronic Government.

## E-GOVERNANCE

NITB is committed for the promotion of e-Governance across the country in line with the vision & IT Policy of Federal Government of Pakistan under the administrative guidance of Ministry of Information Technology and Telecom. Not only existing ICT infrastructure being revamped through due advisories and consultancies, but also provision of e-Governance software applications is being made to public sector organization to serve the public in more effective and efficient manner. NITB mainly focused on cross-cutting e-Governance applications and initiatives that can be replicated across multiple public organizations for better Government to Government (G2G) and Government to Citizens (G2C) services and communication.

## CONSULTANCIES SERVICES

NITB is committed to provide *IT Consultancy and Advisory Services* to the public organizations for the effective and sustainable ICT based initiatives. The following consultancy and advisory services were offered during 2016-17.

- Evaluation and preparation of PC-I for the provision of *Basic IT Infrastructure* for thirteen (13) public-sector organizations to run *e-Office Application*.
- Evaluation and consultancy on preparation of PC-I for *Citizen Feedback Monitoring Program* for Cabinet Division.
- Technical consultancy of *Business Process Reengineering (BPR)* solution for Northern Areas Transport Corporation (NATCO), Ministry of Kashmir Affairs & Gilgit Baltistan.
- Evaluation of PC-I for *Upgradation of IT Infrastructure and HR* at Ministry of Parliamentary Affairs.
- Consultancy on development of *Complaint Management System* for the Prime Minister Inspection Commission (PMIC).
- Consultancy on development of *Task Management Tracking System* for Overseas Pakistan Foundation (OPF).
- Evaluation and verification of *ICT Equipment* for National Commission for Human Rights (NCHR)
- Technical services for the procurement of *IT Equipment* for Drug Regulatory Authority (DRAP)
- Technical services for the procurement of *SaaS based Enterprise Resource Planning-ERP Software and POS application* along with infrastructure for Utility Stores Corporation (USC), Ministry of Industries & Production.

- Technical services for evaluating *IT Equipment* for National Industrial Relations Court (NIRC).
- Consultancy services for replacement and procurement of *BPM (Business Process Management)* business solution for Security Exchange Commission of Pakistan (SECP).
- Technical evaluation of *e-Parliament* PC-I for the National Assembly of Pakistan.
- Technical evaluation of *e-Agriculture* PC-I for the Ministry of National Food Security & Research

## **WEBSITE DEVELOPMENT AND SUPPORT SERVICES**

National IT Board is providing website development services to Federal Government organizations to ensure the availability of public information to the citizens with an aim to have a better focus on Government to Citizen (G2C) services.

National Information Technology Board (NITB) is maintaining GOP Portal ([www.pakistan.gov.pk](http://www.pakistan.gov.pk)) and websites of fifty-six (56) Federal Government Ministries / Divisions / Departments. The contents (information) on the Ministry/Divisions/Department's website is being managed by relevant Ministry / Division / Department while the technical aspects and architectural changes are being handled by NITB. Technical experts from NITB are continuously providing technical training to the focal persons nominated by the relevant organizations on Content Management System (CMS) for proper management of their contents for the site.

In year 2016-17, NITB have successfully developed, upgraded and deployed eleven (11) websites that helped the government organizations to publish information, promote their services & activities, and interact with the citizens in a real-time environment.

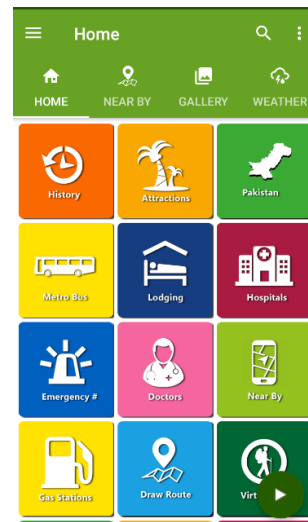
- |                                    |   |
|------------------------------------|---|
| • Aviation Division                | • Environment Protection Agency (EPA)   |
| • Heritage Division                | • National Information Technology Board |
| • Department of Archeology         | • Survey of Pakistan                    |
| • Pakistan Armed Services Board    |   |
| • Directorate of Workers Education |   |
| • Narcotics Control Division       |   |
| • Audit Bureau of Circulations     |   |
| • CDA Training Academy             |   |

## SOFTWARE DEVELOPMENT SERVICES

In addition to cross cutting applications, subject matter experts from NITB are also engaged in developing agency specific applications/software(s) for different government organizations that can help them in achieving efficiency and transparency in their core services.

### ISLAMABAD CITY APP

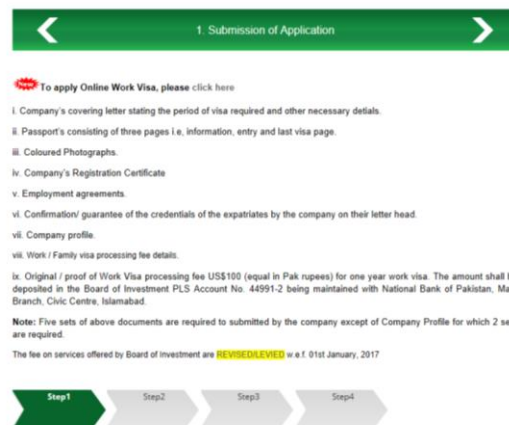
To reap the benefits of 4G/LTE/3G network across the country, NITB and CDA through a joint effort has empowered the citizens of Islamabad with indigenously developed mobile application that not only helps to explore city life; but also facilitates them with direct access to law enforcement agencies, civic services offered by CDA and most critical emergency contact numbers based on user's GIS location. The application was launched for android based mobile phones and available for download at google play store and NITB & CDA's website. Such Initiatives will lay down a foundation and a step towards SMART CITY vision of Ministry of IT. Moreover, NITB is working on connecting other different citizen centric services to this app in the future as well.



### ONLINE VISA PORTAL

In order to promote the ease of doing business and facilitating international investors in visa processing, NITB worked with Board of Investment (BOI) to automate and developed

an online "Work Visa Application Processing System". Work Visas are granted to foreign technical and managerial personnel for the purpose of imparting technical skills to the local population. The manual procedure is now replaced by this newly developed web based application (<http://visa.boi.gov.pk/>) that expedites the application processing time and facilitate the applicants to see the most recent status of their application.



## COMPLAINT MANAGEMENT SYSTEM

To meet the modern trends of world, the Ministry of Planning, Development and Reform has taken an initiative to launch an online portal “*Hotline Complaint Management System (HCMS)*” to ensure the transparency of the project and to get a feedback directly from the citizens. HCMS allow citizens to launch a complaint, suggest changes or provide feedback on any of the proposed plan or project. The core purpose is to get the citizens involved at the time of planning and during the execution of the project. The developed system allows senior management to track the numbers of complaints/feedback along with unique tracking ID and action performed against these queries.

## PC-I TRACKING SYSTEM

PC-I is one of the most critical steps for all the development projects in Pakistan. National IT Board has developed “*PC1 tracking system*” to resolve the queries from ministries and departments regarding the delay in PC1 for CDWP Agenda. Minister of Planning Development & Reform Prof Ahsan Iqbal took the initiative for the automation of PC1 process in planning commission. The system enables the tracking of PC-I, information about Total numbers of received PC1 , Under Processing PC-I in technical section, Approved PC-I in CDWP , Recommended PC-I in ECNEC , Pending PC-I in PIA/Other sections, Return to Ministries and Departments , CDWP Agenda . The System facilitates the chairman of planning Commission for making the Agenda of CDWP.



## CASE TRACKING SYSTEM

NITB has developed a web based “Case Tracking System” for the Attorney General for Pakistan to automate the process of tracking the legal cases nationwide. Real-time status and tracking of the cases from different cities of Pakistan was very challenging for the office of the Attorney General. The main purpose of this web based application is to digitize the information of the cases and timely tracking of the upcoming court dates along with the latest status and

remarks by the honorable court. In the first phase of this application launched in 2016-17, web based solution allowed the law officers to update the status of their cases remotely whereas AG Office can simply review the status of each location, law officer in form of pre-defined reports.

NITB is planning to release the next version of this application in next year with more effective and efficient options such as availability of dynamic reports, tasks assignments, time based tracking, upcoming cases, keywords based search on archived judgments, and Executive Dashboard for monitoring.

## ONLINE TELEPHONE DIRECTORY

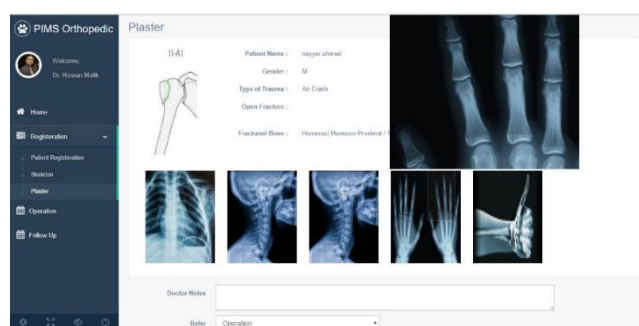
Due to the unavailability of centralized HR application for government offices, it's quite challenging to access the contact information of the relevant officers, wings or sections. As the requirement of such system was raised by the Cabinet Division, NITB's technical experts developed a web-based *Telephone Directory* of the Federal Government employee. The data is updated and maintained by the Cabinet Division and available at <http://www.cabinet.gov.pk/teldirview/>.

The screenshot shows a web application titled "Public View (Online Directory)". It has search filters for Designation, Name, Wing, Min/Div/Dept, and Office/Ex No. Below the filters is a table with columns: S.No, Designation, Name, Wing, Min/Div/Dept, Office/Ex No, and Contact Details. The table lists several employees, including Mr. Anashe Rahman Ahmad Khan, Mr. Muhammad Younus, Mr. Rizwan Bashir Khan, and Mr. Javed Iqbal.

S.No	Designation	Name	Wing	Min/Div/Dept	Office/Ex No	Contact Details
1.	Minister of State	Mr. Anashe Rahman Ahmad Khan	Ministry of Information Technology and Telecommunication	Information Technology and Telecommunication (Main)	92032990-92052233 (Fax)	4th Floor, Evacuee Trust Complex, F-5/1 Islamabad
2.	PSO to Mr. State	Mr. Muhammad Younus	Ministry of Information Technology and Telecommunication	Information Technology and Telecommunication (Main)	92032990-92052233 (Fax)	4th Floor, Evacuee Trust Complex, F-5/1 Islamabad
3.	Secretary	Mr. Rizwan Bashir Khan	Ministry of Information Technology and Telecommunication	Information Technology and Telecommunication (Main)	92094884-92094882 (Fax)	4th Floor, Evacuee Trust Complex, F-5/1 Islamabad
4.	Section Officer to Secretary	Mr. Javed Iqbal	Ministry of Information Technology and Telecommunication	Information Technology and Telecommunication (Main)	92052000-92094882 (Fax)	4th Floor, Evacuee Trust Complex, F-5/1 Islamabad

## E-ORTHOPEDECS

National IT Board have history of providing multiple services in health sector including provision of HMIS based e-Health Solution for the Children Hospital of PIMS, Islamabad. Given the expertise and domain knowledge, the Department Orthopedics at Pakistan Institute of Medical Sciences (PIMS) requested NITB to digitize the patient experience and smart decision based system for treating patients with fractures. The main focus of the application was to use the international practice of using graphical options to smartly decide the exact point of fracture and once the database is fully populated it can be used for running different types of analytics and reports for the policy/decision makers. The application mainly emphasis on collection of patient's information, diagnosis fractures types, X-rays, Doctor decisions, Operations etc.



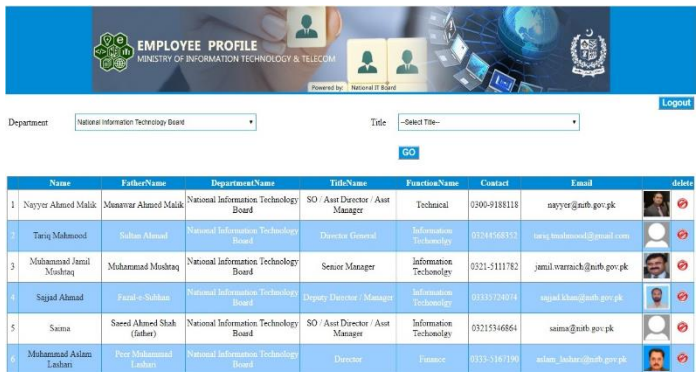
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## HUMAN RESOURCE MANAGEMENT SYSTEM (HRMS)

Availability of latest and up-to-date information of Human Resource (HR) is the most critical challenge for every organization. In order to have a consolidated HR information along with respective details, NITB successfully developed and deployed the centralized HR module for Ministry of Information & Telecom (MoITT). The core purpose of having a portal is to establish a central repository of all employees (including employees of attached departments) and gather information related to personal data, education, area of expertise, trainings, workshops, seminars, conferences attended by the individuals. This module will help the key decision makers to have employees' information available 24/7, rapid identification of required subject matter experts within MoITT, and assist Admin & HR wing to accurately plan career development programs for employees. The application is available at <http://hrprofiles.moit.gov.pk/>

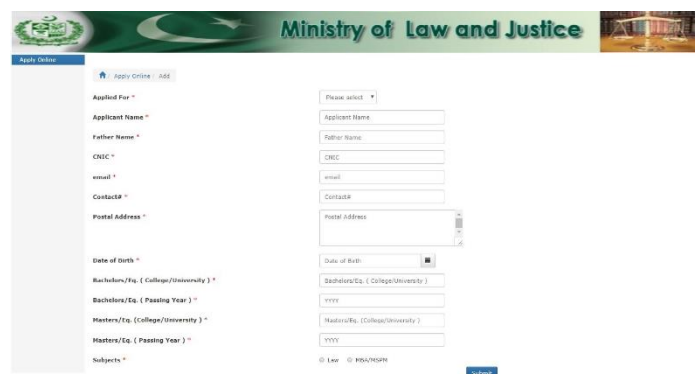


	Name	Father's Name	Department Name	Title Name	Function Name	Contact	Email	delete
1	Nayyer Ahmed Malik	Munawar Ahmed Malik	National Information Technology Board	SO / Asst Director / Asst Manager	Technical	0300-9188118	nayyer@nitb.gov.pk	
2	Tariq Mahmood	Sabir Ahmad	National Information Technology Board	Executive Council	Information Technology	03784568335	tariq.mahmood@gmail.com	
3	Muhammad Jamil Mubasy	Muhammad Mubasy	National Information Technology Board	Senior Manager	Information Technology	0321-5111782	jamil.warwick@nitb.gov.pk	
4	Sajad Ahmad	Faiz-ul-Sabhan	National Information Technology Board	Deputy Director / Manager	Information Technology	03337730716	sajad.khan@nitb.gov.pk	
5	Saima	Saeed Ahmed Shah (father)	National Information Technology Board	SO / Asst Director / Asst Manager	Information Technology	03215346864	saima@nitb.gov.pk	
6	Muhammad Asim Lashari	Pir Muhammad Lashari	National Information Technology Board	Director	Finance	0333-346-136	asim_lashari@nitb.gov.pk	

## RESUME MANAGER (ONLINE JOB PORTAL)

Physical processing job applications is a cumbersome process in public organizations. National IT Board on the request of Ministry of Law & Justice developed an online resume manager application that allows the candidate to directly apply for advertised position through web.

This initiative not only minimize the processing time of these applications but also helps the ministry to have a time-stamped digitized information which contributed towards ensuring transparency during the process and provide mechanism for executing different analytical reports. This web based application facilitated the candidates to maintain their resume and reuse the information for multiple position instead of starting from scratch.



Ministry of Law and Justice

Apply Online

Apply Online - Add

Applicant Form

Applicant Name \*

Father Name \*

CNIC \*

Email \*

Contact No \*

Postal Address \*

Date of Birth \*

Bachelors/Eq. ( College/University ) \*

Bachelors/Eq. ( Passing Year ) \*

Masters/Eq. ( College/University ) \*

Masters/Eq. ( Passing Year ) \*

Subjects \*

Phone select \*

Applicant Name

Father Name

CNIC

Email

Contact No

Postal Address

Date of Birth

Bachelors/Eq. ( College/University )

Bachelors/Eq. ( Passing Year )

Masters/Eq. ( College/University )

Masters/Eq. ( Passing Year )

Subjects

© Law © HR/NSRN

Submit

## ONLINE REGISTRATION FOR BASIC IT TRAINING

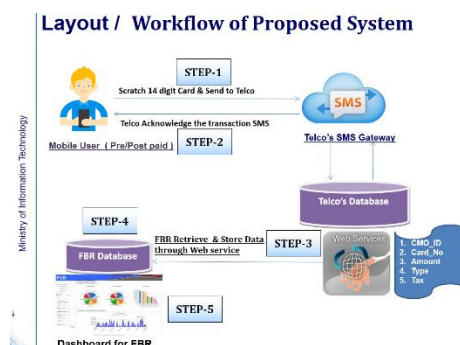
Providing technical training to the federal government employees is one of the core functions of National IT Board. In 2016-17, NITB launched a three and six weeks self-paced training program for LDCs and UDCs in collaboration with Virtual University. Considering the requirements of possible candidates, it was observed that routing the nominations through traditional method may lead towards a delay in processing these queries. In order to avoid such delays and guarantee the transparency of processing these application, an online web based nomination (<http://nitb.gov.pk/trianing>) mechanism was established for candidates and organizations.

The screenshot shows a web-based nomination form titled "NOMINATION FORM FOR BASIC IT TRAINING COURSE". The form includes the following fields and sections:

- Basic IT Course for %:** A dropdown menu with "Assistant" selected.
- Please select a designation:** A text input field.
- OFFICE DETAILS:**
  - Ministry/ Division/ Department \***: A text input field.
  - Enter name of your ministry or department (Max 50 characters):** A text input field.
  - Office Address \***: A text input field.
  - Enter name of your office address (Max 20 characters):** A text input field.
  - Office City \***: A text input field.
  - Enter city name where office is located (Max 20 characters):** A text input field.
  - Office Phone \***: A text input field.
  - Enter your office phone number (Max 20 characters):** A text input field.
  - Designation \***: A text input field.

## TAX DEDUCTION APPLICATION

Due to the record increase of cellular subscriber (above 142 Million) in Pakistan, Federal Board of Revenue (FBR) had to ensure that the tax charged to the citizens by CMO is reported properly to the Government of Pakistan. Nation IT Board using their technical expertise took the challenge and prepared a prototype of the application that can be used and report the actual numbers to FBR in a real time.



## TECHNICAL AND PROFESSIONAL TRAININGS

In order to maintain the efficiency and expertise of the technical staff working at the different federal government organizations, National IT Board offers multiple training programs round the year.

In 2016-17, NITB mainly offered three (3) capacity building programs for the government employees.

- *E-Office end-user Training:* Adoptability of e-Office suite, a critical step toward e-governance that requires extensive end user training. This program is designed to enhance the technical capacity of the government employees to ensure that employees

of Federal Government organizations can undertake business processes with the use of e-Office Application suite. NITB is offering the training in Four different modes;

- In-Class training at National IT Board
- Training session at beneficiary organization
- On-site handholding sessions
- Train the Trainer program

In 2016-17, NITB have successfully trained 1598 officers (947 at NITB and 651 on-site)

- *Basic IT Training:* To enhance the basic IT skills of LDC and UDC, NITB is offering three and six weeks training programs. This self-paced IT training program is designed in collaboration with Virtual University (VU). In 2016-17, 400 candidates successfully completed the training whereas 234 candidates passed the exam.
- *Website Administration Training:* as per mandate NITB is responsible for developing websites for federal government organizations whereas the technical resource/Point of contact (POC) at the beneficiary organization are responsible for managing contents on the sites. In order to ensure that the POC can manage the site seamlessly without any day to day support, NITB is continuously offering training sessions for technical resources for managing websites and contents. In 2016-17, NITB have successfully trained 22 technical staff on web administration for federal government organizations.

## **DEVELOPMENT PROJECTS**

National Information Technology Board (NITB) through its development projects is endeavoring to implement the e-Government Program in accordance with National IT Policy and Vision 2025. The program is being implemented through its different projects in various Federal Divisions/Organizations. In connection thereof, provision of basic Information and Communication Technologies (ICT) is being initiated or completed at different federal government organizations.

## **E-OFFICE REPLICATION PROJECT**

Ministry of Information Technology & Telecom through National Information Technology Board (NITB) has developed “*e-office Application Suite*”. It is an essential component of the TDF Implementation Plan for IT & Telecommunication sector, “E-Government Strategy and Five-year plan” approved by the National E-Government Council (NEGC) and the Federal Cabinet. E-Office application is a custom developed ERP solution, designed and developed

for the automation of the common business processes of the Government of Pakistan. The application is based on existing rules and regulations of the government, that uniquely qualify e-Office having a giant mandate of paradigm shift but with no requirement of legislation or change in the exiting government process. One of the e-Office Application module includes complete workflow management system for the file movement that completely replaces the physical file system. The users can create a digital file, send receive across the organizations, archives files/record, standard GoP templates. The solution also includes multiple core modules like Human Resource Management Information System, Inventory & Procurement System, Finance & Budgeting, Project Management and Internal Portal. The e-office application is provisioned and hosted free of cost for all organizations of the GoP.

It is the responsibility of NITB to ensure the maintenance and availability of e-Office application in collaboration with National Telecommunication Corporation (NTC). Provision of the local IT infrastructure for end users is the core responsibility of the beneficiary organization.

In 2016-17, e-Office *Maturity Model for Implementation (EMMI)* was developed for the self-assessment of the organizations to evaluate that how much maturity an organization has gained and what are the key steps to climb up the maturity levels. . This model consists of six (06) maturity levels, by assessing the maturity of different aspects of implementation processes, it becomes clear what their strengths and weaknesses are, and where improvements are needed. The EMMI also allows an organization to gain insight into the current situation of its implementation processes, and how it should pursue the ultimate level of maturity. The implementation of e-Office application suite has multiple steps, so it is important to measure the steps and to record the improvement in the implementation by assigning certain maturity level.

EMMI Level	Definition
Level 0	Organization does not have the requisite Infrastructure, connectivity. Training for end-users to be imparted.
Level 1	Organization is connected to the National datacenter, Requisite infrastructure & user training have been delivered for selected sections.
Level 2	Organization has attained Level 1 and is using e-Office in selected sections/wings
Level 3	Organization has attained Level 2, has done away with hard files (barring approved exceptions) and is using e-Office as the only medium for internal communication purposes
Level 4	Organization has attained Level 3 and has started Inter-departmental communication/file movement through e-Office
Level 5	Organization has attained Level 4 and has started using other modules of e-Office suite

Strategically the initiative taken under this project carries various benefits like improvement in availability of data by utilization of technology and information systems, increasing efficiency and effectiveness in government processes, implementing standardization across federal government organizations, improvement in inter-ministry or

inter-departmental communication, a step toward green environment at work place, reduction in financial expense in terms of POL, and online auditable track of files & documents.

In 2016-17, the following major activities and milestones were achieved

- Migration of e-Office Application to more secure Tier-3 level National Data Center
- Establishment of e-Office *Maturity Model for Implementation (EMMI)* for effective deployment.
- Requirement gathering and gap analysis of Ministries for implementation of e-Office
- Preparation of PC-I for different federal government organizations for the provision of basic ICT infrastructure.
- Assisting different ministries, divisions, and departments to get connected with the government dedicated fiber ring for the provision of e-Government applications.
- Conducting e-Office capacity building training programs for federal employees.
- So far, e-Office is hosting 58,212 files and 335,377 documents.

E-Office is successfully implemented in nearly thirty (30) federal government organizations. Most of the remaining federal organization are waiting for the provision of basic infrastructure or e-readiness for e-Office. Remarkably MoITT, National IT Board, Ignite, Board of Investment BOI) are using e-Office as the prime or only medium for file management. Whereas, Ministry of Foreign office, Science & Technology, Privatization Commission, Planning Commission, Finance, Establishment Division, Cabinet Division, Interior Ministry, FIA, Police, BISP, PEMRA, NEPRA, PRC are using e-Office as major tool its filing process. The detail status of e-Office is listed below

Level	Ministries/Divisions		
Level 4	1. <u>Information Technology</u>		
Level 3	1. <u>Commerce</u> ,2. <u>Establishment</u> ,3. <u>Foreign Affairs</u>		
Level 2	1. <u>Cabinet</u> ,2. <u>Science &amp; Technology</u> 3. <u>Aviation</u> ,4. <u>Planning, Dev. &amp; Reforms</u> ,5. <u>Finance</u> ,6. <u>Interior</u> ,7. <u>Economic Affairs</u> ,8. <u>Law &amp; Justice</u> , 9. <u>Defense Production</u> ,10. <u>Privatization</u>		
Level 1	1. <u>Defense</u> , 2. <u>Human Rights</u> 3. <u>Petroleum &amp; N. Resource</u>		
Level 0	1. <u>Climate Change</u> , 2. <u>Health</u> , 3. <u>Information &amp; Broadcasting</u> , 4. <u>National History &amp; Literary Heritage</u> , 5. <u>Education</u> , 6. <u>Postal Services</u> 7. <u>Power</u> , 8. <u>Water resources</u> ,	9. <u>Parliamentary Affairs</u> , 10. <u>Railways</u> , 11. <u>Statistic</u> , 12. <u>Housing &amp; Works</u> , 13. <u>CADD</u> , 14. <u>Communication</u> , 15. <u>Industries &amp; Productions</u> , 16. <u>National Food Security</u> , 17. <u>Inter Prov. Coordination</u> , 18. <u>Kashmir Affairs &amp; GB</u> ,	19. <u>Overseas Pakistanis</u> , 20. <u>Ports &amp; Shipping</u> , 21. <u>Religious Affairs</u> , 22. <u>State &amp; Frontier Regions</u> , 23. <u>Textile Industry</u> , 24. <u>National Security</u> , 25. <u>Revenue</u> ,

Level	Departments
Level 4	<u>National IT Board</u>
Level 3	1. <u>Board Of Investment</u> , 2. <u>Benazir Income Support Program</u> , 3. <u>Ignite</u>
Level 2	1. <u>Federal Investigation Agency</u> , 2. <u>Islamabad Police</u> , 3. <u>National Assembly</u> , 4. <u>Prime Minister Office</u> , 5. <u>Capital Development Authority</u> , 6. <u>NEPRA</u> , 7. <u>Federal Board Revenue</u> , 8. <u>PARC</u> , 9. <u>PEMRA</u>
Level 1	1. <u>PASSCO</u>
Level 0	1. <u>HIT</u> , 2. <u>Pakistan MINT</u> , 3. <u>Civil Services Academy</u> , 4. <u>IPO</u> , 5. <u>National Highway Authority</u> , 6. <u>DRAP</u>

## STRENGTHENING OF ICT INFRASTRUCTURE AND AUTOMATION OF PRESIDENT SECRETARIAT (AIWAN-E-SADR)

In 2016-17, “Strengthening of ICT infrastructure and Automation of President Secretariat (Aiwan-e-Sadr)” a PSDP project was initiated by the National IT Board. The prime focus of the project is to equip the President Office with ICT infrastructure, software applications, network and cyber security tools, and technical staff. This initiative will strengthen the ICT based working environment for the President Office, facilitate in providing public services more efficiently and effectively, and enhance the collaboration and interactions with other government organizations. In year 2016-17, the procurement of hardware and software was initiated by the National IT Board.

## **AUTOMATION OF PRIME MINISTER'S SECRETARIAT PHASE-II**

National IT Board is executing this project through PSDP at the Prime Minister Secretariat, the core objectives are to enable ICT environment at PM Office, development of secretariat specific applications, implementation of latest cyber security practices, and provision of relevant hardware and tech tools. In year 2016-17, NITB have successfully procured, developed and deployed the following

- Software Applications (Windows Server, Windows 10, Microsoft Office, Antivirus Suite, Network Management Software, Microsoft database & development platform, and Adobe Photoshop)
- Security H/W and S/W (Firewalls, IPX/SPX, Network Security Application)
- Hardware (Network Scanners, Printers, Network Switches, Fiber modules, SNMP modules, Desktop PCs, UPS, and Laptops)
- Updated version of Grievance Management System and Fund Management System
- Development of multiple modules for *PMs' Youth Program* under *National Internship* initiative.

## **ONLINE RECRUITMENT FOR FEDERAL PUBLIC SERVICE COMMISSION**

Hiring of civil servants was one of the challenging tasks for the Federal Public Services Commission due to non-ICT based application process. National IT Board took this challenge of digitizing the environment and started the project of digitization of recruitment process through PSDP project. In year 2016-17, NITB have successfully completed the following activities

- Hardware (Laptops and desktops)
- Licensed Software
- Extension in LAN infrastructure
- Network equipment
- Hosting of existing application at NTC
- Hiring of technical staff
- Selection of Software Development Vendor
- Software Requirement Specifications (SRS) for new modules

This initiative will empower *Federal Public Service Commission (FPSC)* to have more extensive, efficient, and effective Online Recruitment System for General Recruitment and CSS candidates.



## **NATIONAL TELECOMMUNICATION CORPORATION/NTC**

### **BACKGROUND:**

When the Government decided to de-regulate Telecommunication sector, as a first step, converted T&T department into corporation and created PTC in 1991 through an Act of Parliament. As a second step, PTC was split into five entities such as PTCL, NTC, PTA, FAB and PTET through the Pakistan Telecom Re-org Act 1996.

NTC was given the mandate to provide Telecommunication Services to Government/ Defense communication while PTCL was mandated to provide Telecom services to the private sector.

### **NTC MANDATE:**

National Telecommunication Corporation (NTC) has been established under Pakistan Telecommunication (Re-organization) Act, 1996 for provision of telecommunication services within Pakistan on a nonexclusive basis only to *“the armed forces, defense projects, Federal Government, Provincial Governments or such other Governmental agencies or Governmental institutions as the Federal Government may determine”*. For this purpose, NTC focuses to build, operate and maintain telecommunication system throughout Pakistan to fulfill the telecom needs of Government departments.

### **MISSION:**

*“To provide secure and reliable Telecommunication Services to Government Departments/Organizations all over Pakistan.”*

### **STRATEGIC PERFORMANCE:**

After establishment in 1996, NTC started to concentrate on developing its own infrastructure. Within few years, it aligned itself with emerging technological advancements by deploying Fiber Optic Systems in the long haul and metropolitan areas along with around 150,000 digital lines exchanges. First cloud based Tier-III National Data Center was also established by NTC in record period of five months. It will help the Government in e-governance, e-health and e-commerce. In order to keep itself abreast with technological advancements, NTC prepared a comprehensive plan to migrate its legacy TDM exchanges with latest IP based Next Generation Network (NGN) technology. Through this migration project, approx. 127,643 Telephone and 15,000 Broadband ports have been developed which makes 42% replacement of TDM network.

NTC came into profit in 2015-16 after a lean period of over three years. During 2016-17, NTC's before taxation profits crossed Rs. 441 million. NTC completed around 99 percent of Annual Development Plan of financial year 2016-17, beating all previous records. As a result significant growth was observed in operational performance as 193 New Exchanges were established all over Pakistan in record period of four years (2013-17), making a total of 320 Exchanges showing 130% Growth. An

overall growth of 11% was recoded, making 146,132 total NTC subscribers. After rigorous efforts and fast development plan, NTC network has been expanded from 54 districts to 90 districts/cities where both voice and broadband services have been extended. National Telecommunication Corporation (NTC) and Microsoft Corporation signed a Services Provider License Agreement (SPLA). NTC will provide the licenses as a partner through its deployed infrastructure and locally hosted software, which would ensure integrity of the data and Applications. NTC carried out two very important national level projects, provision of telecom services to new Islamabad Airport and Orange Line Metro Train. Telecom Services being provided to the customers include but not limited to Intranet, e-mail, web-hosting, VPN, video conferencing, DSL and other customized services.

NTC not only undertook the responsibility for managing, registering and administrating پاکستان .domain name for Urdu and local languages but has successfully Completed technical setup for launching of ccTLD for پاکستان .

NTC also initiated and played role in strategically important projects such as Safe City Islamabad, Pakistan Educational Research Network (PERN), positioning of PAKSAT to secure and occupy the allocated Space Slot (2003), induction of GPON Technology and MPLS were also successfully implemented.

In pursuance to its mandate and conformity with Telecom Policy 2015, and to provide the latest ICT services to its subscribers, explored possibilities to enhance subscriber base for revenue generation, NTC signed agreements with CMOs, PTCL, DHA, Nayatel, Multinet, Supernet etc. under Public Private Partnership. Keeping in view the future requirements, NTC has already started preparedness for upcoming demand of Internet of Things (IoT), Smart cities, Smart appliances, Smart meters etc. To play its role NTC has also planned to facilitate CPEC by laying OFC infrastructure along the CPEC Road alignment link and National backbone through Shikarpur with Gwadar and the establishment of Submarine Cable Landing Station at Gwadar. The Gwadar Landing Station will provide alternative route to existing Submarine Cable Landing station at Karachi. Besides, revival of existing Coastal Highway (OFC) from Karachi to Gwadar has been planned for provision of telecom services at Gwadar and various other cities and Garrisons falling on the Coastal Highway.

In addition, NTC has planned to create Government cloud at NTC's National Data Center in a secure environment. In the next four years, NTC will strive for continuous innovation and open collaboration to enhance the industry ecosystem, with the specific goals to build a secure and trusted ICT, NTC will give new meaning and values to the telecom industry.

## OPERATIONAL PERFORMANCE:

### **SERVICES PORTFOLIO:**

<b><u>Telecom Services</u></b>	<b><u>Data Network Services</u></b>	<b><u>Transmission Services</u></b>
<ul style="list-style-type: none"> <li>• Basic Telephony</li> <li>• ISDN-Integrated Service</li> <li>Digital Network</li> <li>• BRI-Basic Rate Interface</li> <li>• PRI-Primary Rate Interface</li> <li>• Supplementary Services</li> <li>• Network Solutions for valued subscribers</li> <li>• GoSmart</li> <li>• M2M</li> <li>• P2P</li> </ul>	<ul style="list-style-type: none"> <li>Data Center Services</li> <li>• Broadband Internet Access</li> <li>• Intranet Solutions</li> <li>• Customized Data Solutions</li> <li>• Web Hosting facility</li> <li>• Virtual Private Networking (VPN)</li> <li>• Leased Line Services</li> <li>• Mail platform</li> <li>• Video Conferencing facility</li> <li>• Robocall</li> <li>• 3G/4G Services</li> <li>• Skype for business</li> <li>• SMS gateway</li> <li>• Co-Location</li> <li>• DDP, ISDN</li> <li>• Radio/Wireless Networking Solution</li> </ul>	<ul style="list-style-type: none"> <li>• Dark Fiber</li> <li>• DPLC-Domestic Private Leased Circuit</li> <li><b>CO-LOCATION</b></li> <li>• Dishes</li> <li>• Antennas</li> <li>• Power Supply</li> </ul>

### **TELEPHONE SUBSCRIBERS GROWTH:**

Despite the decline in the use of fixed telephone, there has been consistent growth and development in the core operational functions. Although there is a nil growth in the fixed lines during the current year however, it reflects 6% growth in the telephone lines over the last four years. It was due to comfort and portability that mobile phone provides over a fixed-line. NTC Management is continuously making its efforts to enhance the subscriber base of the Corporation.

The current year's data regarding basic telephony subscribers is as under:

Regions	F.Y. 2016-17			
	Presence as on 30th June, 2016	Increase	Decrease	Presence as on 30th June, 2017
North	53923	14426	15769	52580
Central	35702	5639	4685	36656
South	35733	5898	6689	34942
<b>Total</b>	<b>125358</b>	<b>25963</b>	<b>27143</b>	<b>124178</b>

#### **BROAD BAND SUBSCRIBERS GROWTH:**

Unlike telephone, there has been an upward surge to acquire and maintain broadband connections. Internet has now become a necessity as compared to a luxury during the previous years. Thus, there has been a remarkable growth of over 22% in broadband connections during the current year:

Regions	Working Connections		
	30 <sup>th</sup> June, 2016	Increase	30 <sup>th</sup> June, 2017
North	8637	1275	9912
Central	4724	1827	6551
South	4651	890	5541
<b>TOTAL</b>	<b>18012</b>	<b>3992</b>	<b>22004</b>

**DE-HIRING OF CO-LOCATIONS / MEDIA:**

To optimize the operational cost, NTC has de-hired the following numbers of media/co-location/co-points:

De-Hiring	2016-17
Media (E1)	60
Co-locations	6
Copper Pairs	557

**PUBLIC PRIVATE PARTNERSHIPS:**

In pursuance to its mandate and in conformity with Telecom Policy 2015, NTC signed agreements with various Telecom Operators in private sector under Public Private Partnerships. The purpose of such venture is twofold:

- (a) to provide the latest ICT services to its subscribers
- (b) to explore possibilities to enhance subscriber's base, which resultantly expand the revenue base of NTC.

An overview of agreements signed during the previous years is as under:

**M/S MOBILINK**

The agreement with M/s Mobilink is to extend various packages for voice calls, SMS and 3G data services including provisioning of Smart Phone sets as part of the package of Government officials. The agreement also supports to address Mobi-cash solutions to Government departments like distribution of salaries/pensions and other relief funds desired to be distributed by the Government of Pakistan.

**M/S CMPAK**

It aims at to extend 4G LTE data services to NTC customers at geographical locations where NTC footprints are not available.

## **PTCL**

NTC has rich history of professional collaboration with PTCL being emerged from single company and have similar nature of network in fixed domain. In line with Telecom Policy, 2015 NTC and PTCL have joined hands for extending NTC services through PTCL platform/network.

## **DHAI-R**

The agreement extends the Telecom Services to NTC subscribers residing in DHAI-R through shared network. The same role model will also be extended to other DHAs locations in the country provided it is meritorious in terms of resources allocation and customer potential.

## **M/S LMKT-GOSMART**

The mobile application will provide mobility to their existing NTC subscribers who will be able to use their fixed line services using the mobile application (GoSmart) anywhere using internet. Gosmart is a value-added service that enables a subscriber to receive and make phone calls using landline number via cell/mobile phone.

- Make and receive landline calls from your mobile phone anytime, anywhere.
- Calls can be made using WiFi/3G/4G media.
- Make audio calls and audio conference.
- Make video calls with GoSmart contacts.
- Receive calls on your landline even when away from home or office.
- Ensure safe and secure connections.
- Enjoy low cost international calls.
- Can be used during international travelling thus no international roaming charges.
- Government address book can be available through this application.
- Find contacts using the Government phone directory feature.
- Save important contacts to your buddy list.
- Text Messaging and files share including images, files & videos.

It will encourage NTC subscribers to use their Landline/ Fixed number, which will ultimately enhance RPU/NTC revenue.

An overview of agreements signed during the **F.Y. 2016-17** is as under:

## **MICROSOFT:**

National Telecommunication Corporation (NTC) and Microsoft Corporation signed a Services Provider License Agreement (SPLA) NTC will have latest Microsoft Products available for its own needs as well as for NTC customers. NTC is first in the country to provide this cloud service through SPLA. NTC now offers software as a service (SaaS) and platform as a service (PaaS) models which can be customized to customers' specific needs.

### **NAYATEL:**

M/s Nayatel has laid an extensive land line network up to the common streets and roads of twin cities of Rawalpindi and Islamabad, particular Fiber to the home (FTTH) solution is popular choice of the customers for Triple Play Services as to bundle Internet access, telephone and Cable TV over a single platform. NTC has therefore arranged such services for its customer's especially residential, official Colonies, Housing societies and Military cantonments to oblige by sharing to access network of M/s Nayatel, besides P2P and incumbent solution by virtue of mutual resources on case to case basis.

### **SUPERNET:**

National Telecommunication Corporation and Supernet signed an Agreement to cooperate in developing Business and support in ICT / Telecom solutions and Data connectivity requirements of the Public Sector.

### **TELENOR:**

The agreement with M/s Telenor provide services like internet Dongles, mobile handset and Sim cards for 3G/4G GSM and Data services in underserved and un-served areas facing limitations of network. Telenor is a world renowned services provider for quality voice and Data having 36 million subscribers base in Pakistan. It further seeks to extend the partnership for money transactions where option of choice is required.

## **FINANCIAL PERFORMANCE:**

The Financial performance of the Corporation for the financial year **2016-17** is given here under

Rs. in Million

<b>Particulars</b>	<b>2016-17 (Provisional/Un-audited)*</b>
Revenue	3,252.28
Operating Cost	3,135.23
<b>Operating Profit/(loss)</b>	<b>117.05</b>
Other Income	332.32
<b>Profit before bank Charges</b>	<b>449.37</b>
Bank Charges	8.33
<b>Profit/loss before Taxation</b>	<b>441.04</b>

\* Audit of the Accounts is under process.

Through hectic efforts of NTC Management, NTC has enhanced its profit by Rs. 316.11 million during the F.Y. 2016-17 against the budgetary projections of Rs. 124.92 million for this F.Y.

### DEVELOPMENT ACTIVITIES:

During this Financial Year **22** x New Development Projects have been approved by NTC Development Working Party (DWP) amounting to **Rs. 488.324 Million**. After approval from DWP and endorsed from NTC Management Board these projects are under execution as per time lines

### UTILIZATION OF ADP:

F.Y.	Budget (Rs.)	Actual expenditure	% Completion
2016-17	816.14	808.91	99.11%

### MAJOR ONGOING DEVELOPMENT ACTIVITY:

Following are the major approved and ongoing projects for F.Y. 2016-17 for establishment of NTC Telecom Infrastructure:

- a. Provision of telecom services at New International Airport Islamabad.
- b. Deployment of Telecom Infrastructure at PAEC Chashma.
- c. TDM to IP Migration of 1-C Exchanges and RDLUs.
- d. Provision of Telecom services at Districts of Multan Directorate (Rajanpur, Arifwala).
- e. Establishment of RDLUs at Pakpattan, Ghotki, Kandhkot, Tando Allah Yar, Tando Muhammad Khan and Mityari.
- f. Laying of OSP Network at QAU, Sports Complex, FPCCI, ICCI, IIUI and Veterinary Hospital, GCWU Faisalabad, Bahawalnagar, Bahawalpur and Rahim Yar Khan.
- g. Installation of MSAG and laying of OSP network at Abbotabad.
- h. Establishment of Multi-Service Access Network at G-6, F-5/1, F-5/2, PAF Kamra, TF Complex, Federal Judicial Academy, Ministry of Defence, CMA Rawalpindi, Railway Station, Mehran University Jamshoro, DCO Office Jamshoro, PBTE Lahore, TEVTA Gulberg, Civil Services Academy, QUEST Nawabshah, Haripur, Okara Cantt, Army Garrison Sargodha, New Katchery Multan and SNGPL Multan etc.



### **FUTURE/PLANNED PROJECTS:**

Following development projects have been initiated/planned for Financial Year 2017-18:

- i. Disaster Recovery of National Data Center at Lahore.
- ii. Establishment of NTC Telecom infrastructure at Interior Sindh i.e. PAF Base Bholari, Thatta City, NAB Sukkur, IBA Sukkur, CAA Sukkur, Arts & Design College Sukkur, SMBBMU Larkana.
- iii. TDM to IP Migration of MSU Quetta to provide state of the art telecom services to NTC designated subscribers.
- iv. Establishment of MSAGs at 09 x Sites of Karachi along with laying of optical fiber cable for media redundancy and improvement in QoS.
- v. TDM to IP Migration of MSU Race Course Lahore (Remaining), SMSU Baghbanpura, Exchanges at Faisalabad, Bahawalnagar, Rahim Yar Khan, Jhelum, Kharian, Sialkot, Kohat and Hayatabad Peshawar.
- vi. Establishment of MSAGs at Havelian, Bahria University Islamabad, Hafizabad, SIAL, Sialkot, Sambrial, Gujranwala Cantt, NLC Gujranwala, Gurumangal Road Lahore, Mehfoorzpura Army Garrison, Orange Line Metro Train Lahore and LDA Complex etc.

# **Universal Service Fund**

## **a. Progress during FY 2016-17**

Universal Service Fund Company in a very short period of time through its innovative structure and efficient execution process has become a role-model for many countries to follow. By completing many successful programmes and laying foundation for several new projects, USF has been able to create a drastic and unprecedented digital revolution in the country and has transformed the lives of the people.

In fiscal year 2016-17, USF continued its journey of success by providing 3G/Mobile internet services in rural areas, facilitated use of ICTs for females, laid optic fiber to connect un-served tehsils across the country and worked for spreading the benefits of e-services throughout the country.

## **b. Programmes**

### **• Broadband for Sustainable Development Programme**

Through the Broadband for Sustainable Development Programme, USF has been aggressively working to provide telecom services to the unserved Mauzas across the country. After the issuance of 3G/4G licenses by the Federal Government, this programme was redesigned to include the broadband equivalent data (internet) services as a compulsory component. For new projects, powering of telecommunication sites through solar energy was also made a part of each project. Since 2013, services are being provided in Kalat, Sibi, Zhob, Shangla, Chitral, Chagai, Khuzdar, Awaran-Lasbela, Kohistan, Dera Bugti and Kharan-Washuk. Although, the field teams faced immense hurdles in laying infrastructure in some areas but these projects started bearing fruits very soon and telecom services are currently being provided in unserved mauzas across the country.

In addition to this, Broadband in unserved urban areas was also merged with the above-mentioned project. This programme was initially designed to establish necessary telecommunication infrastructure and to provide broadband internet services to the urban areas of 2<sup>nd</sup> and 3<sup>rd</sup> tier cities. Additionally shared access points called Broadband Centers have also been created for community as well as educational institutions like schools, colleges and libraries.

- **ICTs for Girls**

USF Project “ICTs for Girls” is playing a colossal role for knowledge enhancement and ultimately the financial independence of women in Pakistan. Microsoft has collaborated in this project to provide training to young girls which will empower and accredit them to participate in socio-economic development of the country and will bridge the gender digital-divide. Through this program, thousands of girls at Pakistan Baitulmal are being trained at the state of the art computer labs under the coaching and training program. This specialized program includes training on coding, computing and communication skills coupled with coaching from industry experts.

The 2nd wave of this program is covering girls’ schools in Islamabad to provide digital learning to thousands of students in one cycle. Through this programme, computer labs are being established in Government Girls’s schools in Islamabad Capital Territory and students and teachers will be provided training by Microsoft. The aim of this program is to increase the employability potential of girls, so that they are financially empowered to take care of their families in future.

- **Optic Fiber Programme**

USF is promoting development of telecommunication services in un-served and under-served rural areas of Pakistan to make basic voice telephony and data services, available throughout the country. Under this programme USF is providing unserved Tehsil Headquarters and Major Towns with Optical Fiber Connectivity. Optical Fiber Connectivity provides cost effective, reliable and scalable backhaul medium over which Voice and Data (Internet) traffic is carried from one location to another. Up till now, USF has provided optic fiber connectivity to Balochistan, Punjab and Sindh Province and connectivity will be provided in KPK province in FY 2017-18.

- **Establishment of Telecentres**

Establishment of Telecentres is an initiative being launched by Universal Service Fund to provide and expand the benefits of ICT facilities to the people in rural areas. This will also help bridging the digital divide between the rural and urban areas. Telecenter will be a community resource center that will provide public with access to telecommunication services, primarily for the people in the un-served and under-served rural and semi-urban areas of Pakistan. In FY 2016-17, contract with Jazz was signed to establish 10 telecentres in the country.

## c. Statistics

<b>Project Statistics for Broadband for Sustainable Development Programme till the end of FY 2016-17</b>	
Contracted number of muzas	9,970
Muzas covered till the end of FY 2016-17	5,642
Contracted number of Broadband connections	490,250
Broadband connections provided till end of FY 2016-17	784,279
Contracted number of EBCs	1,439
EBCs established till the end of FY 2016-17	1,330
Contracted number of CBCs	410
CBCs established till the end of FY 2016-17	369

<b>Project Statistics for Special Projects till the end of FY 2016-17</b>	
Computer Labs established in Pakistan Baitulmal	100
No. of Students trained in Pakistan Baitulmal	4,000
No. of teachers trained in Pakistan Baitulmal	100
Computer labs established in Pakistan Sweet Homes	12

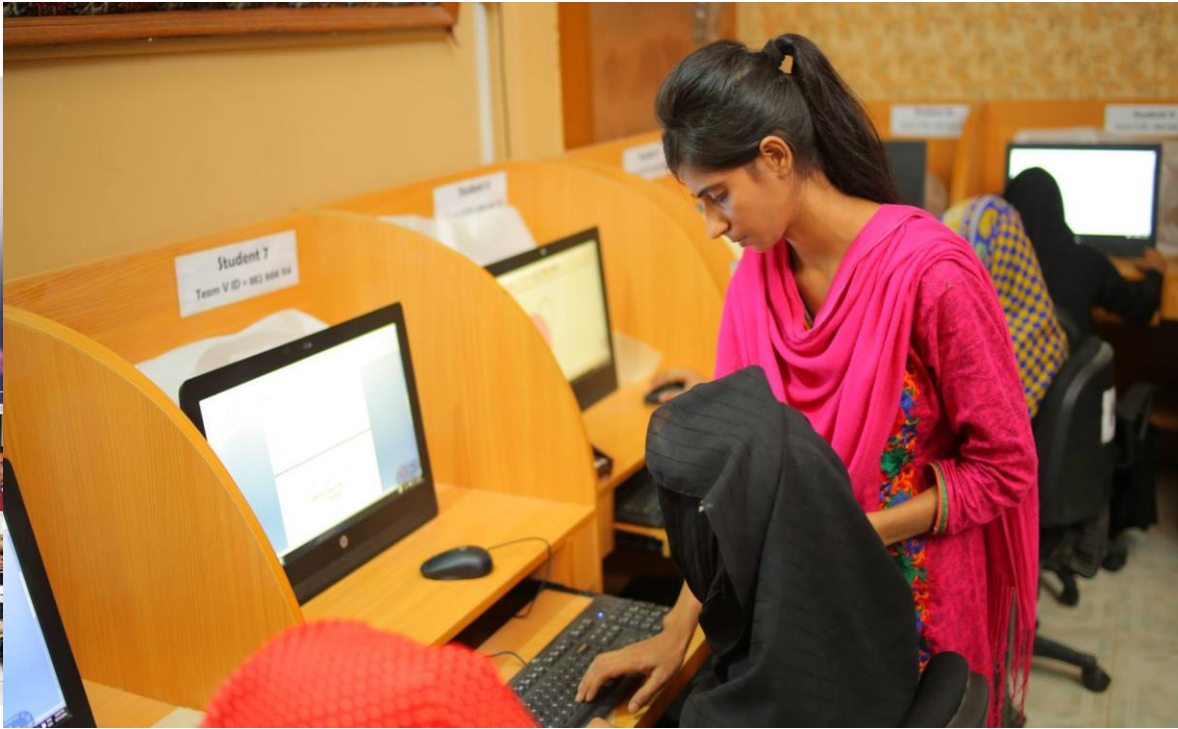
<b>Project Statistics for Optic Fiber Programme till the end of FY 2016-17</b>	
Contracted length of optic fiber cable	6,785
Optic fiber cable laid till the end of Fiscal Year 2016-17	6,447

## c. Pictures









## **Pakistan Software Export Board**

Pakistan Software Export Board (PSEB) is an apex body of the Ministry of Information Technology with the mandate to promote Pakistan's IT Industry in local and international markets. PSEB has been facilitating IT industry through a series of projects and programs in international marketing, human/intellectual capital development, infrastructure development, company capability development, as well as promotion of innovation and new technologies. PSEB's governance structure consists of a 7-member Board of Directors. A Managing Director who is selected from the private sector and appointed for a two-year term heads the organization. PSEB organizes its activities and its internal organization around **International Marketing, PSDP Project Management, Domestic Business Facilitation, Infrastructure Development, and Technical/Data Node Department**. The aforementioned departments are funded through four sources of funding: A grant budget provided by the Ministry of Information Technology, fees contributed by PSEB member companies, funds generated through bandwidth provided to the IT companies, and PSDP "Public Sector Development Program" financed projects. PSEB does not produce its own software products or sell software developed by Pakistani Companies. Its sole mandate is to ensure sustainable development of the Pakistan's Information Technology Industry, bolster cooperation of Pakistan's IT sector with international entities and attract IT companies to invest in Pakistan's IT sector.

**PSEB's core functions are summarized below:**

- Undertake research and studies regarding the state of Pakistan's Information and Communication Technology (ICT) sector, and propose strategies for sustainable development of Information Technology Industry comprising of software products and services; IT-enabled services and hardware.
- Analyze and subsequently implement measures that have the potential of enhancing exports of IT Products and Services from Pakistan.
- Bolster local demand for IT products and services.
- Analyze Information Technology Industry specific laws and regulations of various competitor countries, and accordingly propose improvements and modifications to Pakistan's public policy for the IT industry.
- Propose and implement fiscal and regulatory incentives. Register IT companies in Pakistan and extend maximum facilitation to them. Act as a one-stop shop to cater to the needs of a prospective or existing IT company. Serve as a bridge between local IT companies and public entities.
- Work with telecom regulators and operators to reduce broadband bandwidth tariffs/rates, and improve reliability in order to maintain international competitiveness.
- Plan, develop and operate state of the art Software Technology Parks (STPs) in Pakistan.
- Determine the requirements of local IT industry's human capital requirements, and take steps to address them in collaboration with other entities.
- Develop and execute a marketing plan to help local software companies reach out to potential clients abroad whereas attract and facilitate foreign software firms to establish their software development facilities in Pakistan.



- Arrange for Pakistan's IT industry to participate in domestic and international IT events.
- Provide protocol, hosting and matchmaking facilities for foreign delegates and investors.
- Establish a web portal for customers, investors and companies, and prepare and disseminate marketing collateral.
- Help IT companies in acquiring quality, security and other certifications.
- Facilitate IT companies' growth by enabling access to equity and debt financing, and by fostering an entrepreneurial culture.

### **QUICK FACTS ABOUT THE INFORMATION TECHNOLOGY INDUSTRY**

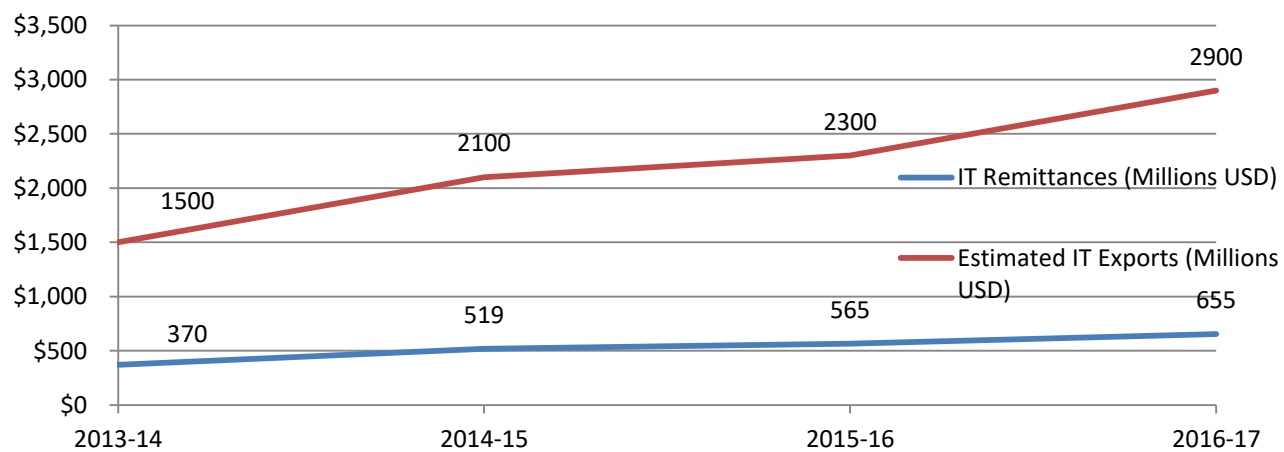
Pakistan's IT & ITeS industry comprises of more than 2,500 IT companies & call centers, and this number is growing each year. These companies possess demonstrated expertise base from high-end customized software development to diversified BPO services. Pakistan's IT sector is one of the few segments in Pakistan's economy that has demonstrated positive year-on-year growth and has earned significant foreign exchange for the country.

Pakistan's IT oriented exports comprise of software development and IT enabled services (also called ITeS that includes call centers and business support activities) and employs over 300,000 English-speaking IT/BPO professionals with many world class experts in current and emerging IT products and technologies. Pakistani companies have especially done well in emerging areas like mobile phone software (Apple iPhone and Google Android), mobile gaming and animation.

Government incentives to the IT & ITeS industry include income tax exemption on IT exports till June 2019, 100% foreign ownership, 100% repatriation of capital and dividends, 3-year tax exemption for IT startups, and tax holiday for venture capital funds till June 2024. As a result of these incentives, Pakistan's IT exports have grown to an estimated \$2.9 billion, according to industry analysts (PSEB/PASHA), which includes freelancers estimated to be earning more than \$300 million annually. Whereas, the domestic market accounts for over \$500 million in annual revenue, and growing rapidly as ICT adoption in Pakistan is increasing across verticals. Hence, the total annual revenue of Pakistan's IT Industry is nearing \$3.5 billion. Pakistan is also ranked as the 4<sup>th</sup> most popular country for freelancing in the Online Labor Index published in 2017 by Oxford Internet Institute (OII).

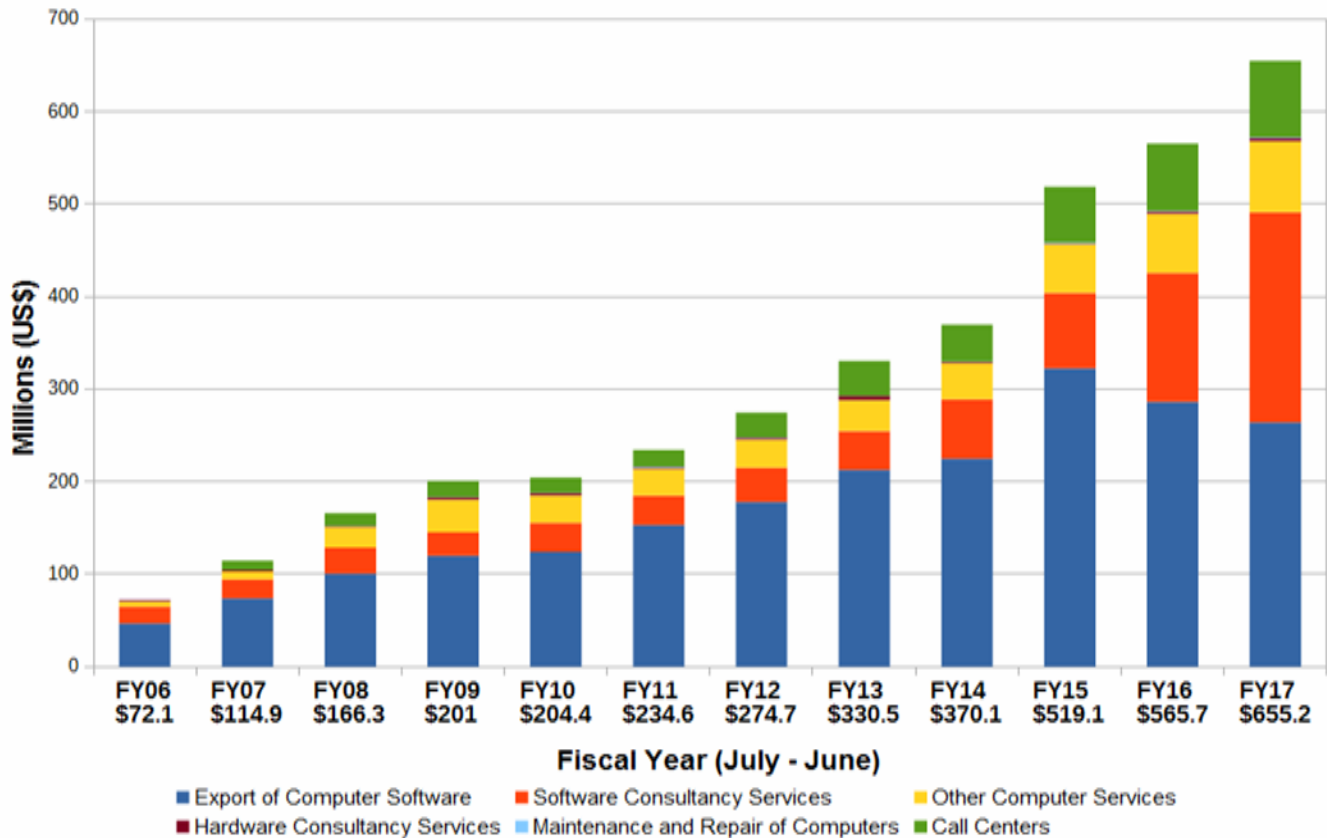
## IT REMITTANCES

Year	IT Remittances (Millions USD)	Estimated IT Exports (Billions USD)
FY2013-14	\$370	\$1.5
FY2014-15	\$519	\$2.1
FY2015-16	\$565	\$2.3
FY2016-17	\$655	\$2.9



## IT & ITeS Export Remittances (FY2006-FY2017)

(Source: Trade in Services data, State Bank of Pakistan)

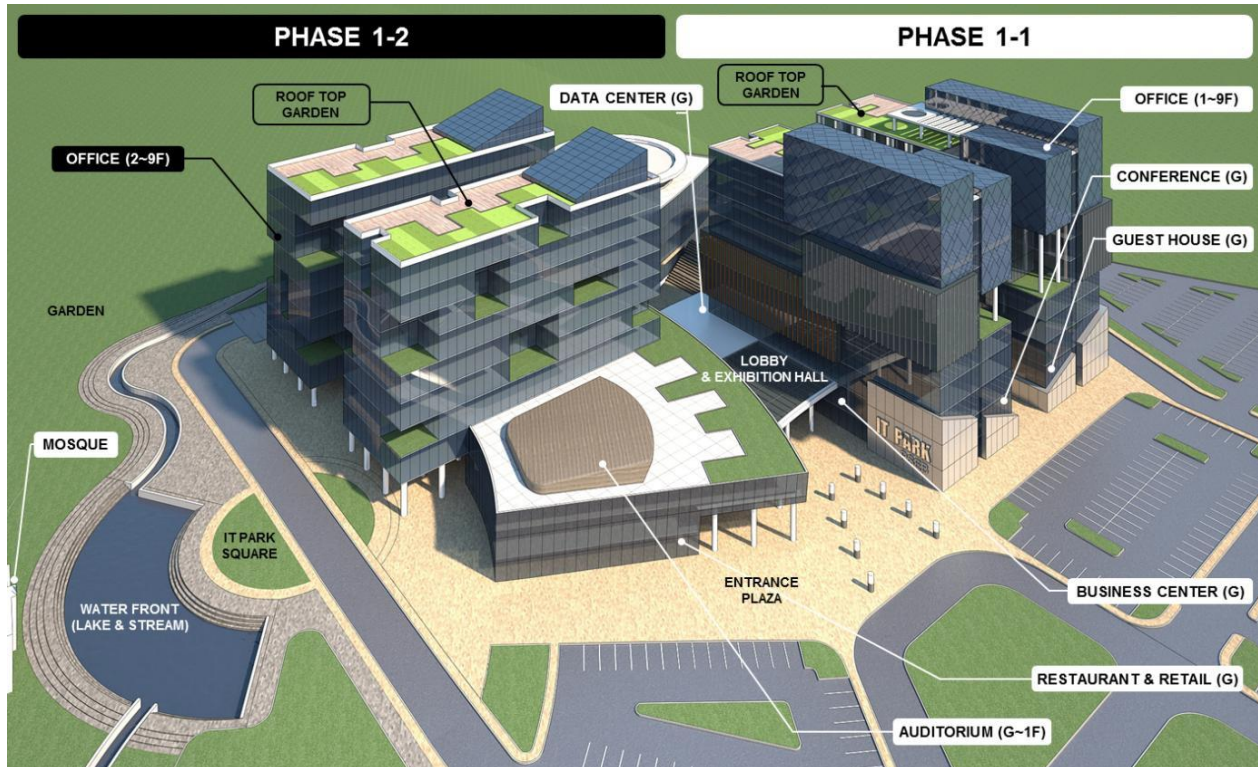


## INFRASTRUCTURE DEVELOPMENT

Software Technology Parks (STPs) have been a major factor in facilitating the IT companies and one of the main reasons for the development of the IT industry and its aforementioned success.

Pakistan Software Export Board has leased 47.79 acres of land from Capital Development Authority (CDA) at Chak Shazad, Islamabad for the development of state of the art Information Technology Park, to be built under financing from Korea Exim bank through the Economic Development Cooperation Fund (EDCF). In this regard, Ministry of Information Technology and Pakistan Software Export Board have been closely working with Korea Exim Bank. Feasibility study of IT Park has been completed by Korean consultants and PC-1 has been approved by Ministry of Planning, Development and Reforms. According to the Korean consultants, construction is expected to take 2.5 years.

## **Building Layout of proposed IT Park in Islamabad**



PSEB has acquired 6 acres of land from Civil Aviation Authority at Jinnah International Airport Karachi for establishment of IT Park. Lease agreement was signed between CAA and PSEB in October 2015. After tendering process has been completed, PSEB will start feasibility study for IT Park in Karachi during 2017-18.

Currently, PSEB has 14 STPs covering an area of one million square feet which have been converted to STPs by PSEB by signing agreements with their landlords that they will keep rent affordable for IT companies and will provide backup power to companies inside the STPs. These STPs have been established by converting suitable third party buildings through agreements with their owners. At present, there are more than ninety IT companies having offices inside these STPs.

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

## **INTERNATIONAL MARKETING**

PSEB's International Marketing Department regularly undertakes initiatives to:

- Promote Pakistan as a competitive destination for outsourcing of IT related work.
- Improve perception of Pakistan's IT Industry in key international markets.
- Promote Pakistan as a high quality destination for the global IT investors.
- Enable and facilitate interaction of Pakistan based IT companies with key international stakeholders such as investors and potential clients.
- Enhance IT industry specific co-operation and collaboration between Pakistan's public/private sector entities and international counterparts.
- Support and encourage all private sector initiatives that have the potential of playing a role in bolstering Pakistan's IT industry, foreign exchange earnings and improving Pakistan's share of global IT market.

## **INTERNATIONAL EXHIBITIONS & DELEGATIONS**

PSEB actively facilitates new business development for Pakistani IT companies. Exhibitions and trade fairs are an excellent platform to interact with relevant stakeholders (investors, buyers, sellers, and decision makers) at both public and private sector entities. Significant subsidies are extended to IT companies by PSEB to enable them to exhibit in key International IT exhibitions. For this purpose, PSEB constructs a Pakistan Pavilion which is utilized by the selected IT companies to market their respective products and services. Having a Pakistani IT Pavilion in key exhibitions projects Pakistan as a viable, feasible destination for IT outsourcing and investment and enables Pakistani companies to generate new leads for outsourcing, partnership, and investment. Since 2008, around 300 companies have been facilitated by PSEB through financial subsidies and other means to exhibit in local and international IT exhibitions. Many companies have generated good leads from these international exhibitions which convert to outsourcing, partnership, or investment opportunities later. Sales cycle from lead generation to proposal to signing of contract varies from 6 to 12 months.

During 2016-17, PSEB and PSEB IT companies participated in seven international events with 59 IT companies generating more than twelve hundred leads.

### **INTERNATIONAL EXHIBITIONS**

<b>Event FY 16-17</b>	<b>Country</b>	<b>Date</b>	<b>IT companies</b>	<b>Leads generated (approx.)</b>
Mobile World Congress	Spain	Feb-16	5	74
CeBIT	Australia	May-16	13	105
Pak-US Business Opportunities Conference	USA	Jun-16	25	35
ITU Telecom World	Thailand	Nov-16	2	200
China Hi Tech Fair	China	Nov-16	5	300
Mobile World Congress	Spain	Feb-17	5	391
CeBIT	Australia	May-17	4	155
<b>TOTAL</b>				<b>1260</b>

### **LOCAL EVENT PARTICIPATION**

Local exhibitions provide an ideal platform for Software and Information Technology firms to showcase their respective expertise, interact with prospective customers and other stakeholders. In 2016-17, PSEB and member companies participated in local IT exhibitions. PSEB also sponsored different industry events including PASHA ICT Awards, Lahore and Telecom & ICT 2016 and RCCI Awards, Islamabad.

<b>Exhibitions FY 2016-17</b>	<b>Date</b>
ITCN, Karachi	Sep, 2016
BYTES, Islamabad	March, 2016
IDEAS, Expo Karachi	Nov, 2016
IT Awards	Dec, 2016
DICE, Islamabad	Dec, 2016
IBCE, Lahore	Nov, 2016
Pak-China Business Forum, Lahore	March, 2017
Safe Secure Pakistan, Islamabad	March, 2017
RCCI Awards	April, 2017
2 <sup>nd</sup> Innovation Summit, Baluchistan	April, 2017

## **DELEGATIONS**

PSEB supports and encourages outbound delegations comprising of local IT industry representatives to create linkages with foreign IT companies. These delegations have represented Pakistan's IT industry in many important markets such as the US, UK, Canada, China and Malaysia over the past decade. In June 2016, a large delegation comprising of senior representatives of Pakistani IT companies and PSEB, led by Federal Minister of Commerce visited the US for US Pakistan Business Opportunities Conference in New York. The conference attracted many representatives from US companies as well as US-based Pakistani entrepreneurs and was successful.

In March 2017, Pakistani IT Delegation attended Trilateral Trade & Investment Summit where they were able to interact with representatives from both the Czech Republic & United Kingdom. In May 2017, a delegation comprising of senior representatives visited Canada to attend Pakistan – Canada ICT Forum. The aforementioned delegations, also summarized below, were immensely helpful in developing Pakistan's perception as viable and feasible destination for outsourcing and investment.

<b>Event FY 16-17</b>	<b>Country</b>	<b>Date</b>
Trilateral Conference	UK	March, 2017
ICT Investment Forum	Dubai	April, 2017
Pakistan Canada IT Forum	Canada	March, 2017

## **ONLINE MEDIA MARKETING, MARKETING COLLATERAL, PUBLIC RELATIONS**

The use of Social Media is absolutely imperative to market Pakistan's IT sector foreign customers and investors and to improve perception of Pakistan in key IT outsourcing markets as a viable destination for delivering high quality products and services. PSEB social media marketing is an important initiative to allow entrepreneurs and industry experts to interact with one another and build relationships. PSEB Social Media Marketing aims to capitalize on its social media efforts through wider audience reach, audience interaction and proactive branding of Pakistan's IT Industry. Social Media Channels such as Twitter, Facebook, YouTube and LinkedIn are being utilized to enhance both awareness and image of Pakistan's IT industry. PSEB blog is playing a vital role in increasing brand recognition and awareness regarding achievements of industry players in a wide array of verticals.

PSEB creates marketing collateral to project Pakistan's IT industry as a viable, feasible destination for IT outsourcing. Print material has been updated on a regular basis to accurately reflect the dynamic nature of Pakistan's IT industry and to effectively portray its strengths in the international arena

## **PSEB WEBSITE**

PSEB's website at [www.pseb.org.pk](http://www.pseb.org.pk) provides up-to-date information to PSEB member companies, overseas/local investors and perspective customers of Pakistan's IT industry. PSEB website celebrates the success stories of the local IT Industry and portrays the local IT Industry in a positive light. PSEB updates its website on regular basis with news and success stories about Pakistan's IT industry.

## **PSEB's DOCUMENTARY**

PSEB developed a comprehensive video documentary titled "The Rising Tide" with the objective to market Pakistan's IT Industry and has been updated this year as well. The video highlights success stories of Pakistan's IT industry, areas of expertise of Pakistani companies in software development and BPO services, and includes testimonials of both foreign and local stakeholders about Pakistan's IT industry. The video has received very positive reviews and has gone viral on social media. The video can be watched on the home page of PSEB's website.

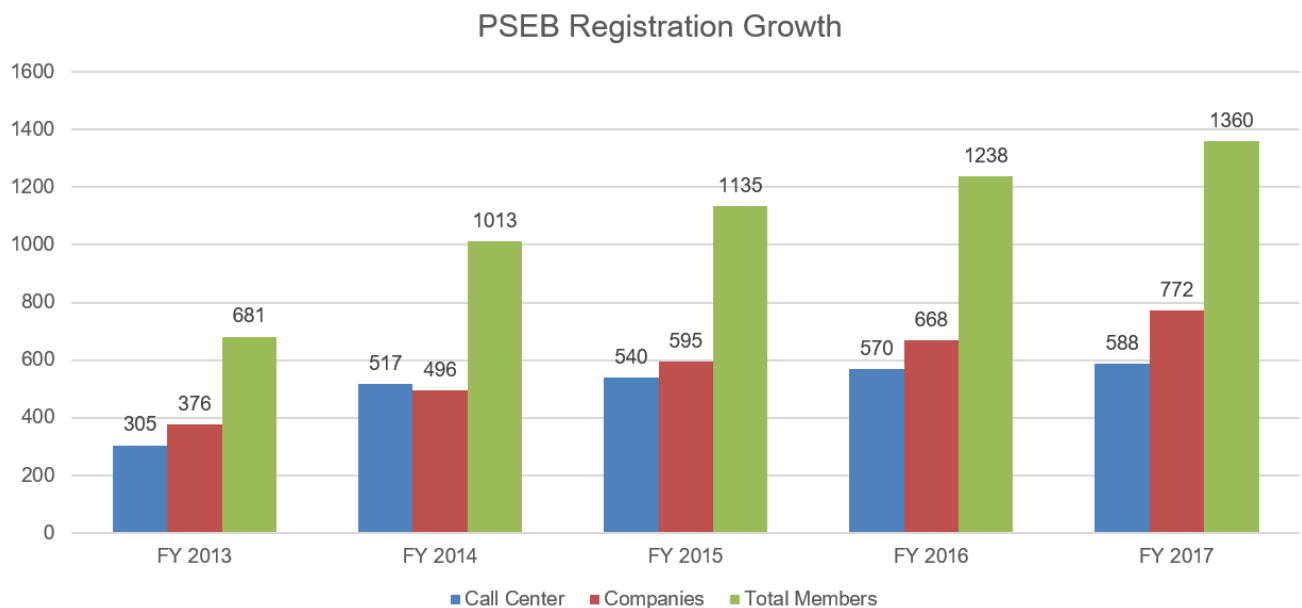
## **DOMESTIC FACILITATION**

Domestic Business Facilitation role & activities are closely aligned with PSEB's mission of promoting and facilitating Pakistan's IT industry, accelerating exports as well as local business. Domestic Business Facilitation Department is primarily responsible for registration and facilitation of IT and ITeS Companies.

IT industry and key stakeholders from the private and public sectors are actively engaged in achieving PSEB's mission through continuous dialogue, discussions, meetings, conferences, exhibitions, seminars, workshops, collecting data regarding the industry, and reviewing government policies to enable IT industry-friendly initiatives e.g., government is providing income tax holiday on IT exports until 2019, 100% foreign ownership option, 100% repatriation of profits, and providing state-of-the-art software technology parks.

Domestic Business Facilitation Department is primarily responsible for registration and facilitation of IT and ITeS companies. As of June 2017, 1,360 companies including 772 IT/ITeS companies and 588 call centers have valid registration with PSEB. Islamabad/Rawalpindi, Lahore, and Karachi are the major hubs of IT in Pakistan followed by secondary cities including Peshawar, Abbottabad, Faisalabad, and Multan etc.





Registration of IT companies was previously handled manually by PSEB. This process has now been fully automated and moved online to PSEB's website. Companies have praised the online registration and renewal process because it has streamlined the process for both PSEB and member companies.

Domestic Department on behalf of PSEB organized/sponsored and supported several major domestic events during the year including stakeholder consultation on IT Policy, PSEB CEO Forum at ITCN ASIA, CPEC EXPO, PSEB IT Awards 2016, P@SHA ICT Awards 2016 in Karachi, RCCI ICT Awards 2017 in Rawalpindi, VISIO SPARK 2016, 2<sup>nd</sup> Innovation Summit Quetta, Open Source Summit 2016 and IEEE International Conference C-Code etc.

## **PROJECTS**

Following activities have been achieved by the Projects Department of Pakistan Software Export Board:

- Placement of 1,500 interns in the ICT Industry
- ISO27001 Consultancy of 08 PSEB selected companies
- ISO27001 Audit of 08 PSEB selected companies
- ISO20000 Consultancy of 08 PSEB selected companies
- ISO20000 Audit of 05 PSEB selected companies
- CMMI Level-2 Consultancy of 05 PSEB selected companies. CMMI Level-2 Consultancy takes 8-10 month
- CMMI Level-2 Audit of 05 PSEB selected companies
- CMMI Level-3 Consultancy of 04 PSEB selected companies. CMMI Level-3 Consultancy takes 14-16 month

- ISO27001 Lead Implementer Training of 50 professionals
- ISO20000 Lead Implementer Training of 50 professionals
- ISO27001 Lead Auditor Training of 10 professionals
- ISO20000 Lead Auditor Training of 10 professionals
- 05 CMMI Auditors participated in the Appraisals of the Companies as per pre-requisite for the final course i.e. SCAMPI which is scheduled from 11-15th December, 2017

## **TECHNICAL/DATA NODE DEPARTMENT**

Bandwidth availability is crucial for the operations of an IT company and PSEB is providing cost effective, reliable bandwidth to 144 IT companies operating in 14 Software Technology Parks located in Islamabad, Rawalpindi, Lahore, Karachi, Peshawar and Abbottabad. These STPs are equipped with state-of-the-art ICT infrastructure and backup power arrangements. PSEB Data Node Department is managing data nodes in all Software Technology Parks to facilitate IT companies with bandwidth and colocation services. These operations work successfully round the clock offering technical support to IT companies on a 24x7 basis. PSEB is providing 834 Mbps bandwidth to 144 IT companies in 14 STPs at present. Some achievements of Data Node Department during 2016-17 are as follows:

- 1- Generated annual revenue of more than PKR 52 million.
- 2- Data Node Department is providing Co-location services to reduce the OpEX of IT companies by placing their servers inside Data Node where air conditioning, access control, high speed redundant internet connectivity and 24x7 uninterrupted power supply is ensured.
- 3- Migrated PSEB's network to IPv6 CIDR (Classless Inter-Domain Routing), the next generation Internet Protocol, and offering this IPv6 enabled network to IT companies also.
- 4- Reduced bandwidth tariff by 20% to make internet bandwidth more affordable for IT companies.
- 5- Negotiating with Cloud Computing Service providers to devise a special discounted tariff for IT & ITeS companies to avail cloud services like IaaS, PaaS and SaaS of Tier –III compliant Data Center facility. This would be very helpful for SME's to focus on their core operations and let a professional Data Center take care of their hosted servers and services at less CapEx and OpEx.

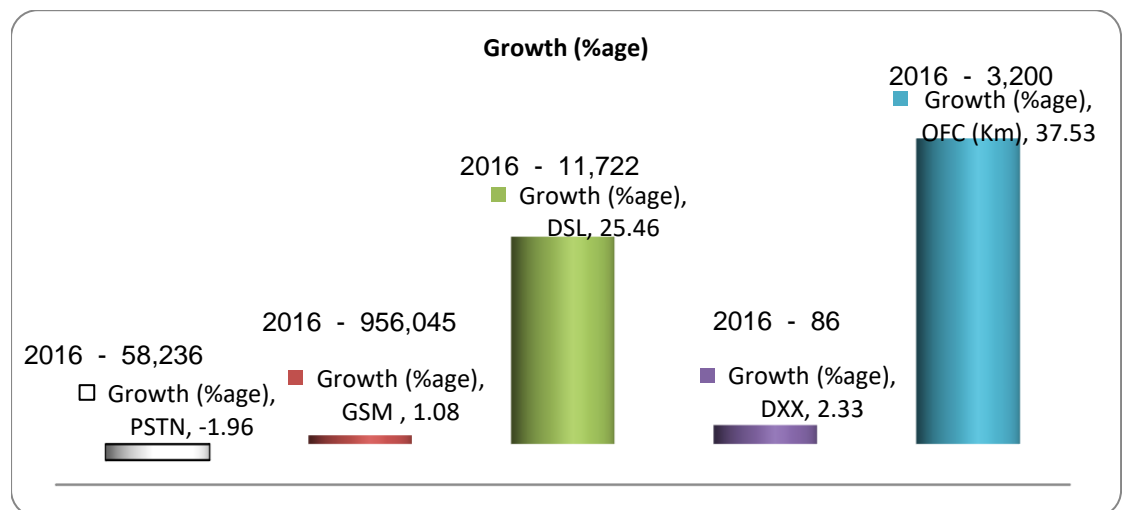
## **SPECIAL COMMUNICATIONS ORGANIZATION (SCO)**

1. SCO has completed 41 years of continued devotion to the cause of expanding comprehensive ICT services to the people of far-flung & most rugged areas of AJ&K and Gilgit-Baltistan. During this journey, SCO has always strived for improved communication environment in AJ&K and Gilgit-Baltistan. The quality of communication facilities being extended to the local populace are comparable to those being provided in mainland.
2. SCO being Significant Market Player (SMP) has the unique honor of providing all types of communication, i.e Landline, GSM, CDMA, WLL, Internet (dialup & broadband) and Digital Cross Connect (DXX) to the people of AJ&K and GB. SCO has also progressively enhanced its transmission media capacities through Optical Fiber Cable (OFC), supplemented by Satellite & Microwave networks and presently in phase of launching 3G/ 4G services in its areas of responsibility.
3. SCO, during the last one year remained committed in expanding state of the art telecomm facilities to the people residing in remote areas of AJ&K and GB. The progress made by SCO over the past one year has been in conformity to our commitment of providing quality telecom services and extension of digital technology from voice to data to our valued customers.
4. **Achievements during FY 2016-2017.**

Some of the milestone achievements are appended below:-

a. **Subscriber Growth.**

Overall subscriber growth from year 2016 to 2017 are as under:-



b. **Declaration of Significant Market Player (SMP).**

PTA has declared SCO as SMP in AJ&K and GB. The status of SMP is awarded to high ranking telecomm operator in different services offered in a particular region. It is indeed recognition of overall performance of the SCO and the services rendered to the people of AJ&K and GB.

c. **Area Coverage and Range of Communication Services.**

Exclusive coverage of SCO network in nearly 250 locations at present amply highlights the significance and importance of SCO's role in the area. Particularly, the most sensitive and under-served / un-served areas along Line of Control in AJ&K and far flung valleys in GB are only being served by SCO.

d. **Socio-Economic Uplift of the Area.**

SCO has positively contributed in socio-economic uplift of the people of AJ&K and GB through providing modern telecom facilities to the following:-

- (1) 800 educational institutions.
- (2) 370 hospitals / healthcare facilities.
- (3) 234 financial institutions / banks for online banking and ATM services.
- (4) 150 tourist locations.
- (5) Border crossing points in AJ&K and Sust Dry Port in GB.

e. **Revenue Targets.**

SCO has successfully achieved overall assigned revenue targets above 100% in the last 10 years.

- |     |   |   |              |
|-----|---|---|--------------|
| (1) | Revenue target for Financial Year 2016-17   | - | Rs 2,100 (M) |
| (2) | Revenue realized for Financial Year 2016-17 | - | Rs 2,148 (M) |

## 5. **Progress of Development Activities**

### a. **Expansion of Optical Fiber Network in AJ&K and Gilgit Baltistan.**

Project was designed to address the ever increasing demand of high capacity bandwidth to extend latest telecom services to the local populace of AJ&K and GB. Under this project, laying of 811 Km OFC (both underground / aerial) with transmission system for backhaul connectivity of remote un-served areas was planned. Project has been completed and 811 Km OFC has been laid.



### b. **Construction of Cross Border OFC System between China and Pakistan for International Connectivity of Voice / Data Traffic.**

Pak-China OFC Project is the only ICT project so far planned under the ambit of CPEC. Due to strategic nature of the project and experience & expertise in undertaking development projects, SCO was selected to execute the project under peculiar environments of the area. The OFC part of the project which was kicked off in May 2016 has been completed earlier than its scheduled time. The trial traffic on the OFC link will commence in December 2017 while commercial traffic is planned in December / January 2018. Due to its inherent potentials, it has a key role in support of other projects being undertaken under the CPEC ambit. The project has broad socio-economic dimensions especially for underserved regions by creating job opportunities for locals of the area while adding to the overall economic prosperity of remote locations. It will also be a significant source of revenue for Govt of Pakistan.



d. **Launching of NGMS (3G/ 4G) Services in AJ&K.**

In order to upgrade existing GSM (2.5G/ 2.75G) network to NGMS (3G/ 4G) network in AJ&K, a project was approved by CDWP in 2016. After tendering formalities / selection of vendor, SCO had signed a contract for launching Next Generation Mobile Services (NGMS) 3G/4G in AJ&K. By execution/ implementation of project in a short time of 9 months, the long outstanding demand of 3G/ 4G services by populace of AJ&K will be fulfilled and SCO will be able to provide quality mobile services to the people of AJ&K. Cellular network of AJ&K has been upgraded and is ready for NGMS (3G/ 4G) Services. Services will be provided after spectrum action by PTA.



d. **Expansion & Upgradation of NGMS (3G/4G) Services and Seamless Coverage along KKH (in Support of CPEC) in GB.**

A project for Expansion & Upgradation of NGMS IN GB and Seamless GSM Coverage along KKH was approved by CDWP on 17 January 2017. Consultants have been hired for market analysis, preparation of RFP and evaluation process for Core Network, Access Network, VAS Platforms, Transmission Network, Billing and support system. Technical and Financial



proposals were called through open tendering process. Technical and financial evaluation is under process. Project work will be commenced after selection of successful vendors.

**e. Establishment of SCO Technical Training Institutes at Gilgit.**

The Prime Minister of Pakistan announced establishment of Technical Training Institute by SCO at Gilgit with initial grant of Rs.100 Million. 30x Kanals land for institute was allotted to SCO at Gilgit by Gilgit Baltistan Govt. Prime Minister approved Rs 100 M out of PSDP on 21 Nov 2016. Project has been formally approved by CDWP on 9 May 2017. Rs.50 Million has been allocated for FY 2017-18 for construction of building. Architect has been hired for design and preparation of architecture of the Training Institute. Construction work will be started by November 2017 after selection of construction firm through open bidding. Building structure will be completed by June 2018.

**f. Expansion of Broadband Internet Services (Through MSAN Technology) in AJ&K and GB.**

SCO is providing ICT services (58,000 landline and 15,000 Broadband subscribers) in AJ&K and GB. With growing demand of broadband services coupled with high speed data, the existing infrastructure is unable to fulfill the requirements of subscribers, due to dependence upon 10 to 15 years old PSTN and Copper (Outside Plant) Networks. PSTN has also outlived its life, no manufacturer provides new PSTN equipment and world over PSTN has been migrated to IP based technologies. SCO has proposed a project for provision of triple play services i.e voice, data and video through Multi-service Access Node (MSAN) technology initially in 11 major cities of AJ&K and GB.

## **Introduction**

Ignite – National Technology Fund (formerly **National ICT R&D Fund**) is the premier national institution which is dedicated towards promoting an innovation and research commercialization ecosystem across the country. It is focused towards making Pakistan a player in the knowledge economy by providing Venture Capital funding to startups focused on fourth industrial wave technologies and by addressing gaps in the entrepreneurial ecosystem. It believes that a critical driver of the knowledge economy is a robust startup ecosystem which sets the pace for a holistic national transformation.

Emerging technologies such as the ones highlighted in “The Fourth Industrial Revolution”<sup>1</sup> are disrupting and transforming human life in many ways. Tech startups are the building blocks of the knowledge economy. The Company has aligned itself with these changing dynamics and is focusing on commercialization and impact of funded projects and function more like a Venture Capital (VC) Fund, which will continue to provide grants in the form of smart money, which includes mentorship from industry leaders and facilitation of follow up funding.

Taking cognizance of the remarkable pace at which technology is transforming our lives, the Company has identified specific horizontals that will be the focus of its efforts in the coming few years. The priority thematic areas are listed below:

1. Artificial Intelligence/Big Data
2. Internet of Things
3. Cloud/Cyber Security
4. Block chain
5. Shared Economy
6. Virtual/Augmented Reality
7. Wearables, Implantable
8. 3D/4D Printing
9. Robotics
10. Neurotech

Ignite positions itself as an enabler of innovation. It believes that exciting tech startups will drive the nation’s transition into a vibrant and progressive future where it will be amongst the leading economies of the world.

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<sup>1</sup> The Fourth Industrial Revolution by Klaus Schwab – Published by World Economic Forum 2016



### **Funded Technical R&D Projects**

For the year 2016-17, Company has approved 33 technical projects worth PKR 578.05 million. These projects are categorized as under:

<b>S. No</b>	<b>Description</b>	<b>No of Project s</b>	<b>Approved Budget (PKR million)</b>
1.	Artificial Intelligence	8	121.97
2.	Big Data	6	93.14
3.	Clean Tech	2	33.08
4.	Cloud	3	42.41
5.	Internet of Things	1	19.37
6.	Shared Economy	1	28.59
7.	Wearable/Implantable	4	45.94
8.	Augmented/Virtual Reality	1	27.35
9.	Neurotech	1	33.32
10.	Other	6	132.88

### **National Incubation Centers**

National Incubation Center (NIC) for Islamabad worth about PKR 564 million was awarded to Jazz/Team up and is currently operational at the NITB building in H-9, Islamabad. This particular center would largely cater to the young enterprising minds within the vicinity of the federal capital. Taking into account the wealth of talent across the country, the Company is also setting up National Incubation Centers across the four provincial capitals.

- Karachi
- Lahore
- Peshawar
- Quetta

National Incubation Center(s) contract for Lahore & Peshawar has already been awarded and should be operational by the end of 2017. The driving force behind encouraging a startup ecosystem is the understanding that these startups form the very basis of a knowledge base economy and with the requisite guidance and support they will help transform the social and technological landscape of the country.

### **National Grassroots ICT Research Initiative (NGIRI)**

National Grassroots ICT Research Initiative is aimed at assisting those undergraduate students of public and private sector universities who are enrolled in degree programs related to Information and Communication Technology (ICT) disciplines and have initiated their Final Year Projects (FYPs). The financial assistance under the program is aimed to enable students undertaking FYPs for building prototypes and working models in order to increase their creativity, innovation and hands-on engineering and development skills.

The program was launched in February 2012. The program is supporting the undergraduate students in order to increase their creativity and hands on experience by development of prototype/working model of their FYPs. Till date, five phases of the program have been rolled out and details are as follow:-

Year	Participating Universities/DA I's	No of FYPs evaluated	No of FYPs approved	Amount Disbursed (PKR million)
2011-12	68	785	272	15.26
2012-13	78	1016	418	31.7
2013-14	72	1247	430	25.13
2014-15	75	1324	436	29.59
2015-16	72	1167	511	27.83
<b>Total</b>		<b>5539</b>	<b>2067</b>	<b>129.52</b>

In May 2017, a National Level Competition among top FYPs nominated by participating universities was held at Islamabad. Total 34 FYPs were showcased during the competition and top three FYPs were selected for awards.

### **Prime Minister's ICT Internship Program**

Prime Minister's ICT Internship Program 2017 is offering 3000 Internships to ICT graduates who want to pursue their career in the ICT Industry. Selected interns are being placed in ICT Industry & IT departments of public and private sector organizations for a period of six months. This project is funded by Ignite (formerly National ICT R&D Fund) and is being executed by Pakistan Software Export Board (PSEB).

#### **Project Brief:**

Project Duration:	17 months
Total Cost:	Rs.284.36 Million
Project Start Date:	January 2017
Stipend Amount:	Rs.15,000/- per month
Women Quota:	30%
Disabled Quota:	2%

Geographical distribution of the interns and their placement status during FY 2016-17 is given below:

Area	Allocation	Interns Placed during FY 2016-17		Total
		Male	Female	
Punjab	1,406	539	191	730
Sindh	566	235	82	317
K.P.K	464	356	33	389
Balochistan	264	32	11	43
Capital Territory	95	93	56	149
Gilgit Baltistan	67	30	03	33
AJ & K	71	45	16	61
FATA	67	51	0	51
<b>Total</b>	<b>3,000</b>	<b>1,381</b>	<b>392</b>	<b>1,773</b>

### **Prime Minister's National ICT Scholarship Program (PM NICTSP)**

Since 2007, Ignite (formerly National ICT R&D Fund) is implementing National ICT Scholarship Program (renamed in 2011 as Prime Minister's National ICT Scholarship Program) across all provinces of Pakistan including FATA and Gilgit Baltistan. The program was approved by ECNEC in February 2008 for a period of five years (2007-2011), as per parameters listed in the approved PC-1, for the total budget of PKR 2,414.84million in financial collaboration with PSDP (GoP).

About 4,761 fully-funded 4 year ICT-related undergraduate degree scholarships have been offered to the talented and deserving students of Pakistan under this program in top universities of the country.

The program was extended by the Board of Ignite (formerly National ICT R&D Fund) for another 3 years i.e. 2012-14, whereby 500 scholarships were approved for each subsequent year:

#### **Year-Wise Program Achievements**

<b>Program Summary</b>				
<b>Year</b>	<b>Training Imparted</b>			<b>Scholarships Offered</b>
	<b>Principals</b>	<b>Teachers</b>	<b>Students</b>	
<b>2007</b>	-	<b>700</b>	<b>6,100</b>	<b>390</b>
<b>2008</b>	-	<b>436</b>	<b>7,200</b>	<b>550</b>
<b>2009</b>	<b>200</b>	<b>600</b>	<b>9,000</b>	<b>737</b>
<b>2010</b>	<b>200</b>	<b>600</b>	<b>11,000</b>	<b>580</b>
<b>2011</b>	-	-	-	<b>918</b>
<b>2012</b>	-	-	-	<b>500</b>
<b>2013</b>	<b>169</b>	<b>509</b>	<b>7,008</b>	<b>548</b>
<b>2014</b>	<b>152</b>		<b>9,018</b>	<b>538</b>
<b>Total</b>	<b>721</b>	<b>2,845</b>	<b>49,326</b>	<b>4,761</b>

#### **Province – Wise Scholarship Allocation**

<b>Province</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
AJ&K	-	-	-	-	-	-	21	18	39
Balochistan	21	29	75	51	40	36	51	51	354
Fata	6	5	16	12	10	2	26	17	94
Federal Capital	-	-	-	-	-	1	-	4	5
Gilgit Baltistan	-	-	17	12	12	1	11	16	69
KPK	37	86	122	92	123	76	83	80	699
Punjab	219	305	350	295	529	270	256	251	2475
Sindh	107	125	157	118	204	114	100	101	1026
<b>Total</b>	<b>390</b>	<b>550</b>	<b>737</b>	<b>580</b>	<b>918</b>	<b>500</b>	<b>548</b>	<b>538</b>	<b>4761</b>

More than 1,580 scholars were studying under the program during the FY 2016-17. 1,048 scholars have successfully graduated during the FY 2016-17 and now contributing in the economy or pursuing their higher qualification in national and international universities.

#### **Prime Minister's Scholarship Program for Talented Students of Balochistan**

Ignite (formerly National ICT R&D Fund) is providing funding for the first three batches (2011-12, 2012-13, 2013-14) of 'Prime Minister's Scholarship Program for the Talented Students of Balochistan for a period of five years (class 8th to class 12th). The batch enrolled in 2011-12& 2012-13 has concluded its term and graduated. Batch of 2013-14 is currently being provided funding and will

conclude its term in 2018. The total project funding is 675 million Rupees. Scholarship covers tuition fee, boarding & lodging, bi-annual travel charges, stipend, books, stationery, uniforms and miscellaneous expenses. The scholarship award is applicable only to the students of 30 districts of Balochistan.

Program is being executed by the Company in collaboration with Capital Administration and Development Division (CADD) and Education Department, Government of Balochistan. Total disbursements made under the program stand at PKR 480million (approx.).Below table shows the status of students:

<b>No. of Scholarships</b>	<b>Passed Out (2015-16)</b>	<b>Currently Studying (2016-17)</b>
<b>424</b>	<b>285</b>	<b>139</b>

### **International Symposium on Technology Entrepreneurship and Incubation**

International Symposium on Technology Entrepreneurship and Incubation organized by Ignite (formerly National ICT R&D Fund) in collaboration with HEC and IBA Center for Entrepreneurial Development, Karachi, was held at HEC on 19-20 August, 2016.

The purpose of symposium was to develop entrepreneurial mindset and share latest ideas and developments in the area of entrepreneurship and incubation with faculty members, managers of incubators and ORIC managers. It was designed to encourage entrepreneurs, start-ups and incubators in bringing new ideas and implementing them in an effective manner.

A large number of intellectuals, Vice Chancellors of universities, students and volunteers participated in the event.

### **Capacity Building for Developing Mobile Applications for Persons with Disabilities in Pakistan**

This project was funded by Ignite (formerly National ICT R&D Fund) and executed by Special Talent Exchange Program (STEP).

#### **Project Brief:**

Project Duration:	6 months
Total Cost:	Rs. 3.32 Million
Project Start Date:	August 12, 2016
Total Proposal Received till Deadline:	72

The project was designed to promote awareness on mobile accessibility, built technical capacity of mobile developers on global standards and mechanisms, and, produced mobile application(s) for persons with disabilities in Pakistan. It also facilitated mobile application developers to develop mobile

applications for PWDs by providing mentoring and validation through group of expert persons with disabilities.

Details of workshops conducted along with participants trained are as follows:

<b>S.No.</b>	<b>City</b>	<b>Participants Trained</b>
1	Islamabad	30
2	Peshawar	48
3	Quetta	56
4	Lahore	28
5	Karachi	43
<b>TOTAL</b>		<b>205</b>

# **TELECOM FOUNDATION**

## **Background:**

Telecom Foundation (TF) was established in 1991 as Charitable Trust under Endowment Act, 1890 through S.R.O. No.1194(1)/91 dated 04 November 1991. Main objective of the formation of Telecom Foundation was to provide welfare amenities like financial assistance/stipends to students and subsidized education to children of the beneficiaries i.e. in service and retired employees of Pakistan Telecommunication Company Limited (PTCL), National Telecommunication Corporation (NTC), Pakistan Telecommunication Authority (PTA), Frequency Allocation Board (FAB) and their subsidiaries.

Telecom Foundation has been undertaking telecommunication projects and other commercial ventures to generate funds to support its welfare activities. The Foundation is governed by a Board of Governors with Secretary IT as its Chairman.

## **PERFORMANCE AND ACHIEVEMENTS:**

### **1. Education:**

Telecom Foundation is running a chain of School Systems (12 Nos.) in different cities of Pakistan wherein beneficiary students are getting education on subsidized fee. Efforts have been made to improve quality education for which qualified teachers have been engaged. As present 2734 students are enrolled in TF School Systems with 278 teaching and non-teaching staff. The students of high schools have passed matriculation examinations with flying colors.

### **2. Skill development programs:**

- a. Telecom Foundation is conducting skilled development programs in its Training Centers located in different cities with the following objectives:
  - To create awareness of emerging disciplines through skilled development courses.
  - To produce professionals in the following fields:
    - i. Optical fiber cables jointing & transmission.
    - ii. Gigabit Pasic Optical Network (GPON)
    - iii. Broadband Technology (DSL/IPTV).
    - iv. CCTV.
    - v. Basic Computer Courses
    - vi. Electrician Course.

### 3. Business activities:

Telecom Foundation is currently registered with Pakistan Engineering Council in Category CB with a limit of Rs.3,000 million for construction/ operation of engineering works, telecommunication installation, external telecommunication works and general civil works under CE10, EE03, EE07, EE08 & ME01. Telecom Foundation undertake business and commercial ventures mostly in cable laying projects to generate adequate resources to carry out its welfare activities. Despite general recession prevailing in the country, TF has been able to procure some projects through competitive bidding during the last three years. Brief detail of projects obtained/ undertaken by TF is given below:

	(Rs.in Million)
▪ NTC OSP/OFC Network (Faisalabad to Lahore & Qila Sheikhpura Sargodha).	19.79
▪ UG Cable laying at PAF Base Mushaf Sargodha	3.025
▪ NTC OSP/ OFC Network & Reallocation/replacement of NTC Network at Aziz Cross GT Road, Gujranwala	11.41
▪ OSP/OFC Network for Orange Train Package-I &II LHR	28.48
▪ Laying of UG Cable Network at Risalpur (Section-I &II)	4.545
▪ Laying of UG Cable Network at Rawalpindi (Section-I &II)	4.429
▪ NTC work for laying of UG Cables at Quaid-e-Awam University Of Engineering Science & Technology Larkana.	3.492

### 4. Projects in hand:

Detail of projects in hand are given at Annexure.

### 5. Financial:

Due to low business volume and provisions for receivables/losses of subsidiaries, the Foundation remained in losses upto 2010-11, but it has improved its profitability during last two, three years. Despite recession in telecom development market the Foundation sustained its operations. The Foundation is heavily dependent upon rental income of its main building to meet operational expenses and running twelve schools. The Foundation was over borrowed in past, but it has paid back loans and presently free from borrowings.



**TELECOM FOUNDATION**

DETAIL OF PROJECTS IN HAND

Sr. No.	Name of Projects (Telecom)	Value of Contract (M)	Date of Contract Started	Date of work completion	%ages
1	Orange Train Package-I	17.77	5 weeks after issuance of PO of each section		22%
2	Orange Train Package-II	10.71	5 weeks after issuance of PO of each section		41%
3	OSP Network at Sargodha Road Faisalabad	0.88	04-08-2017	19-09-2017	90%
4	Laying of UG Network at PAF Base Lahore	11.55	work order awaited from NTC		
5	OSP/OFC Network at Gujranwala	5.70	02-06-2016	15-09-2016	One sec. complete. W.O awaited for remaining work
6	OSP/OFC Network at Qila Sheikhupura	7.360	06-05-2015	04-08-2016	90% work completed. ROW awaited from NTC for remaining work
7	Laying of UG Cable Network from MDF to Cabinet No.505 (OC ENGG Residence) at PAF Base Mushaf, Sargodha	3.025	10-05-2016	09-07-2016	100%
8	Relocation / Replacement of NTC Network due to Construction of Fly Over at Aziz Cross G.T.Road, Gujranwala	5.710	02-06-2016	90 Working Days	50%
9	Laying of UG Cable Network at Risalpur (Section-I)	2.183	August 2017	90 Working Days	80%
10	Laying of UG Cable Network at Risalpur (Section-II)	2.362	August 2017	90 Working Days	80%
11	Laying of UG Cable Network at Rawalpindi (Section-I)	2.238	August 2017	90 Working Days	50%
12	Laying of UG Cable Network at Rawalpindi (Section-II)	2.191	August 2017	90 Working Days	50%
13	NTC work for Laying of U/G Cables at Quaid-e-Awam University of Engineering Science & Technology (QUEST) Larkana. Est No. 718-D(c)	3.492			LOI No. Dir-Dev.-S/718-D(c) dated 22-8-2017 received. Work Order Awaited
<b>Total</b>		<b>75.171</b>			

## **Pakistan Telecommunication Employees Trust (PTET)**

Pakistan Telecommunication Employees Trust (PTET) is established under the Pakistan Telecommunication (Reorganization) Act, 1996 to disburse pension to PTCL pensioners. Detail of achievements and progress are as under:

1. The Trust has obtained ISO 9001:2015 certification. This is in continuation of our strategy to bring operational excellence and is recognition of our standards in line with international best practices.
2. NADRA's VeriSys system has been installed to enable verification of pensioners' CNICs, conversion to family pension and data cleansing.
3. PTET is currently serving over 39,000 pensioners as at 30 June 2017. Pensioners have the option to draw pension through Pakistan Post or banks. For pensioners' facilitation, the option to receive pension through bank was started in January 2015.
4. Computerized pension books have been introduced and accordingly, all new pensioners are issued new pension books. This has brought efficiency in our processes by reducing time and cost. Further, the pension payment process is already automated and records digitized in the form of scanned copies.
5. On communication side, to enable a faster communication with pensioners:
  - Universal access number helpline is available for pensioners' facilitation, with dedicated staff available to cater for pension queries. (within office hours)
  - A text message facility has been initiated for better communication with pensioners.
  - Urdu/English versions of PTET websites contain view-only information for pensioners' facilitation.

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# **TELEPHONE INDUSTRIES OF PAKISTAN**

The Telephone Industries of Pakistan was established by the Government of Pakistan (P&T department) in 1952 with the collaboration of Siemens of Germany. The initial ratio of shares was 75:25. The main objective of the company was to make telephones and also cater to requirements of the growing telecom industry within the country. The company remained as a subsidiary/subordinate company to the erstwhile P&T Department and later on its successor i.e PTCL till 2006-7. On privatization of PTCL, TIP was placed under the Ministry of IT and Telecom.

The company had started incurring losses from the year 2002 as the company could not cope with rapidly transforming technologies in the telecom sector. This gradually led to decline in its income and profits. The GoP had to bear the burden of providing funds for establishment related expenditure in 2008-09 and onwards till today. Many other issues have cropped up as a result of instability to the company i.e land disputes, union related initiatives and serious financial losses due to weak administrative and financial controls.

The year 2016-17 has been an eventful year in the history of the Telephone Industries of Pakistan. It was actually the start of the reformation process of a sick /loss making unit with the sincere objective of making this entity a better and stable corporate entity. The Ministry of IT and Telecommunications had also placed TIP on the list of Privatization for early implementation. Following is an overview on the situation prevailing there and the administrative and financial actions taken by the TIP management during the current year to streamline and rationalize matters within the Telephone Industries of Pakistan.

## **Administrative Issues;**

- i- Serious unrest and agitation among the regular employees of TIP to safeguard their vested interests accruing as a result of no real business in the company, ex- contractual workers seeking regularization or ex- colony board employees claiming to be TIP employees and they had obtained stay orders from High and lower courts. There were 64 court cases against TIP at the start of July 2016. Writ of top management was not visible.
- ii- There were serious issues of financial indiscipline and noncompliance within the finance departments who were controlling matters and expenditures on their own.
- iii- There was a colony board established in the T&T colony Haripur based on agreed mutual collaboration between TIP, PTCL and NRTC to provide funds for the smooth running of the board. Due to differences in views, NRTC and PTCL withdrew their contribution from areas of the colony board and TIP was constrained to use its funds for the smooth running of the colony board. Issues of nepotism and favoritism were found foremost in the affairs of the colony board.
- iv- Un-authorized expenditures accumulated to an estimated Rs.700 million in last 10 years.
- v- Despite enforcement of 2012 IRA, the CBAs or unions were continuing to work instead of getting themselves registered with NIRC as TIP was declared as trans-provincial industry. Agreements/settlements unfavorable to TIP as a company continued to be made between employees representatives i.e. Union /CBA and TIP Management leading to further losses.

## **Financial situation;-**

- a- Financial Reports (Audit) for the years 2013-14, 2014-15, 2015-16 were not prepared.
- b- Issues relating non filing of tax returns existed.
- c- The finance department was filled with individuals hired on daily wages and no regular employee was equipped with knowledge, skills and experience to deal finance related issues. Most of these daily wages employees were those who were earlier terminated and almost 95% were litigants against the company in high courts and Supreme Court of Pakistan. A deliberate approach of slowing down work and delaying tactic was prevailing.
- d- Wasteful expenditure due to bad agreements between with CBAs / unions involving subsidies / benefits in House rent, electricity & gas bills, medical treatments etc resulting in loss of millions of rupees. This was despite repeated pointing out by Government Audit teams terming such expenditures as wasteful and un-authorized.

### **Corrective Action Taken**

a. **Administrative Approvals and Co-signatory**

Managing Director became co-signatory to all transactions /payments related to TIP and all delegation of financial powers were abolished.

b. **Rationalization of extra staff**

The existing temporary staff (contingent) in start of July 2016 was 128 in TIP Factory Haripur. This strength was reviewed and reduced to 64.

c. **Engaging third Party for temporary employees:**

Services of outsourcing agency (third party) was used to engage all contractual /contingent employees for regularization of services.

d. **Streamlining of Transport and Related Expenditure:**

There were 63 vehicles on the strength of TIP in July 2016 with a majority of them un-roadworthy. Therefore an assessment was made for roadworthy and un-roadworthy vehicles. Decision was taken to dispose off unusable vehicles, old and off road ones first, in four phases due to high maintenance cost. All vehicles allocated to officers with POL quota were withdrawn and compensated with car /conveyance allowance. PSO POL fleet cards was introduced in TIP for the first time. By 30<sup>th</sup> June, 2017, 34 vehicles were disposed-off in the first two rounds of auctions fetching Rs.22.392 million.

e. **Corrective Action**

Disciplinary action by issuance of show cause notice was taken against TIP employees involved in indiscipline and land corruption case in TIP Housing Scheme. A complaint was lodged with NAB by MOITT resulting in the filing of a reference in the Accountability Court against 141 employees of TIP for loss of Rs.450 million to the government exchequer. Similarly, action was taken against other TIP employees found involved in inciting violence directly or indirectly.

f. **Rationalization /Austerity measures**

Biometrics attendance system was installed at the entry and exits points to check the absence /late comings of the employees. CCTV cameras installed in the finance Department effective January, 2017 onwards, all employees in different building blocks were directed to shift to one building i.e. main administration block. The impact was reduction in expenditure of factory electricity bills.



**g. Establishing online file movement in TIP**

An online electronic filing system was introduced in TIP enabling connection and communication between Islamabad, Haripur, Lahore and Karachi to submit files to MD for approvals / orders. This measure saved time and resources of sending files by post/courier from one city/place to another, ensuring swift communications and quick disposal of files/cases.

**h. Redesigned Website**

TIP management has also introduced a new version of its website and is continuously making efforts to improve the website and its contents ([www.TIP.gov.pk](http://www.TIP.gov.pk)).

**i. Financial streamlining**

During the last six months, financial audit of pending years 2013-14 and 2014-15 have been completed following a timeline agreed with SECP . The entire team of finance managers was replaced and the 95% of the old daily wages employees removed from TIP. A new team of qualified and competent was put in place in TIP. DDO for each regional office (Karachi, Lahore, Islamabad, Haripur) were nominated.

**j. Savings**

Due to strict austerity measures and fiscal control, the operating expenses in FY 2016-17 resulted in savings. POL payment through PSO fleet cards had a good impact. Expenditure on Purchase of Medicines was curtailed significantly resulting in savings. Expenditure on Medical reimbursement was seriously curtailed due to stringent checks on fraud or wrong submission of cases.

**k. Pension through Bank Accounts**

Reportedly a figure of 3000 plus pensioners of TIP was quoted and was never verified. However, to ensure transparency and authenticity of process, it was decided in January 2017 to introduce a transparent and verified mechanism of disbursement of pension only through bank accounts. Despite hurdles, by end of June, 2017, there are 2280 verified pensioners receiving pension through verified bank accounts throughout the country.

**l. Utilities –Electricity & Gas Bills**

For years, TIP had been making undue and unverified payments for electricity and gas bills of residences of TIP and ex- TIP residents, including bills related to schools, hospital and estate office. Average monthly expenditure paid on electricity ranged between Rs.5.00 million (off peak months) and Rs.10.00 million (full peak months). TIP management with the solid backing of TIP Board of Directors adopted the approved policy of withdrawal from making payments in matters related to T&T colony, Haripur under the head of utility. This resulted in huge savings from the resources of TIP (see table 1)

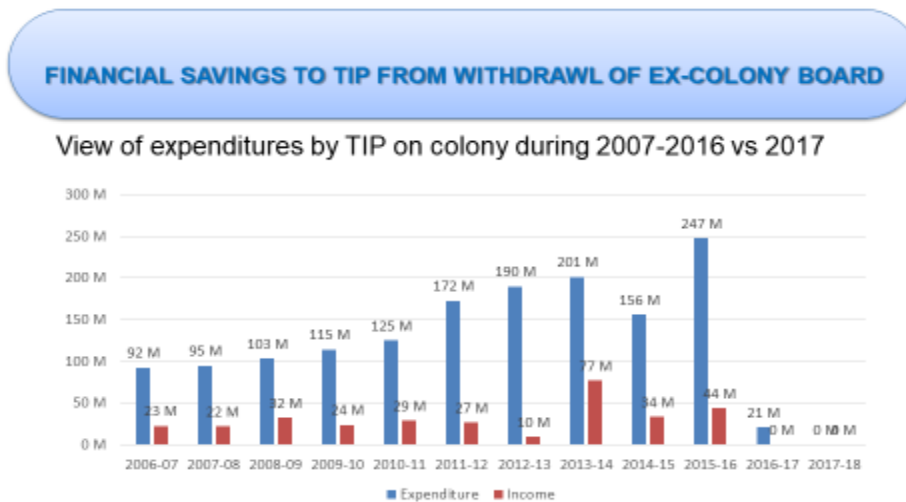
**m. Production efforts**

The TIP management took a conscious decision to assess the capability of the machinery and assembly lines of the TIP factory workshops and it was decided to manufacture steno telephone sets in view of the overwhelming demand of such sets in the public sector. Therefore, work on production of 2500 steno sets was initiated as a pilot project through publication of tenders in newspapers. Confirmation of delivery has been received for foreign imports and consignments will be reaching soon. Hence it is expected that once this test production is successful, the size of production will be increased in view of available finances.

n. **Court Cases**

At the start of the financial year, TIP was contesting 64 courts cases in various courts including the Supreme Court of Pakistan. By the end of June 2017, TIP was facing 74 courts cases made by litigants (existing / ex- regular /contractual employees/CBA office bearers) desirous of either hindering or halting corrective action / reform agenda being carried out being part of the vested interests responsible for the decline of Telephone Industries of Pakistan. TIP management was able to holding itself successfully with the support of the Ministry of IT and Telecommunication and TIP Board of Directors. It has also adopted a proactive approach to reduce the litigation burden on TIP.

**Table.1**



18

o. **Revision of rental agreements of TIP office building Haripur :-**

Moreover, TIP Islamabad office has revised the rental contract with M/S MTML (U-phone ) and Pak Data Com (PDL) Rs 52 psf to 60 psf for covered area and Rs.28 to Rs 33-34 for open area psf) and yearly rental income of TIP increased to Rs. 43 million this year with 10% annual increase in subsequent years.

p. **Production of 2750 Steno telephone sets: -**

On the direction of MD TIP production department plan to manufactured 2750 steno telephone sets. Plastic material/some other raw material was already available in TIP stores. After procurement of parts & components production of 2750 steno telephone sets were in process .Expected sale would be around 18.6 million at unit price of Rs 6786/ (including GST) per set against the total input cost of Rs. 9.5 to 11 million approx.

# Virtual University of Pakistan

## Organizational Structure:

The University was established vide Ordinance No. LII of 2002. The honorable President, Islamic Republic of Pakistan is the Chancellor of the Virtual University of Pakistan.

The Board of Governors is the apex body of the University, responsible for the general supervision and control of administrative, academic and financial affairs and the power to lay down the policies of the University.



Authorities of the University includes; the Board of Governors [Secretary, Ministry of Information Technology is the Chairman of Board] the Executive Council, Academic Council, Boards of Studies, Advanced Studies & Research Board, Selection Board, Finance & Planning Council etc. The Rector is the Chief Executive and Academic officer of the University who is responsible to ensure that the provisions of the Virtual University's Ordinance, the Statutes, the Regulations and Rules are faithfully observed in order to promote teaching, research, administration, general efficiency and good order of the University.

## Brief Introduction:

The Virtual University of Pakistan is the pioneer in Information and Communications Technology (ICT) based education in Pakistan and is the thought leader in the provision of quality higher education through enabling technologies. It thus aims at alleviating the lack of capacity in the existing universities while simultaneously tackling the acute shortage of qualified professors in the country. By identifying the top Professors of the country, regardless of their institutional affiliations, and requesting them to develop and deliver hand-crafted courses, the Virtual University aims at providing the very best courses to not only its own students but also to students of all other universities in the country and abroad.

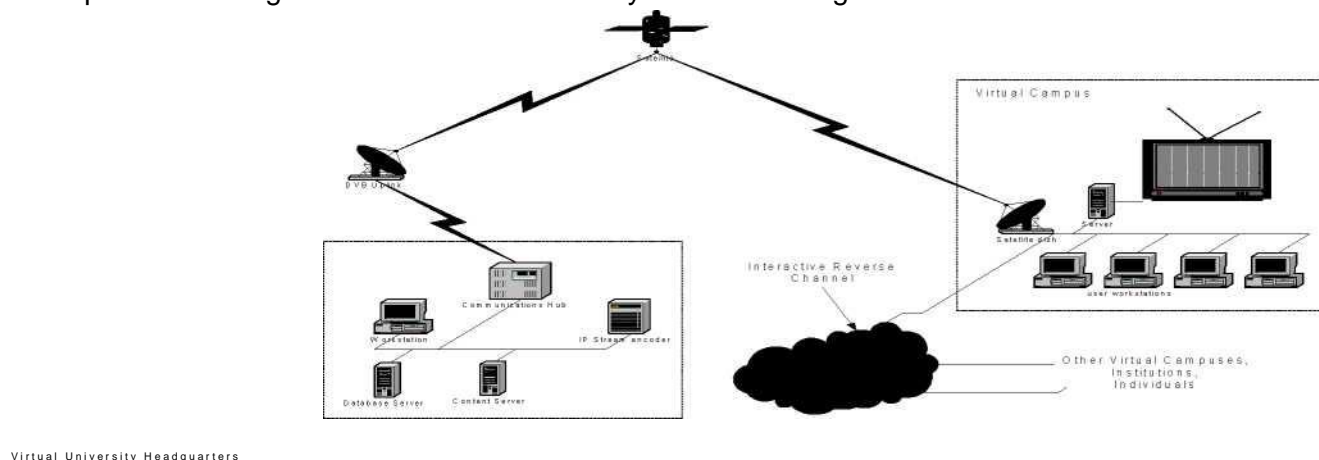
It employs a unique pedagogy involving video content delivered through multiple modes including broadcast television, the World Wide Web and DVDs. Comprehensive student- teacher interaction is provided over the Internet through the University's custom designed Learning Management System, and student support is also supplemented using mobile devices. A continuous quality enhancement cycle has been instituted and the university consistently scores in the highest band in the HEC's quality rankings.

The University leverages ICT in every way possible. In addition to owning and operating four free-to-air satellite television channels, the Virtual University uses IT systems developed in-house for every aspect of its operations. In particular, the extremely innovative IT based examination system of the University, which has been presented at an international conference at MIT, USA, is also used by a top tier national university with full support from VU. The VU Learning Management System is being



used by a chain of private colleges with the aim of improving learning outcomes at the intermediate level. Other universities are also planning to adopt the same system for their use.

Operational Diagram of the Virtual University of Pakistan is given below.



The Virtual University of Pakistan offers a wide spectrum of academic programs. The outreach of the University is stable with a footprint in over 100 plus cities and towns of the country and the gross enrolled student strength hovers around 200,000. The University maintains high academic standards and students have to work regularly and consistently to get a degree from the Virtual University.

1. Academic Programs: The Virtual University is offering number of academic programs as listed below and the number is constantly increasing with the introduction of new areas of study. List of programs initiated during the during the year 2016-17 [Fall 2016 & Spring 2017] along with total number of programs offered by the University is given in table below:

S.No.	Programs/Level	No.of Program Initiated during the Year 2016-17
1.	PhD Programs	-
2	M.Phil /MS Programs	2
3	2-year Master Programs	2
4	1-year M.Ed. Program	1
5	4-year BS Programs	1
6	2-year Bachelor Programs	-
7	B.Ed. Programs	3
8	2-year Associate Degree Programs	-
9	Post Graduate Diploma Programs	-
10	Specialization Certification	-
11	Deficiency Semesters	1
12	Zero Semester for MS	1
<b>Total:</b>		<b>11</b>

## 2. Students' Detail:

Detail of overall students admitted, graduated, and active during the period Year 2016-17 is given in table below.

Sr. #	Year	No. of Students	Pass Out	Overall
1	2016-17 [Fall 2016 & Spring 2017]	23919	5250	79737

## 3. No. of Courses Developed:

Detail about courses developed during the period 2016-17 is as under:

Sr. No.	Courses Developed During the Period 2016-2017		Total No. of Courses Developed
	Developed	Under Development	
1.	24	19	24

## 4. VU Education for Pakistanis Residing Abroad:

The University is transmitting its course contents on satellite television which are being seen in other parts of the world especially middle east and surrounding region. Given the quality and affordability and ease of access, VU Programs have become very attractive for expatriate Pakistanis. In foreign countries where VUTV transmission is not available, students can attend lectures through DVDs, VULMS, open courseware (<http://ocw.vu.edu.pk>) or on YouTube (<http://www.youtube.com/vu>). Admitted students may avail the facilities to study at home. However, their examinations are monitored through webcam and state of the art computer based examination system. Presently 1749 students are enrolled as overseas Pakistani students residing in the countries listed below are benefiting from VU:

Continent	Countries
Asia	Afghanistan, Bangladesh, China, Hong Kong, Singapore, South Korea, Taiwan, Sri Lanka, Japan, Indonesia, Kyrgyzstan, Uzbekistan, Palestine, Philippines
Middle East	Bahrain, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, UAE, Yemen, Iraq, Turkey
Europe	Austria, Belgium, Denmark, Spain, Germany, Sweden, France Finland, Italy, Ireland, Norway, Switzerland, Netherlands, Cyprus, New Zealand, Portugal, United Kingdom

<b>North America</b>	Canada, USA,
<b>Africa</b>	Jamaica, Sudan, Botswana, Egypt, Libya, Morocco, Rwanda, South Africa, Zimbabwe
<b>Australia</b>	Australia

## 5. Virtual Campuses:

Presently, there are 164 Virtual Campuses (including PVCs + VU owned Campuses) in over 110 cities spread throughout Pakistan. These campuses provide the required infrastructure to VU students for undertaking courses and to conduct proctored examinations.

Wherein, VU has established its own 27 campuses at Abbottabad (**Hazara**), Badin, Bahawalnagar, Bahawalpur, D.G. Khan, Faisalabad, Ghotki, Gujar Khan, Gujranwala, Hyderabad, Islamabad, Jalalpur Pirwala, Jhelum, Karachi, Lahore, Multan, Muzaffargarh, Nankana Sahib, Patokki, Peshawar, Quetta, Rawalpindi, Sahiwal and Sukkur. These campuses act as a study center for VU students. Summary of Virtual Campuses is as under:

Sr.#	No of Campuses Established Year 2016-17		Total No of Active Campuses Year 2016-17		
	VU Own Campuses	PVCs	VU Own Campuses	PVC	Total
1	-	15	27	137	164

## 6. Convocation:

During the period Virtual University hold its 8<sup>th</sup> Convocations for 6269 graduates respectively. The President of Pakistan and Chancellor Virtual University of Pakistan, conferred degrees to the graduating students.

## 7. Linkages and Collaboration:

During the 2016-17 period Virtual University of Pakistan has established linkages and MoUs with national and international universities/institutions for the improvement of education standards in the country. The University is spearheading and coordinating an IDRC (Canada) funded project on Distance Learning Technologies in Asia wherein research work in many countries including Japan, Mongolia, Malaysia, Indonesia, Vietnam, Cambodia etc. is being carried out under the supervision of VU. Virtual University of Pakistan also provides infrastructure facilities for Pre-Services Training Program for TVET teachers in collaboration with University of

the Punjab, Lahore and Kaiserslautern University, Germany.

■ **Virtual University of Pakistan Signed MoU with Dharmavahini Foundation Sri Lanka:**

The institutions agreed on the content development for the broadcast of an educational TV channel, development of educational content and subtitling & sharing of video lessons along with course material for mutual benefit. The developers of educational programs, individuals and school leavers, in Pakistan and Sri Lanka will get the benefits of education by using television and virtual online learning as an educational media.

■ **Virtual University of Pakistan Signed MoU with University of Agriculture, Peshawar:**

A memorandum of understanding was signed between Virtual University of Pakistan (VUP) and the University of Agriculture, Peshawar for research, development, innovation and joint education.

■ **Virtual University of Pakistan Signed MoU with Lahore College for Women University:**

A memorandum of understanding was signed between Virtual University of Pakistan (VUP) and Lahore College for Women University (LCWU) for research, development, innovation and joint education endeavors.

■ **Virtual University of Pakistan Signed MoU with Department of Auditor General of Pakistan:**

Virtual University of Pakistan (VUP) signed a memorandum of understanding with the Department of Auditor General of Pakistan (DAGP) on March 27, 2017.

■ **Virtual University of Pakistan Signed MoU with Taleem Foundation:**

An MoU was signed between Virtual University of Pakistan and Taleem Foundation (a renowned NGO actively involved in promoting education) to mark the beginning of collaboration for improvement, promotion and furtherance of ICT-based educational setup of the country.

■ **VUP Signed MOU with SIMAP:**

Virtual University of Pakistan has signed MoU with Surgical Instruments Manufacturers Association of Pakistan (SIMAP, Sialkot). The MoU was signed on November 17, 2016. A delegation of SIMAP including Mr. Jahangir Baber Bajwa (Chairman, SIMAP), Mr. Ashraf Raza (Former Chairman, SIMAP) and Ms. Iram Zafar (Secretary General, SIMAP) visited VUP.

- **Virtual University Signed MoU with the Institute of Financial Markets of Pakistan:**  
Virtual University Signed MoU with the Institute of Financial Markets of Pakistan, Karachi on February 17, 2017.
- **Virtual University Signed MoU with Learning Alliance Economy for Knowledge:**  
The Virtual University has signed MoU with Learning Alliance Economy for Knowledge, Karachi on March 8, 2017.
- **Virtual University Signed MoU with Learning Alliance Economy for Knowledge:**  
The Virtual University has signed MoU with Learning Alliance Economy for Knowledge, Karachi on March 8, 2017.
- **Virtual University Signed MoU with Government Sadiq College Women University:**  
Virtual University of Pakistan signed a Memorandum of Understanding with Government Sadiq College Women University, Bahawalpur on March 16, 2017.

#### **8. Major Accomplishments:**

Following are few major accomplishments of the University during the year 2016-17:

- Initiation of new MS programs in Mathematics & Molecular Biology.
- **First Issue of the Journal of Distance Education and Research (JDER) Gets Published:**

The 1<sup>st</sup> issue of the Journal of Distance Education and Research (JDER) from the platform of Virtual University of Pakistan (VUP) has been published <http://journal.vu.edu.pk>. JDER is a peer reviewed, open access, multi-disciplinary journal which is published biannually. It aims at publishing outstanding theoretical and applied research in all academic disciplines with particular emphasis on distance education and e-learning. JDER provides an instant open access to its content holding the belief that making free availability of research to the public supports sharing knowledge internationally.

- **Daily Student Teacher Interaction Starts at VUP:**

Department of computer science initiated an activity to facilitate its students to interact with teachers on every working day in synchronous mode. During the visiting hours, the students can talk to the respective course instructors over Adobe Connect to discuss learning problems and provide feedback on their courses. This activity will help the students to sort out their weekly lectures' issues and keep students in-line with conventional mode interactions.

■ **Virtual University of Pakistan Launches Facebook Page “Life at VU”:**

Virtual University of Pakistan (VUP) launches a new Facebook page “Life at VU” for VU students to provide latest news and updates about extra-curricular activities. The Facebook page "Life at VU" is: <https://www.facebook.com/lifeatvu>.

■ **Faculty Leadership**

(Awards and representation in Govt. policy making committees, memberships on various Councils etc.)

■ **Rector, Virtual University of Pakistan is Conferred with the Title of “Honorary Fellow” from Commonwealth of Learning (COL):**

The Commonwealth of Learning (COL) conferred the title of “Honorary Fellow” to Dr. Naveed A. Malik (Rector VUP) in the 8<sup>th</sup> Pan Commonwealth Forum conducted at Kaula Lumpur, Malaysia. The designation of “COL Honorary Fellow” recognizes outstanding individual contributions to distance education in areas such as leadership & service and published works including courseware, lectures, presentations and mentorship. Consideration is typically limited to citizens of commonwealth countries and designations are for life. Dr. Malik is the second Pakistani to be honored with this title.

■ **Prof. Dr. Masroor Ellahi Babar Wins Research Productivity Award 2015:**

Virtual University of Pakistan is honored that Prof. Dr. Masroor Ellahi Babar (Registrar and Dean Faculty of Science & Technology) had been awarded “Research Productivity Award” for the year 2015 by the Ministry of Science and Technology (MoST) and Pakistan Council for Science and Technology (PCST).

■ **Dr. Naveed Malik Chairs the Youth Entrepreneurship Conference 2016:**

LOGIX College and Pakistan Entrepreneurship Forum (PEF) conducted an entrepreneurship conference for the youth at LOGIX College, Sargodha. Dr. Naveed A. Malik (Rector VUP) was the Chief Guest of the conference.

■ **Mr. Shahbaz Yaqub Becomes “Fellow Member” of ICMAP & “Affiliated Member” of CIPFA:**

Mr. Shahbaz Yaqub (Assistant Professor, Accounting & Finance) has become a fellow member (FCMA) of the Institute of Cost & Management Accountants of Pakistan (ICMAP).

■ **Computer Science Department of Virtual University Secures National ICT R&D Funding:**

Department of Computer science, VUP has secured funding from National Grassroots ICT R&D for three Final Year students’ Project. The submitted Projects were “Game Club”, “NFC Based Android Task Launcher” and “Virtual Dressing Room”. The project on “Virtual Dressing Room” is accepted by the ICT R&D for next round of competition. The main purpose of this project is to Change the world into technology era and to enhance the shopping experience of people where they will see the clothes attached virtually on their bodies.

**9. Student Leadership**

(Co-curricular Activities: University dramas, exhibitions, expos, competitions, debates at national and international levels):

- **A Student of Faisalabad Campus (VUP) Wins Microsoft Contest:** Mr. Ahsan Siddique (bc140402002), a student of Virtual University of Pakistan, Faisalabad Campus, won the Microsoft contest entitled "Learn for a Chance to Win with Microsoft". The competition was held among the young talented IT students from Egypt, Saudi Arabia, Lebanon and Pakistan.

#### 10. Conference/Symposium/Workshops:

- **Virtual University of Pakistan Hosts National Symposium on Genetics Testing & Counseling:** The Department of Molecular Biology, Virtual University of Pakistan organized a one-day national symposium sponsored by Higher Education Commission of Pakistan titled as “Potential Impact of Genetics Testing & Counseling” at M.A Jinnah Campus, Lahore on August 04, 2016
- **Virtual University of Pakistan Holds National Conference:** One-day national conference entitled "Latest trends in detection and degradation of aflatoxins and its ingredients in the feed" was held on April 18, 2017.
- **Department of Economics Initiates ‘VU Economists’:** The Department of Economics has formed a research group "VU Economists". The aim of this initiative is to provide a platform to the members of the group to explore and generate latest knowledge in the field of economics. The group will focus on research-based activities by holding weekly presentation sessions by all the members. The group will strengthen the economics faculty by inculcating research culture.
- **Virtual University of Pakistan Organizes International Conference on “Latest Trends in Domestic and Wild Animal Genomics and Biotechnology”:** Virtual University of Pakistan (VUP) organized a two days International Conference themed as “Latest Trends in Domestic and Wild Animal Genomics and Biotechnology” on November 21-22, 2016 at M. A. Jinnah Campus, Lahore. The Conference provided a forum where animal sciences and conservation, recent trends in molecular investigations, genomics, modern molecular biology and biotechnology tools and techniques could be exchanged and discussed by all the stakeholders. A total of 25 research papers and 40 posters were presented in the conference.
- **Department of Molecular Biology Organizes Seminar on “Advancements in Aging Research”:** The Department of Molecular Biology organized an educative seminar entitled “Advancements in Aging Research” at Lawrence Road Office Lahore (LRO) on November 8, 2016. The seminar was organized with the collaboration of National Academy of Young Scientists (NAYS) and Pakistan Aging Research Society (PARS). The main objective of this seminar was to create awareness about the aging process and its consequences on human health. Dr. Aftab Ahmad (President, NAYS) delivered a very informative speech discussing the factors accelerating the aging process.



- **A Seminar on World Quality Day:** World Quality Day was commemorated by Directorate of Quality Enhancement (DQE) Virtual University of Pakistan (VUP) in collaboration with Quality Enhancement Cell (QEC), University of Education on December 28, 2016.
- **Department of Computer Science Organizes a Seminar on Robotics:** The Department of Computer Science organized a seminar on robotics at Lawrence Road Office, Lahore to discuss the state-of-the-art robotic concepts and potential avenues of research and development. Dr. Syed Atif Mehdi (University of Kaiserslautern, Germany) was the guest speaker.
- **Virtual University of Pakistan Organizes Laptop Distribution Ceremony:** A ceremony for the distribution of laptops under Prime Minister's National Laptop Scheme (PMNLS) Phase II was held at Virtual University of Pakistan, M.A Jinnah Campus, Lahore, on February 11, 2017. Prof. Ahsan Iqbal, Federal Minister for Planning and Development was the Chief Guest of the ceremony. More than 700 VU students from various disciplines received their laptops on the occasion. The PM laptop scheme has benefitted 2500 students of Virtual University across the country.
- **Virtual University of Pakistan Organizes Biosafety Workshop:** Department of Molecular Biology, VUP, organized a one day workshop "Biosafety & Biosecurity: Principles and Practices" in collaboration with the Pakistan Biological Safety Association. The workshop was held at M.A. Jinnah Campus, Lahore.
- **Virtual University of Pakistan Organizes a Seminar on 'Freedom from Corruption Improves Quality of Life':** A seminar on 'Freedom from Corruption Improves Quality of Life' was organized by Directorate of Quality Enhancement (DQE) and Character Building Society, Virtual University of Pakistan in collaboration with National Accountability Bureau (NAB) on May 10, 2017.