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SUSTAINABILITY REPORT 2015-16

TELENOR PAKISTAN

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Executive Summary

Telenor Pakistan – a local subsidiary of the Telenor Group – is a provider of high quality telecommunications and digital services across the country. It stands as the second largest operator in Pakistan’s telecom sector with nearly 40 million customers and continuously expanding 3G and 4G network. In the course of its growth since 2005, Telenor Pakistan has been at the forefront of bringing innovation in the industry and introducing a number of ways to capitalize on already existing resources through customer friendly products and services for the very first time.

Above all, Telenor Pakistan takes pride in being part of an industry that can touch peoples’ lives directly at the grassroots level and understands the responsibilities affiliated with the stature. From encouraging entrepreneurship with mobile internet to making digital inclusion a reality in Pakistan, Telenor Pakistan has linked its business strongly with empowering societies and contributing as a responsible corporate citizen to the local economy.

Whether as customers or employees, people are the most valuable resource for Telenor Pakistan and their wellbeing is of utmost importance for the company. Ensuring compliance with international standards of Responsible Business conduct throughout the supply chain is also one of Telenor Pakistan’s fundamental principles. Inclusion of Women and Persons with Disabilities in Telenor Pakistan’s workforce is also ensured through specially designed programs to encourage diversity. The company’s contribution to social causes for the uplift of marginalized societies and speedy response in the times of calamities and emergencies has also had a significant impact on the people in dire need.

Investment in critical infrastructure while keeping long term sustainability in mind is not only part of Telenor Pakistan’s business strategy but equally vital for the society. As for contributions to the national exchequer, Telenor Pakistan has paid PKR 243 Billion since its inception in 2005 in various forms of direct and indirect taxes, bringing the overall

investment in Pakistan to over USD 3.5 Billion. Environment protection is also one of the key areas of considerations when it comes to assessing a project’s feasibility.

And finally, Telenor Pakistan strives to create a business environment that is conducive for the development of innovative services that empower the people of Pakistan and believes in using digital technology to reduce inequalities in all forms possible. Be it helping remote communities to register births through mobile apps or providing farmers in Punjab with timely agronomical information through SMS to maximize yield, Telenor Pakistan is laying the foundation of a silent digital revolution that transcends across all socio-economic segments of the society.

Introduction

At Telenor Pakistan we strongly believe that our business is tied to many positive social impacts over and above our efforts in the domain of Business Sustainability . Be it contributions to the national exchequer, development through infrastructure or promoting entrepreneurship through digital inclusion, Telenor Pakistan has been at the forefront of disseminating benefits of Information Communication Technology in general and mobile communication in particular.

This report captures a holistic view of the best practices adopted by Telenor Pakistan during 2015 – 16 and their impact that continues to contribute towards empowering societies. It covers the creation of shared value both for society and business over time by various departments and work streams of our company – not as a byproduct but as a guiding principle that has given them their professional vision. All information is presented in words, photographs and infographics.

SECTION 01

SUSTAINABILITY REPORT

Our Approach to Sustainability

Guiding Vision

At Telenor Pakistan we believe that success of the business is intertwined with progress of the society. Without sustainable development of the markets we operate in, business cannot prosper.

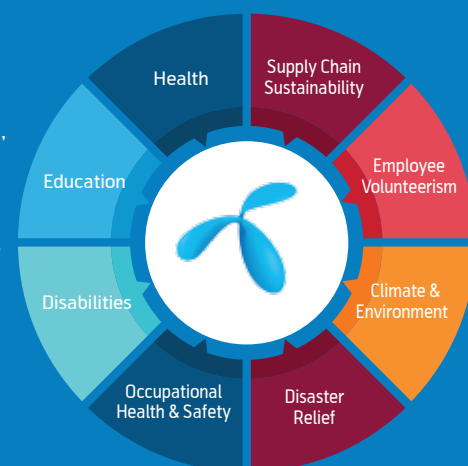
Driven by our vision “Empower Societies” and committed to the trust our customers put in us, we exist not just for profitability but equally for the benefit of people, planet and their prosperity, leveraging on long term partnerships to help create, connected and peaceful world, with a digital future that harnesses transparency and hence, sustainability for our generations to come.



Sustainability at Telenor Pakistan

At Telenor Pakistan, Sustainability is at the foundation of how we conduct our business, and not just a standalone risk management tool or a mix of unrelated philanthropic activities. Our strategy is built around our core i.e. leveraging the power of digital technologies to promote sustainable development and address the challenges our society faces, creating mutually beneficial opportunities all the while mitigating risks. Our mantra for Sustainability - “Digital for Development-D4D” is the manifestation of creating ‘Shared Value’

that is scalable and mutually beneficial. The exponential growth in digitization and anticipated universal penetration of Internet is giving rise to a connected world like never before. Millions of people, from different places and backgrounds, now have the opportunity to be on the same page, both literally and figuratively, a giant leap towards Reduced Inequalities in the society. Sustainability at Telenor Pakistan is based on a using our core competencies that benefit the society as well as the business and encompasses 8 major areas for social investment including:



Responsible Business Conduct

Responsible business conduct is one of the four pillars of Telenor Pakistan's business strategy and an essential part of all our operations. We have a strategic focus on responsible contribution to economic, environmental and social development in the communities we operate, acting with accountability and transparency.

Telenor Pakistan, as a responsible corporate entity, has pioneered the industry in developing and implementing high standards of corporate governance, anti-corruption, labor and human rights, data privacy and environment, in accordance with international conventions and best practices.

We have robust governing documents and a clearly laid out Code of Conduct (COC) for employees & Supplier Conduct Principles (SCP) those are implemented across all Telenor Group business units including Telenor Pakistan ensuring ethical business practices from employees and across the supply chain and hence the protection of our employees and our customers.

New Sustainability Direction – Telenor Group

Responsible business conduct has always played a huge role in our operations, yet three big shifts are driving our new direction.

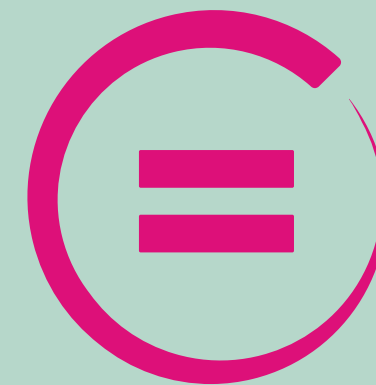
1. The first is the changing way we are managing risk. Telenor shapes business standards in many of the markets we serve. It's an inseparable part of being a responsible operator in these countries, and placing us among the forerunners in mitigating corruption, human rights risks, and poor working conditions amongst suppliers. We manage these as independent risks; yet increasingly we're setting operating standards for responsible business conduct across borders, as well as within them. As a result, in 2017 we will start to integrate our operating principles for responsible business conduct more holistically across everything we do as a business both for ourselves and our broader ecosystem.

2. The second lies in our ambitions as a digital service provider. It's not enough to enable Internet access: we want everyone to be able to leverage its benefits. This includes meaningful solutions that can address social, economic and environmental

problems, close the inequality gap, and empower societies. Our customers are demanding it, our society needs it, and our future as a company depends on it.

As a result, in 2017 we will accelerate our ability to create and scale digital services designed to empower societies. These will be focused on increasing access to digital identity, raising skills and knowledge, growing employment and income, and driving economic growth.

3. The third is the broader global imperative for a sustainable future. Last year, United Nations including 193 world leaders agreed to adopt a collective set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. This move accelerated expectations for private sector leaders to join the international community in taking meaningful action. Sigve Brekke, President and CEO Telenor Group, publicly pledged Telenor's support for this agenda, spreading the word to more than 100 million customers, partners and friends.



Reduced Inequalities

In 2017, we will start to align our agenda directly with that of the UN Sustainable Development Goals. Our business already supports all these Goals, but yielding greater impact will require us to better focus our priorities. An assessment of our activities reveals one Goal in particular where our contribution delivers the most impact: **Reduced Inequalities**.



Compliance and Code of Conduct

Regions Covered



7 Regions, 14 Cities,
48 Sessions

Targeted Employee Base



3008

Overall Employee Participation



1724

Telenor being one of the major international players within the telecom industry has built its success on ambitious goals, high performance and by conducting its business without compromising on "Integrity". In order to further strengthen the culture of business ethics, Telenor has launched a global hotline offered by an international vendor "Navex Global" to enable the employees and other parties to report Code of Conduct breaches conveniently without any fear of repercussions. The reporting channel provides voice and web based reporting mechanism while ensuring the highest level of confidentiality.

During 2016, Ethics & Compliance (E&C) team conducted nationwide Integrity Awareness Roadshows for all employees in order to improve their understanding towards functionality of E&C hotline, ethical dilemmas and an individual's obligation towards Code of Conduct. Precisely speaking the company successfully reinforced the confidence of its employees in our core values.

Ethics & Compliance team will continue upholding the principles that makes Telenor Pakistan industry leader when it comes to best practices and adhering to with international standards. This includes innovative and continued efforts to improve the function, engage employees and maintain and retain their confidence in the existing regimes.

*be the force
against corruption*



Anti-Corruption

Telenor Pakistan has made continuous progress in strengthening its internal controls in a bid to curb and eliminate any incidence of financial corruption and corrupt practices. The prime tool in this effort to stamp out corruption, as and where it may occur, is an effective Anti-Corruption Policy which, inter alia, aims to achieve the following objectives:

1. Limit any legal risk and financial exposure associated with graft
2. Create a conducive business environment
3. Prevent the wastage of financial resources
4. Avoid reputational damage

Awareness of the policy, and the obligations it creates for individual employees, is paramount for the purpose of achieving the said objectives. The Anti-Corruption Support Team, which is an amalgamation of key resources from the Legal Team and Corporate Communications

Team, have been entrusted with this critical task of spreading constructive and functional knowledge of the policy. Consequently, various online tools as well as scenario training sessions have been offered and pursued with the employee-base of Telenor Pakistan. The Legal Team, which is the owner of the Anti-Corruption Policy, have received multiple queries seeking advice on whether or not a particular act, often intended to be taken in the course of business, falls foul of the Policy.

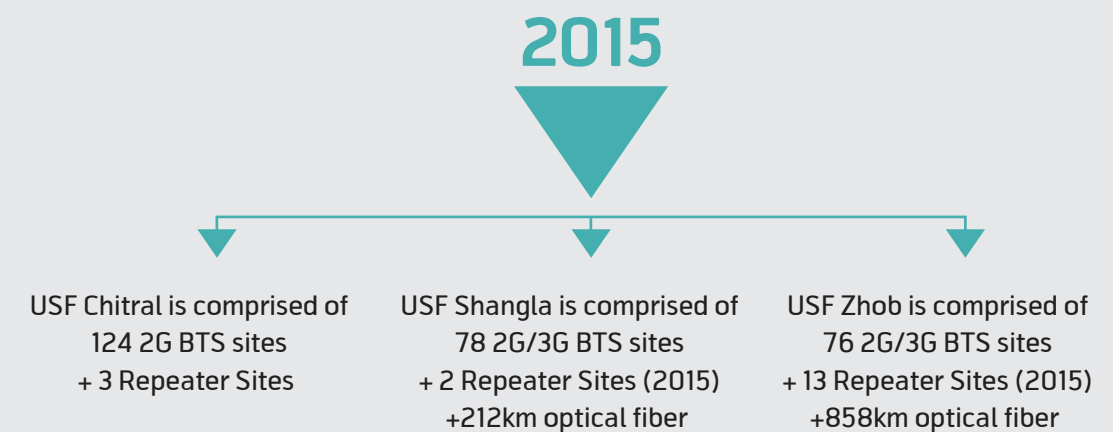
Ambition:

Drawing on the effectiveness of the trainings, and the remarkable response received from the employees, the Legal Team intends to continue to advocate our anti-corruption stance, undertake roadshows and hold internal seminars to further spread awareness of the policy and strive to achieve zero-tolerance for all corrupt practices.

Universal Services Fund

Universal Services Fund (USF) promotes development of Telecom service in un-served and under-served areas. It aims to increase the level of telecom and Broadband penetration both in urban

and rural areas of the country to bring significant advances towards enhancement of e-services. Telenor Pakistan has been awarded three projects by USF:



By virtue of these projects, Telenor Pakistan has been able to connect 3 remote undeserved districts impacting a total population of 1,480,201.



Naya Aghaz

With the goal of empowering women at workplace and harness gender diversity within Telenor Pakistan's workforce, the program provides opportunities for women who have either been on a career break to support their families or never had the opportunity to work in the corporate sector.

The nine-month "Naya Aghaz" program also enables Telenor to

create a future talent pool of potential female employees and future female leaders for the organization while testing flexible working opportunities, virtual working, flexi hours and inclusion of women from diverse backgrounds. Telenor Pakistan believes that this program will lead to the establishment of new ways of attracting and acquiring a talent pool, while providing women with

flexible working opportunities in order to manage their work life balance.

In Naya Aghaz Program Batch III (2015) 22, and in Batch IV (2016) 28 women were taken onboard. Till date 59 women have benefited from this initiative. This program is a regular annual recruitment feature of TP's culture and recruitment.

Humqadam

Stats for 2015 - 2016

No. of Activities <

60

No. of Volunteers <

1284

No. of working hours <

5,846

To kindle social awareness and responsibility in our people, Telenor Pakistan is conducting a flagship Employee Voluntarism program called Humqadam, since past 6 years.

More than 70,000 working hours have been clocked till date by employees towards community service in areas of disability, education, health, environment and emergency response. The program won the National CSR Award 2016 for employee engagement in sustainable activities.

Activities Includes:

- Playdays with patients at the Partner hospital
- Workshops to inculcate professional skills in Persons with Disabilities
- Recycling Awareness Session for kids
- Hygiene awareness sessions and distribution of hygiene kits in schools
- Tree plantations
- Safe Internet Sessions
- First Aid Mobility assistance trainings
- Regular Blood banks
- ICT Trainings
- ICT labs setup



Telenor Pakistan takes pride in the fact that it is not only one of the first employers in the country to take up Disability as a priority agenda, but also among the first to implement a program translating ambitions into concrete outcomes.

Being an equal opportunity employer, Telenor Pakistan launched the first of its kind program Open Mind Pakistan focusing on mainstreaming Disability. By building strategic partnerships, raising awareness through advocacy, trainings and volunteerism, ensuring

building accessibility and enabling inclusion in the work force, Telenor is opening new avenues for people with disabilities as per ILO conventions.

Batch III of OMP commenced in Jan 2016. 16 Persons with Disabilities were on boarded as trainees to go through comprehensive on job training. So far 48 PWDs have been part of this program since 2013

Ambition

To broaden the perception of diversity within and outside the organization and under the umbrella of diversity. To continue showcasing the inclusion model as a best practice for wider adoption within likeminded organizations in public and private sector and pioneer the job market in inclusion. We aim to operationalize the program as an integral annual feature of Telenor Pakistan's culture and recruitment and work on finding possibilities of long term placements within and outside the organization.



Safe Internet and School Outreach Program

By virtue of being a responsible digital service provider, Telenor Pakistan is a strong proponent of the fact that our users be equipped not just with the means to access the Internet, but with the right information and support system to be able to navigate this new world safely.

The Safe Internet Program is designed to empower girls and boys to use **Information Communication Technology (ICT) and the Internet responsibly in a safe manner.** It promotes responsible and safe on-line behavior of children through building their capacity in self-protection online through play based interactive awareness sessions and modules. It also enhances the capacity of project staff, teachers, School Management Council members and students on child protection via workshops and engagements. Telenor Pakistan engages with broader stakeholders including relevant government departments, civil society and media to sensitize them on the importance and effective use of online safety guidelines.

The program covers two major areas:

- School outreach & awareness
- Preventing the spread of Child Sexual abuse material

Status:

Building on the success of Telenor’s School Rehab & Improvement Project, which provided physical infrastructure to schools destroyed by floods, Safe Internet Program was launched in the newly rehabilitated schools to provide virtual access and awareness on safe internet usage through “Safe Internet Parents Guide.” Puppet shows and role plays were also part of the awareness sessions. The program will reach approximately 17,000 children and elementary School teachers in 4 Districts in Punjab, Sindh and Khyber Pakhtunkhwa (KPK) in collaboration with our implementation partner, Plan International Inc. (Pakistan office), over a period of 12 months starting from September, 2016 to August, 2017.

Also as a new theme within humqadam and Customer First Day we have been able to reach more than 5000 students.



Ambition:

Embedding the safe internet theme in I- Champ 2017 program, Telenor is aiming to cover around 1600 secondary schools in 76 districts of 4 provinces, Gilgit Baltistan and Azad Kashmir. An estimated 600,000 students will be trained by experts under this program.

Human Rights Due Diligence (HuRidd)

Human Rights Due Diligence is conducted perpetually by Sustainability/CR teams and iterations are performed every two years

Telenor Pakistan respects and upholds internationally recognized human rights as set forth in the UN Universal Declaration of Human Rights. Telenor Pakistan seeks, in accordance with the UN’s Guiding Principles on Business and Human Rights, to avoid human rights abuses and ensure effective remedies in case any of these rights have been violated.

Human rights risks and opportunities, both actual and potential are mapped and reported

In pursuit of the same Telenor Pakistan regularly conducts human rights due diligence exercise for identification and mitigation of human rights related risks, opportunities and impacts resulting from its activities.

Status:

1st iteration concluded and 2nd iteration commenced in 2016

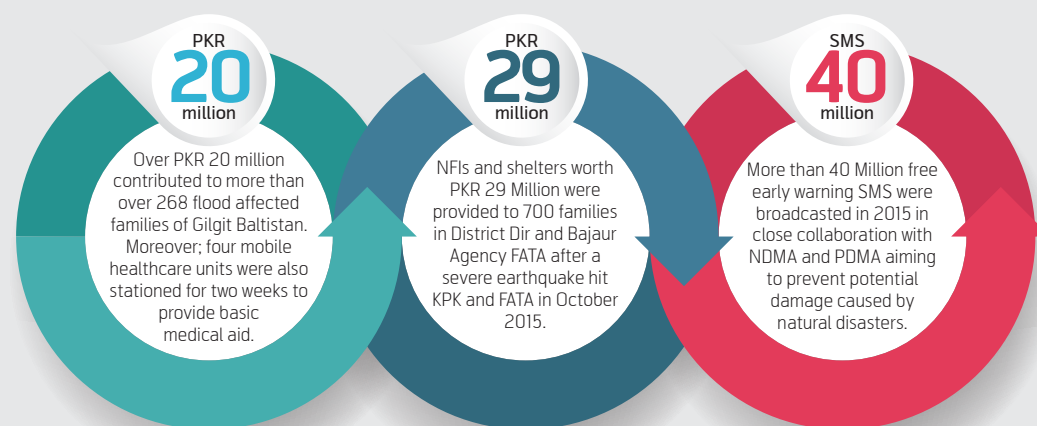
Ambition:

To conclude 2nd iteration in 2017

Management and mitigation plans are devised and implemented



Emergency Relief and Early Warning



Occupational Health and Safety

Occupational health and safety (OH&S) unit at Telenor Pakistan has a strong focus on primary health and safety hazard prevention and control. The goal of occupational health and safety programs include fostering a safe and healthy work environment. OH&S may also protect co-workers, family members, employers, customers, and many others who might be affected by the workplace environment. Telenor Pakistan has implemented OHSAS 18001 standard for continual improvement in occupational health and safety management system. It covers all the corporate offices, data centers, core and network locations.

Annual Risk Assessments activities on the occupational health & safety scope resulted in 360 improvements in the year 2015. In 2016, the number was raised to 539 improvements. Most of these improvements were in the major risk areas of work including fire safety, work at height, electrical safety and ergonomics etc. In addition, every building is inspected on occupational health and safety scope on quarterly basis for reviewing the situation and for identifying health and safety related risks. Telenor Pakistan is committed to systematically work to ensure and secure a good and compliant working environment for its personnel.



a) Employee Engagement, Awareness & Trainings

We believe that all incidents that pose a threat to health and safety of our and supply chain workforce can be avoided! During 2015 – 2016 primary focus was on employees’ behavioral change to ensure their own safety. The behavioral change program included:

- Regular communication focusing on creating awareness, realizing importance and understanding benefits of safe work practices
- Rolling out weekly HSE tips to all employees
- Celebrating HSE Week and Road Safety Week
- Organize activities on International HSE related days, including:

International Day for preservation of Ozone layer	16th September
Human Rights Day	10th December
World Environment Day	5th June
World No Tobacco Day	31st May
World Day for Safety & Health at Work	28th April
World Labor Day	1st May
World Earth Day	22nd April
World Water Day	22nd March

b) Tool-Box-Talks

Tool-Box-Talks are Telenor Pakistan’s perpetual 15 – 20 minutes refreshers to workers on HSE related matters.

c) Training & Awareness Sessions

Focused group class room sessions are held for employees and In-house contractors based upon training need analysis, Inspections and Risk Assessments. The key training topics include Electrical Safety, Fire Safety, Driving Safety, Manual Handling, Work-at- Height etc.



In-house Contractors

- 5,196 man-hours of trainings and awareness, in 345 sessions
- 418 man-hours of Tool-Box-Talk at work, in 142 sessions
- 4,327 participations in 487 Sessions

Employees

- 2,846 man-hours of trainings and awareness, in class-room sessions.
- 453 man-hours of e-learning on driving safety
- 53 HSE on-boarding sessions, for new joiners
- 1,759 Participations



FIRE SAFETY & ERP



WORKPLACE ERGONOMICS



HYGIENE



PPES



HOT WORK



MANNUAL HADING

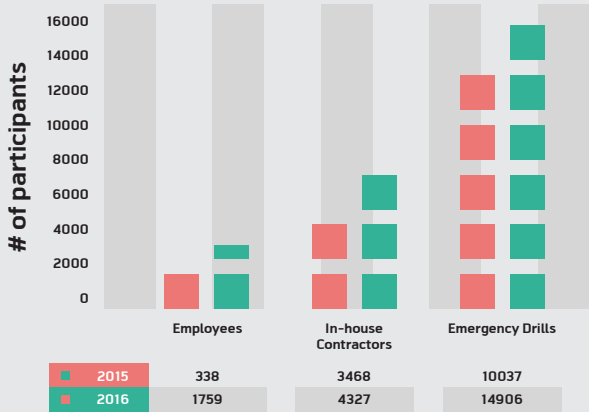


ELECTRICAL SAFETY



LADDER SAFETY

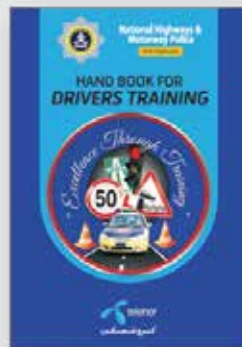
Trainings & Awareness



d) Campaigns for employees

In 2016, campaigns were run on Road Safety, Climate & Environment, and Ergonomics to build awareness amongst employees.

- a. Road Safety week was celebrated in July
- b. Approx. 1,000 employees participated in the E-learning module on driving safety
- c. In collaboration with National Highways & Motorway Police (NH&MP), 20 Training sessions were held on “Road Safety”, throughout the year 2016, training 715 participants
- d. Driving Safety Handbook was launched for employees and public
- e. 4x4 vehicle trainings were held for driver of USF projects
- f. Campaign through social media were conducted



Supply Chain Sustainability

Telenor’s Supplier Conduct Principles (SCP) are based on internationally recognized standards, including requirements on human rights, health and safety, labor rights, environment and anti-corruption. It is mandatory for all Telenor contracting parties to agree to these principles. Suppliers are legally obliged to uphold responsible business practices, monitor compliance to Telenor’s requirements and build capacity among suppliers.

In 2015-16, the supply chain responsibility focus remained on mitigation of supply chain risks, capacity building and monitoring compliance with Telenor’s requirements on responsible business conduct. It has particular emphasis on SCP areas with respect to child labor.

Mitigating Supply Chain Risk:

An Agreement on Responsible Business Conduct (ABC) legally obliges the supplier, having a direct contractual relationship with Telenor Pakistan, to comply with the SCP and requirements set out in the agreement on Responsible Business Conduct (ABC). By year end 2016, in Telenor Pakistan, a total number of 1720 Agreements on Responsible Business Conduct were signed.

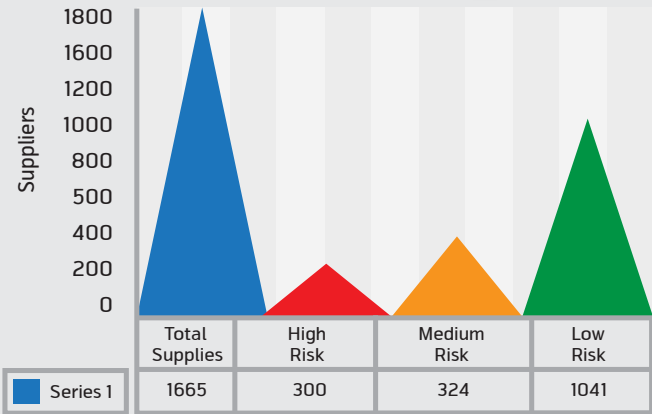
Monitoring Compliance:

- Telenor Pakistan carried out 426 supplier inspections in 2016; including simplified inspections, detailed inspections and audits
- 79 % of the inspections were carried out unannounced
- Approximately 82 major non-conformities were identified during the inspections, followed by immediate remedial actions

Supply Chain Inspection



Annual SCRA



Annual Supply Chain SCP Risk Assessment:

This risk assessment of the entire supply chain is carried out annually for all suppliers and high risk sub-suppliers; based on the potential SCP risk they pose.

In 2016, Telenor Pakistan conducted SCP risk assessment of 1,665 suppliers and sub-suppliers. Consequently, 18% suppliers were identified as high risk, and mitigation measures, covering the monitoring and capacity building, were planned accordingly.



Supply Chain Anti-Corruption Program

Trainings conducted	205
Participants	3000
Man Hours	4400

On a variety of areas from general HSE awareness to anticorruption, a total of 205 trainings conducted with over 3000 participants and 4,400 man hours.

Telenor believes that a sustainable business means having a transparent route, firm values and a clear vision for choosing suppliers, partners and shareholders. This is the Telenor Way and is based on our Code of Conduct (CoC), our Supplier Conduct Principles (SCP) and the Telenor Values.

To ensure sustainability in our value chain we secure Agreements on responsible Business Conduct (ABC) with our suppliers. These agreements specify how Telenor and the suppliers shall work together to promote responsible business conduct in the supply chain.

Telenor Pakistan Supply Chain Anti-Corruption Program 2016 included:

1. 36 Anti-Corruption focused inspections of suppliers, during 2016.
2. 1,000 man-hours of capacity building of suppliers through trainings & awareness.
3. Anti-Corruption handbook development and distribution in Urdu & English languages.
4. Training content development for suppliers in local language.

Conducting annual training for suppliers on Anti-Corruption.

Suppliers

- 4,455 man-hours of trainings and awareness, in 205 sessions
- 400 man-hours of e-learning for suppliers, on driving safety
- 3,241 Participations

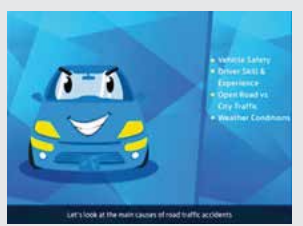
Capacity Building in supply chain - 2016:

On a variety of areas from general HSE awareness to anticorruption, a total of 205 trainings have been conducted with over 3000 participants and 4,455 man hours.

Road Safety Campaign in Supply Chain

Prioritizing transparency, our reporting on non-conformities or incidents goes beyond tier 1 of the supply chain. The road and driving risks increased in our supply chain during 2016 due to remote operations, roll-out in hilly terrains, fog and smog issues. Resultantly, massive campaigns and road shows were conducted to mitigate risks regarding work-related travel.

- E-based training on Road Safety 'People First-Road Safety Rules Edition' was developed and translated in local language. Through class room sessions at TP premises, 3rd party locations and supplier premises the awareness was rolled-out for;
 1. Work force in Sales and Distribution channel
 2. General suppliers
 3. USF projects
- Driving Safety awareness sessions for suppliers in collaboration with National Highways & Motorway Police (NH&MP) were conducted



Climate and Environment

a) Conserving the Environment

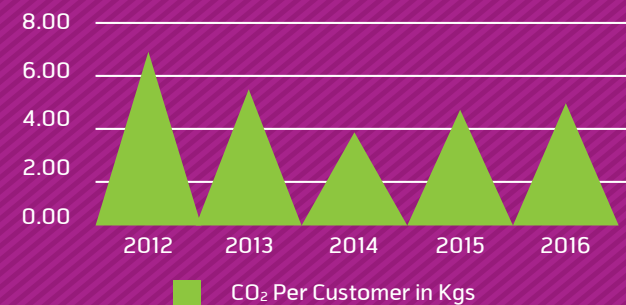
Telenor Pakistan is committed to minimize its environmental impact and make all reasonable efforts to minimize use of resources like energy and raw materials. Our technology and smart services have the potential to cut global carbon emissions and, reduce resource intensity. Telenor Pakistan's key focus is to stabilize energy consumption by improving the energy efficiency of its networks, which represent around 90 per cent of the total energy consumption.

b) Energy Consumptions and CO₂ emissions:

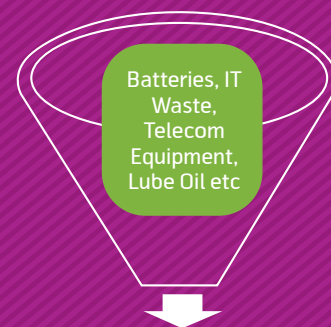
In 2016, total energy consumption in Telenor Pakistan was approximately 557 GWh. Our energy consumption per end customer has over the last five years dropped by approximately 35 per cent.

The associated emission of greenhouse gases in Telenor Pakistan is estimated to a total of 0.178 million tons of CO₂. Our CO₂ emissions per end customer have over the last five years dropped by approximately 32 per cent.

CO₂ Per Customer in Kgs



Hazardous electronic waste and hazardous municipal waste



c) Alternate Energy Solutions:

Telenor Pakistan deployed solar energy consumption system at 163 base stations (towers) during 2015, and 248 during 2016, which brings the total count to **573** by the end of 2016. Telenor Pakistan undertakes cost and energy efficient initiatives like network swaps, the sourcing of energy-efficient technologies infrastructure-sharing and more energy efficient data centers and buildings.

d) Responsible E-waste Initiatives:

The growing demand for ICT products and devices, and their increasingly short lifespans, has resulted in e-waste. In this regard, Telenor Pakistan is securing sustainable waste management systems to minimize its impact on the environment. All electronic waste is reused, recycled or safely disposed according to internationally recognized standards and regulations.

Our E-waste in 2015 reduced to 1,300 tons as compared to 1,953 tons of waste generation in 2014, this is 34% reduction since 2014.

E-waste has further reduced to 1,129 tons in 2016,



807, 700 Kgs of batteries recycled through EPA approved facility.



800+ Kgs, of IT waste was incinerated through EPA approved Facility.



312, 780 Kgs of Telecom waste, Reused and Recycled.



2000 Liters, of used lubed oil incinerated at an approved cement manufacturing plant.

e) Sustainable Environment Practices:

Over 70 procurements at TP with a contract value greater than USD 250,000 were thoroughly evaluated on the sustainability criteria during 2015 and 2016. The purpose is to deploy eco-efficient solutions and ensure product life cycle including the safe disposal.

Telenor Pakistan has implemented Environment Management System in accordance with ISO 14001:2004 standard. The revised ISO 14001:2015 standard was implemented during 2016 which was followed by successful audit of the management system.

Network Resilience during Disasters

In year 2015(July-Aug), Pakistan was hit with devastating spells of monsoon rains and subsequent floods that affected around 800,000 people. One of the hardest hit areas was Chitral where Telenor Pakistan was the only mobile operator. 29 dedicated BTS sites provided coverage to Upper Chitral, Bombarate and Dasu regions posing a formidable challenge for the Technology Field Operations teams to keep the network alive. Smart network operating solutions proved to be the differentiating factors like Solar Power, timely fuel and equipment spare stocking, preventive maintenance, establishment of special monitoring 'war-rooms', arrangement of vehicles/boats etc.

Digital Birth Registration (DBR)

Pakistan has a birth registration rate of only 33.6 percent; approximately 60 million children are unregistered. This is due to multiple social and economic factors, including insufficient resources, weak governance structures, and high costs in time and money required for birth registration. These factors are then exacerbated by a general lack of awareness regarding the benefits of birth registration.

Status:

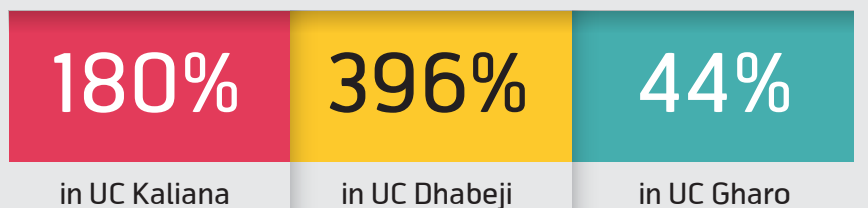
Telenor Pakistan in collaboration with UNICEF, Government and a range of other stakeholders conducted a feasibility study in which three potential registration models were identified:

- **Telenor Facilitator:** In UC Gharo, District Thatta, Telenor retailers or "Sahoolat Ghar" were used as Touch Points
- **Government Facilitators:** In UC Kaliana, District Pakpattan, Nikah (marriage) registrars, while in Dhabeji, District Thatta, Lady Health Workers were chosen as facilitators

Designated government data collectors (facilitators) are equipped with smart phones and a customized mobile application, which digitized the standard birth registration form with necessary documents being photographed. These smart phones have mobile banking accounts enabled for transparent and timely allowance disbursements to the facilitators.



Birth registrations increased significantly across all three UCs:



A web-based dashboard provides real-time data on reported and registered births and also monitors the performance of concerned government officials. The authorized government officials, after reviewing the submissions online, address any queries and process the registration accordingly. The system also extracts information from the data collected and disseminates mother and child's health related advisories along with immunization alerts to the beneficiaries. This project is an ideal example of leveraging technology for development through public private partnership.

Ambition:

After successful conclusion of the pilot in 2016 with promising results, both the provincial governments decided to scale up the solution strategically in other districts, laying a strong foundation for provision of this basic human right across provinces.

DBR is now being scaled up to 5 priority districts under the same tripartite partnership. The solution is now being deployed at Local Government Department (LGD) Secretariats at the provincial capitals Lahore and Karachi.

Telenor Internet Champion (iChamp)

Status:

In June 2015, Telenor Pakistan in collaboration with Facebook, launched Free Basics – a revolutionary initiative to offer free internet services to the masses.

In line with the mission of creating informed societies, Free Basics comprises of national news, weather forecast, maternal health, inspirational stories,

financial management, classifieds, translation tools, and self-development tools.

In 2016, Free Basics supported local publishers like AZ Comics, and teachme.com to teach basic mathematics' concepts to users. Telenor also partnered with REFUNITE, aiming to reunite refugees who have been displaced during natural disasters.

Ambition:

Telenor iChamp is an online learning based competition carried out among secondary schools with the aim to promote internet literacy and safe use of internet among Pakistani youth through fulfilled educational sessions in schools. Covering 76 districts 1,600 schools across all four provinces, Gilgit Baltistan and Azad Kashmir, an estimated 700,000+ students will be trained by

experts through Free Basics with free handbooks and other resources. The 15-episode reality show will feature competitions based on using internet productively and a grand finale where the ultimate iChamp will be announced. iChamp 2017's goal is to touch mass secondary schools nationwide across Pakistan to educate youth on the benefits and safe use of internet.



Mobile Agriculture

Status:

In line with its vision of “Empowering Societies”, Telenor Pakistan launched its “Khushaal Zamindar” (Prosperous Farmer) service for smallholder farmers that made up to 89% of Pakistan’s 30 million farmer base in December, 2015. The service provides localized, contextualized and customized information which includes weather forecasts, timely agronomic and livestock advisory through text messages and outbound voice calls to help farmers increase their crop yield, reduce post-harvest losses, safeguard nutrition and better handle adverse climatic effects and natural resources. Out of 1.4 million active users on Khushaal Zamindar service in December 2016, 20% are females. The service is available in three languages, is free of cost and covers a wide range of cash crops, fruits and vegetables, fodder and livestock. The service is particularly beneficial for farmers who lack access to reliable information that can help them counter the agronomic problems to increase crop yield and guides them on immediate remedial actions in case of natural calamities.

Ambitions:

Addressing gender inequalities: 70% of Pakistan’s female workforce is deployed in agriculture sector where smallholder family women are primarily taking care of livestock and horticulture crops. Connecting / engaging with these women is extremely challenging due to cultural and educational issues that deprives them of numerous opportunities to improve their livelihoods and contribute towards their family’s income and hence well-being.

In line with our commitment towards the SDG of “reduced inequalities we will launch a free of cost IVR service for female farmers using our Prosperous Farmer platform through a dedicated extension i.e. 7272-51 with the aim to enhance women participation in agriculture. The service will additionally promote awareness on nutrition and livelihood related issues along relevant content for improving their dairy, livestock and horticulture yields.

Digital and financial inclusion:

Agri-businesses do not have a direct relationship with the farmers they procure from. Their relationship is controlled by middle-men called Arthis. This leads to corruption, delayed dissemination of information, and limited access to financial services for the small-holder farmers; and serious supply chain inefficiencies for the Agri-businesses. To address this issue Telenor Pakistan will launch Source Smart; an online commodity buying platform aimed at digitizing farmers’ production records and payments hence improving their credit worthiness that will accelerate their financial inclusion.

Climate change has affected Pakistani farmers more than anything else in the recent times and the future looks bleak with the country expected to be listed as “water scarce” by 2020. This means lesser water available for food production and hence lower yields for the small holder farmer. Telenor Pakistan is developing a cost effective rainfall measurement solution based on the attenuation signal fluctuations b/w its cell sites to feed into an easy to use ‘Irrigation Management System’ for small holder farmers so that they get to know the quantity of water required for their crops and hence take first step towards “Climate Smart Agriculture” which is in line with UNs SDG of “Climate Action”.

Telenor Pakistan has been officially selected as Govt. of Punjab’s partner to carry out their initiative of “Empowerment of Farmers through Digital and Financial Inclusion” across Punjab. As part of the project, Telenor will disburse and collect interest free loan installments from 125,000 farmers, provide 4G mobile handsets and SIMs, agri apps, internet connectivity to the farmers. Other than that Telenor will be setting up facilitation centers across the 36 districts of Punjab to train the farmers on smartphone and app usage to the best of their advantage. This is a game-changer and the biggest Public-Private partnership project of its kind in the world and its expected outcomes will contribute towards multiple SDGs.

Digital Learning

Digital Learning Program is a virtual education platform designed in collaboration with Orenda to transform the teaching and learning environment while meeting the needs of primary schooling in Pakistan through innovative use of technology. Using an iterative design methodology, the national curriculum is adapted and converted into animated digital content, produced in local languages, to supplement understanding of concepts through visual aid and simpler language.

Status:

The digital content is coupled with activity and play based learning. Teacher training module and a robust real time monitoring and evaluation system for adaptive and personalized lesson management and planning are also in place.

Currently, the direct beneficiaries of the program are students at 12 government primary schools.

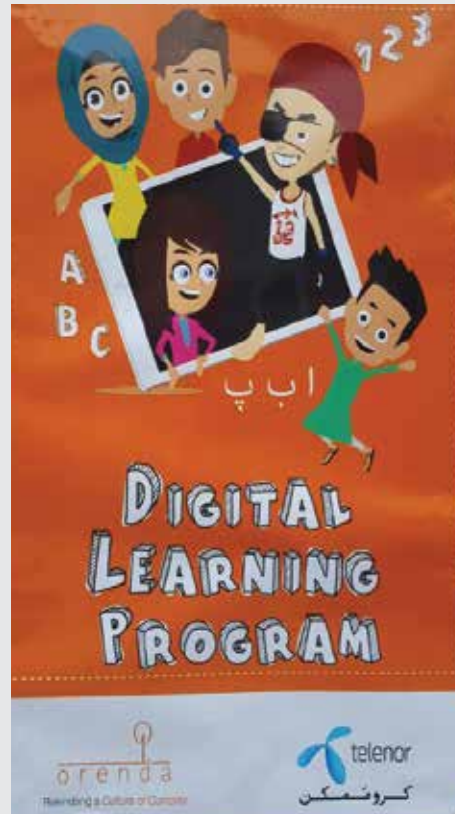
Digital Learning program is built to create an education system that is personalized and adaptive according to the learners' capacities, captivate the learners' interest, and ensure greater accessibility and transparency, in order to achieve sustainability.

Salient Outcomes

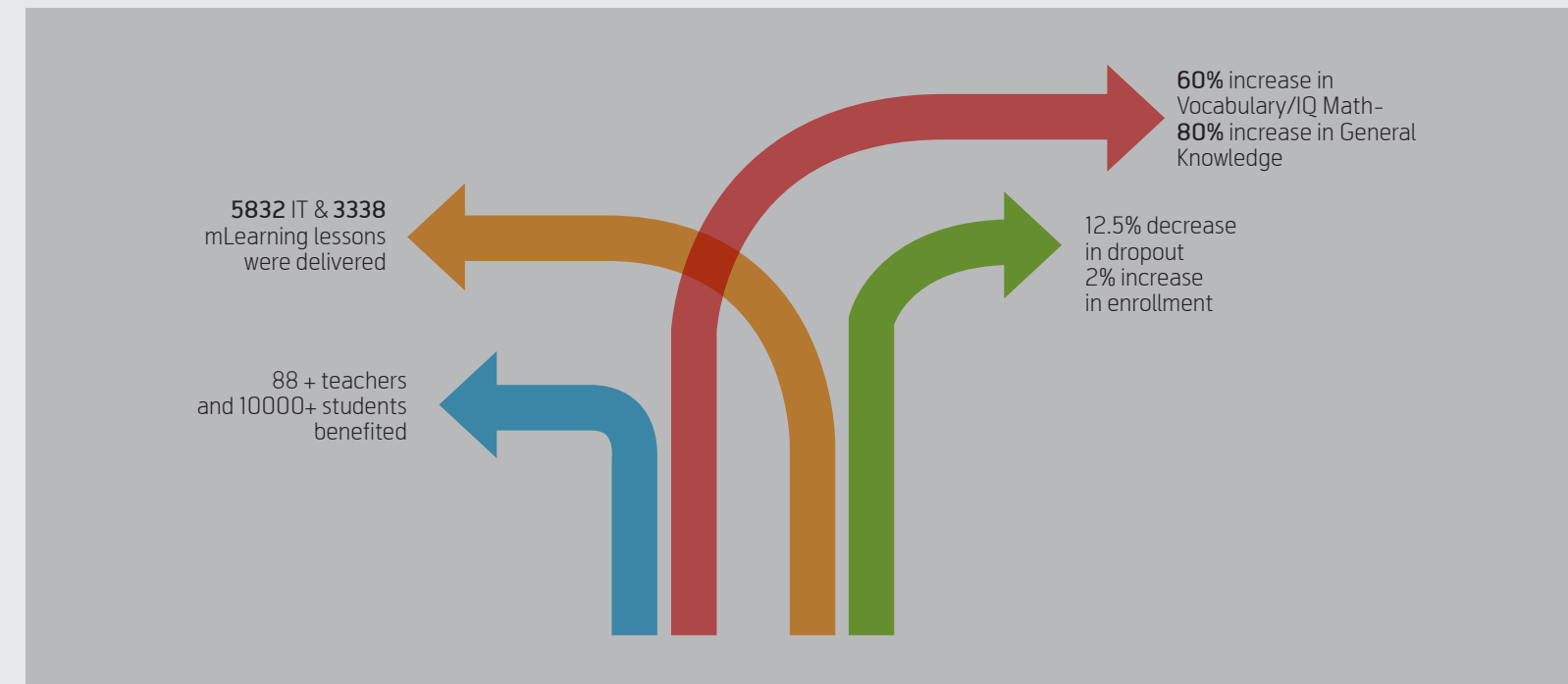
- Increased access to innovative ICT
- Better turnout & reduced dropout rates
- More inclusive and participatory classrooms
- Better trained teachers in schools in underserved communities
- Supplement the existing teaching modules through activity and play based learning

Ambition:

Based on learnings and experiences from the pilot and proof of concept, TP intends to develop a commercially sustainable model for wide scale take up among public and private sector schools.



Telenor Taleem - Mobile Education



During the scale up phase of Schools Rehabilitation and Improvement Project, Telenor Pakistan built 44 fully equipped ICT labs in 44 public elementary schools of 4 worst flood affected districts. Facilities included laptops, solar panels and smart phones along with data SIMs and internet connectivity via Telenor's portable Wi-Fi devices..

An extensive ICT and mLearning training module was developed in collaboration with PLAN International based upon Public Curriculum and Telenor Taleem portfolio. Simple and basic educational and informative content via SMS, MMS and IVRs were sent to the rehabilitated 44 schools under detailed lesson plans.

Big Data for research on Dengue



Since November 2010, thousands of people in Pakistan have been diagnosed with dengue and many lost their lives to the infectious disease. Realizing the gravity of the situation, Telenor Pakistan in collaboration with Harvard TH Chan School of Public Health and Telenor Research (Telenor Group) in 2015, conducted a study on 'Impact of human mobility on the emergence of dengue epidemics in Pakistan'. The purpose was to analyze the causes, trends and effects of dengue fever in Pakistan and to study its spread through anonymized consumer data. The study provided a tool to the health professionals and authorities and contributed to the design of more effective national response mechanisms. The findings were of international significance to support the remedial efforts to control the spread of Dengue in various parts of the world.



Mr. Gates highlighting work by @TelenorGroup and Harvard University. Use of big data in the fight against dengue



twitter.com/billgates/stat...



Nikkei applauding the study conducted by Telenor and Harvard

Financial Inclusion

a) Enabling Cashless Transactions through EasyPaisa in Wholesale Vegetable Market [Sabzi Mandi]:

In a bid to digitize day to day cash transactions, Easypaisa has rolled out its digital payments service at Karachi's Sabzi Mandi (Vegetable market). Easypaisa aims to bring digital financial inclusion across all customer segments currently operating in the Mandi and change the conventional modes of payment through Easypaisa's secure, reliable and instant payment service. From shopkeeper, Mashakhori, Arti and ultimately to the farmer, Easypaisa has digitized all the four phases of conventional payments in the market. Easypaisa has successfully achieved volume generation of more than PKR 600 million.



