Report On

[Digitization of Government Organizations and Services Through Telecommunication Services]

By
Shabiba Benta Habib
15104140

An internship report submitted to BRAC Business School in partial fulfilment of the requirements for the degree of Bachelors in Business Administration

BRAC Business School
BRAC University
September 2019

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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing a degree at BRAC University.

2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I/We have acknowledged all the main sources of help.

Student's Full Name & Signature:

_____
Shabiba Benta Habib
15104140

Supervisor's Full Name & Signature:

_____
Fabiha Enam
Senior Lecturer, BRAC Business School
BRAC University

Letter of Transmittal

Fabiha Enam

Senior Lecturer,

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of Internship Report on "Digitization of Government Organizations and Services Through Telecommunication Services"

Dear Madam,

It is my pleasure to submit my internship report titled "Digitization of Government Organizations and Services Through Telecommunication Services". During this span of three months, I have worked with utmost dedication and have tried my level best to meet the needs of the course and follow all the guidelines given by my supervisor to prepare the report. This internship program has been really very helpful for me as it gave me an exposure to the world of practicality and I am sure it is going to help me perform in my career in future.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

_____

Shabiba Benta Habib

15104140

BRAC Business School

BRAC University

Date: August 25th, 2019

Non-Disclosure Agreement

This Agreement is made and entered into by and between Grameephone Ltd. and Shabiba Benta Habib for the purpose of receiving certain confidential information of Grameephone Ltd. to enable the Student to undertake the project described in this report.

Company and Student hereby agree as follows:

1. "Confidential Information" means proprietary and confidential information of Company marked or identified as such in accordance with Section 2 below.

2. To be treated as Confidential Information, any information provided by Company to Student in tangible form shall be marked "Proprietary and Confidential" or similar markings. Information disclosed orally must be identified orally as confidential at the time of disclosure and summarized in writing within 30 days of disclosure.

3. No information will be Confidential Information that: (i) is already known to Student, or (ii) is or becomes publicly known through no wrongful act of Student, or (iii) is received by Student from a third party without similar restrictions and without breach of this Agreement.

4. Except as provided herein, Student will not disclose any Confidential Information to any other person. Student will not use any Confidential Information other than in connection with the Project.

5. Student may disclose Confidential Information (i) to other students who have executed non-disclosure agreements with Company, (ii) in response to the lawful request or requirement of a governmental agency or by requirement of law, and (iii) to the faculty member supervising the Project, provided that faculty member has signed a non-disclosure agreement with Company.

6. Company understands that to complete the requirements of the course in which he or she is enrolled, Student must give a substantive presentation concerning the Project to an audience that will not have signed non-disclosure agreements, and that such presentation will include information about the Company. Company will work with Student to prevent the inclusion of Confidential Information in the presentation and any written materials prepared by the Student.

7. All Confidential Information delivered by Company to Student will be and remain property of Company. All Confidential Information, and any copies thereof, will be promptly returned to Company or destroyed by Student upon Company's request.

Executed as of the date and year first above written:

Student's Signature

Date: 25th August 2019

Name: Shabiba Benta Habib

Executive Summary

ICT services are given the limelight and core importance in the current government's "Digital Bangladesh" movement. The mission of this movement is to mainstream ICTs such that it is used as a tool to eradicate poverty, establish good governance, ensure social equity through quality education, ensure proper healthcare and law enforcement for all, and prepare the people for climate change. However, there is a lack of participation from the private sector, which makes the ICT services and venues financially and socially unviable. Hence, Grameenphone (and other telecommunication services) and the government has been actively seeking out common middle ground in their services in order to build a more connected nation. This might include special tariff included sim cards, high-speed broadband Internet connection or any other ICT related services. In order to reach the ultimate goal, citizens of the country need to be connected through a network of mobile communications.

Keywords: Telecommunications; ICT; Government; Business Development; Grameenphone; Digital Services; Digitization

Table of Contents

List of Acronyms

GP   Grameenphone

a2i   Access to Innovation

ICT   Information and Communication Technology

BDM   Business Development Manager

BTCL   Bangladesh Telecommunications Company Limited

LTE   Long-Term Evolution

BASIS   Bangladesh Association of Software and Information Services

IoT   Information about Things

BTRC   Bangladesh Telecommunication Regulatory Commission

MAU   Monthly Average Users

VMS   Voice Mail System

SMS   short message service

WAP   Wireless Application Protocol

EDGE   Enhanced Data Rates for GSM

GPRS   General Packet Radio Services

Chapter 1: Introduction

1.1 Background

ICT – Information and Communication Technologies – encompass every form of digital, computer technology, wireless and telecommunication services which can be leveraged to present a unified communication. ICT and its impact have been dubbed by the leading industries as a key development enabler.

ICTs are given the limelight and core importance in the current government's "Digital Bangladesh" movement. The mission of this movement is to mainstream ICTs such that it is used as a tool to 'eradicate poverty', 'establish good governance', 'ensure social equity through quality education', 'healthcare and law enforcement for all', and 'prepare the people for climate change', as stated in the government's manifesto.

The implementation of the projects and strategies pertaining to the vision of Digital Bangladesh is expected to lead the country to middle income/developing country status by the end of 2021. For all intents and purposes, to change the way the population lives. It will aim towards every aspect of livelihood gains and improve the quality of life and governance.

The mobile operators, Bangladesh Telecommunications Company Limited (BTCL), Power Grid Company of Bangladesh (PGCB), Bangladesh Railway (BR), and some PSTN operators are some of the players involved in establishing the telecommunication industry in Bangladesh. Except f or a few PSTN operators, all the major players have together deployed almost 15,000 km of optical fibre connection. This has thus created a wide network covering 59 districts and a total of 297 upazillas.

Despite phenomenal growth in mobile phone subscription, a significant part of the marginalized community, particularly women, is out of the reach of mobile phone network due to affordability. While the advent of smartphones and affordable internet creates an opportunity for common citizens, due to the high cost and lack of commercial viability, it has not reached many inches of the country.

Other than commercial viability, the lack of integration of local language content and public access to ICT services limits the scope of changing lives. Mobile phone-based value-added services that could benefit the citizens' income and empowerment are not feasible for a number of reasons – Particularly unattractive revenue sharing policy and lack of funds.

There is a significant lack of participation from the private sector; their lack of synergy with the not-for-profit sector and the government is making ICT services and venues financially and socially unviable.

Hence, Grameenphone (and other telecommunication services) and the government has been actively seeking out common middle ground in their services in order to build a more connected nation. This might include special tariff included sim cards, high-speed broadband Internet connection or any other ICT related services.

In order to reach the ultimate goal, citizens of the country – irrespective of economic condition, education, race, ethnicity, profession, gender – need to be connected through a network of mobile communications. In this way, they can access the broadband Internet for exchanging information and accessing services.

1.2 Origin of the Report

The internship program is a prerequisite for the completion of the Bachelor of Business Administration Program of BRAC University Bangladesh. I completed my tenure of three months in Grameenphone Ltd. in the Government Business Development department of the Business division.

The report **"Digitization of Government Organizations and Services Through Telecommunication Services"** has been assigned my department supervisor and line manager and approved by my internship supervisor.

1.3 Objectives

This internship report will reiterate my learning and experience as an intern in the Business Division of Grameenphone. I have shadowed Business Development Managers in my department and learned of their experiences and learning. I also have presented details about my 3 months' work experience along with a comprehensive description of what I had to learn about different ministries and work.

General Objectives:

- To relate theoretical learning acquired through classroom study with that of the real-life business situation faced by the internee during his/her internship period.

- To fulfil the requirement of the internship program.

- To discuss the telecommunication integration of government business in Bangladesh.

Specific Objectives:

- Describe the government's "Vision 2021" and their relation to telecommunication services

- Outline the role of telecommunication services in enabling government services

- How does Grameenphone align itself with government organizations?

- Role of Grameenphone in these projects

- Outline internship experiences and takeaways from the 3-month period

1.3 Limitation

- Being an intern, I will not be privy to many to information and facets of many more projects likely happening. I may be exposed to vital information, but unable to divulge due to confidentiality reasons. This study is based on government projects may also present a lack of information. I will be able to present one – Grameenphone's – perspective on the study.

- The company does not have a sufficient source of secondary data and the collection of data was not smooth. For this report, since it has future government policies and project in relation to Grameenphone, confidential data cannot be written.

1.4 Methodology

For this report, the data and information collected have been mainly primary. Primary sources included visiting, personal observation, face to face interview and practical deskwork.

Secondary information will be for background information, present conditions and numerical reports. Visitations and direct reports from my supervisor and other business development managers will also be collected. As for external sources, different websites related to the telecommunications sector, and reports from newspapers were also included.

Data Collection Method:

The following methods were used to collect the required information for the research:

Documentation: Information taken from written reports of events, plus administrative documents such as annual reports, proposals, progress reports, and internal documents.

Interviews: Most primary data was collected through informal interviews and conversation. The respondent answered in his/her own words. Respondents were mainly personnel of Grameenphone Ltd. Besides this, regular conversations with many GP employees have helped.

Direct Observation: Information was collected by the observation of the office works and different activities of the officials during my internship period. By shadowing their meetings and field visit I was able to gather necessary insights. No necessary surveys were conducted. The research for this report is entirely informational and observation-based.

Chapter 2: Vision 2021 - Digital Bangladesh

2.1 Background

After their historical national parliamentary election in 2008, Bangladesh Awami League formed created a lofty manifesto of seemingly unachievable goals. Among those goals was to elevate Bangladesh to middle-income status – hence 'Digital Bangladesh' has emerged as a critical stepping stone. Bangladesh Awami League announced its manifesto, "Vision 2021", and "Digital Bangladesh" project to transform Bangladesh into a fast-developing Middle Income Country by 2021. Today it not only serves as a vision but also as a unique approach to developing the needs of the unprivileged population by offering them social goods in the form of ICT. "Digital Bangladesh" is a unique and ground-breaking strategy undertaken by a government to leverage ICT and its relative services for the reduction of poverty and transformation of the lives of the common populace of Bangladesh.

2.2 Philosophy

"Digital Bangladesh", as mentioned above, is a magnanimous undertaking but is still a stepping stone for "Vision 2021". The year 2021, coincidentally, is also the golden jubilee (50th) since the birth of Bangladesh. Hence the year presents a special significance for Bangladesh and the ruling government party.

This policy has been faced with criticism, calling it a "politically biased technological optimism". This stemmed from the context of the state repression of media, low internet penetration and inadequate electricity generation in Bangladesh. In contrast to these lacking, Digital Bangladesh attempts the effective and unique use of technology in developing education, health, job placement and poverty reduction. These ICT services will attempt to make these basic needs accessible and improved for the common populace.

The philosophy of "Digital Bangladesh" encompasses the core values of basic democracy. It vows to ensure people's right to democracy and maintain their fundamental human rights, which includes easy access to basic services. The vision aims to practice transparency and accountability when it comes to establishing justice and ensuring proper execution of government services. At the end of the day, "Digital Bangladesh" will attempt the maximum use of technology in all aspects of basic service in order to ensure the overall improvement of the daily lifestyle of general people and provide basic services at minimum or no cost. This includes all classes of people and does not discriminate with any prejudice.

Through Digital Bangladesh projects, the government aims to provide high-speed internet connections through fibre optic cables and telecommunication services (mobile data) to the rural areas of 64 districts. In the end, this will link 1006 unions (lowest administrative tier) to the expansive worldwide internet. Facilitating the ease of access to the internet will enable the villagers and townspeople to avail many services they were deprived of. For example, villagers can now establish e-centres which will allow demanders to open bank accounts; MFS will be available as well and enable them to receive money from relatives working in the city or abroad; students will be able to easily attain their examination results and many more.

Digitization of Bangladesh through ICT integration will touch upon other sector's services as well. For example, it will attempt to fully create a paperless work structure, wherein everything is in the cloud or remotely, and do not have to use paper. In the same line, it will reduce costs as well. A number of government offices have adapted these processes to facilitate participation and outcome. The electronic and social media will be used effectively to advocate and raise awareness on key national, regional and global issues. This way, issues of national importance and knowledge about sustainable development will reach to the masses and help employ a people-centred integrated approach.

These are challenging undertakings, but can certainly be accomplished, as indicated by the successes achieved so far in the areas of ICT and media interventions.

2.3 Broad Outcome areas of Digital Bangladesh

Honourable Prime Minister Sheikh Hasina has outlined four core competencies for all the Digital Bangladesh projects:

1. Developing human resources ready for the digital age;
2. Connecting citizens in the ways most meaningful to them;
3. Taking services to citizens' doorsteps; and
4. Making the private sector and market more productive and competitive through the use of digital technology.

They are elaborated as below,

1. Human Resource Development

In the 21st century, millions of people in the economical workforce in Bangladesh are unemployed. Most are unemployed due to lack of access to basic skills in areas such as mathematics, science, and sometimes the English language. "Digital Bangladesh" aims to fill in this gap by bringing in innovative technology-driven service and cost-effective delivery tools. By the use of digital learning contents, it also aims to spread vocational and 'lifelong education' opportunities to the youth and adults. This will be done in order to re-calibrate their skill set and build newer skills to better match the needs of the 21st-century globalized world.

2. Connecting Citizens

One of the biggest challenges of the Digital Bangladesh vision is to bridge the so-called digital divide. This is the gap that exists due to the imbalance between the country's citizens in the usage of technologies – i.e. the populace living in the city is more privileged and attuned to the usage of technology while the rural side is underprivileged. The vision attempts to benefit all so as to avoid the effects of the digital divide.

Hence, the government plans to launch projects and affiliate itself with finding sustainable connectivity channels such that the populace may reap the benefits of Digital Bangladesh. The projects undertaken are such that they can reach the marginalized and the disadvantaged, who are the primary target of the Digital Bangladesh vision. For example, projects must include innovative and shared access outlets such that it is raising the quality of lives of local communities. It also has to take into account that it is raising awareness of services in the communities so that can they can access the public electronic services. Significant development of the inclusion of local language has to be achieved since most English is not as well integrated outside of major cities. The content has to be developed such that is relevant and understandable to the locality the project is targeting.

3. Pro-Poor Service Delivery

In order to incorporate ICT in all spheres of government services, the "Digital Bangladesh" vision has made leveraging ICT as much as possible as its main strategic outcome. This will ensure adequate and fast delivery of services to those who are the least served. Imperative to the cause, the projects under "Digital Bangladesh" will try to leverage technology that is already available for millions such as mobile phones, radio, TV etc. They will adopt the use of digital/electronic administration platforms and create affordable and transparent electronic services as well. In addition, internet services are a bonus.

In order to ensure all services are pro-poor, the government aims to focus on areas of education, healthcare, agriculture and law enforcement, as these are basic rights and needs. Furthermore, improving the administration of land, disaster management and water resources is also a top priority to attend to.

To summarize, there are three broad components of Digital Bangladesh that the government has set out to achieve. Firstly, ICTs have to be used to improve ease of access to markets by the disadvantaged producers and SMEs; secondly, projects have to promote ICT businesses through providing services and technology needed to sustain; and lastly, boosting ICT as to earn foreign currency and generate employment.

2.4 Impact of Digital Bangladesh

The projects and steps undertaken for Digital Bangladesh are expected to lead Bangladesh into achieving a middle-income country status by the end of 2021. This is because Digital Bangladesh aims to use modern technology to impact every aspect of public and private life and the way they interact to improve the quality of life and quality of governance.

The number of the country's total internet users is now 90.05 million, according to statistics published on the Bangladesh Telecommunication Regulatory Commission (BTRC)'s website. Of the total users, 80.47 million are mobile phone internet users, 570,000 are broadband internet (ISP + PSTN) users, and the rest 83,000 are WiMax users. The total number of internet subscribers reached 80.89 million at the end of July 2018. A significant increase in these numbers has been noted after the inception of projects carried out under Digital Bangladesh. So far, $800 million have been earned in 2017 by exporting ICT products and services. (BASIS)

As mentioned in the previous chapter, through the three-sided approach to digitizing Bangladesh, there has been a positive utilisation of ICTs for decentralising service delivery and the digital centres have the main drivers of the cause. The government has allocated 1% of the government's total Annual Development Programme to these digital centers. The government has put particular importance on providing digital services right at their hands. Budget and sustainability is a big challenge for any project's success in Bangladesh, hence local resources have been thoroughly mobilized in this regard.

2.5 Examples of Project Undertaken for 'Digital Bangladesh'

Digital Municipality Service System

Korea International Cooperation Agency (KOICA) introduced digital municipality services system in Bangladesh in collaboration with local partners to bring out various public services smoothly and timely to the public. This pilot project under the KOICA supported the "Establishment of the e-Government Master Plan for Digital Bangladesh" project which was initiated in 2014 with the grant assistant of US$ 3.2 million.

In order to provide fast and accurate services to the people of Bangladesh, KOICA aims to establish a digital platform in municipality sectors to manage all types of resources in an organized, effective and efficient way.

Access to Information (a2i)

a2i is a UNDP and USAID-supported program working under the Prime Minister's Office. With the support of the Information and Communications Technology (ICT) Division, USAID and UNDP Bangladesh, a2i has introduced more than 16 digital services and platforms this year in line with its vision of transforming the country into digital Bangladesh. Through a2i, a great number of services and platforms for Digital Bangladesh have been introduced and succeeded.

A list of a digital project undertaken by a2i are given below,

1. Introduced two online-based platforms – "Konnect" for students and "Accessible Dictionary" for visually-impaired people.
2. In collaboration with the Department of Agriculture Extension developed the digital platform "Krishi Batayon" (agriculture portal) and the "Krishak Bandhu Phone Seba". The aim is to increase ease of access to agriculture services across the country. Any

farmer included in the list of Krishi Batayon can ask any question related to agriculture by making a call to 3331.

3. Launched the "333 Call Centre" for information on government services and how to avail them. Apart from that, it can also be used as a helpline in order to reduce social problems and help those in need. Anyone can dial the helpline 333 from anywhere of the country and for expatriates Bangladeshis they can 09666789333. They can receive information about government offices, tourist attractions, districts, and solutions.

4. Introduced "Skills Portal" (skills.gov.bd), an online platform created to give access to various a2i skill-development programs. Interested parties can assess the demand of skills required in the current employment market and avail the necessary services. a2i access the required manpower for the industries and connects the patrons to proper skill development organizations of various industries.

5. In collaboration with the Department of Environment launched two environment challenge funds titled "Effluent Treatment Plant (ETP) Monitoring System" and "Remote River Water Monitoring System" to check river pollution and wastes discharged by factories. The projects will protect the environment and rivers from pollution by providing information online on waste control and quality of river waters respectively.

6. Launched "E-Licensing and E-Learning System" for transforming services to e-services for saving time and reducing cost, and six digital centres aimed at ensuring easy, fast and low-cost access to government and private services for the RMG and fishery workers.

a2i's Digital centres

After beginning operations in 2010, a2i has established more than 5,400 digital centres to provide one-stop information and service delivery outlets. Regardless of their educational capability and ICT literacy, these digital centres ensure that the underprivileged can access information and services with just their fingerprint. These services and information are vital to their livelihood.

In order to facilitate entrepreneurship, these centres are essentially micro-enterprises run by locals. They work in tandem with local government representatives. The centres leverage modern technology to provide locals with access to more than 150 public and private services. Public

services are services provided by the government, free of cost and available to all. The drawback is mainly the access point of these services which are usually in the capital or in central towns. The services – which include the creation of land papers and records, birth registration, passport creation and maybe even job application – are now readily available at digital centres. Private services are more specialized and do not have much mass demand, but are as equally important as public services. At digital centres, patrons may avail mobile financial services to send and receive money, rural e-commerce services such as agriculture products' order or tools of the trade, or even insurance. Additionally, various types of computer and vocational training could be provided given the demand for a particular area.

A typical digital centre is located about four kilometres from the local's villages. Most citizens availing the service are service holders or keep busy during business days, hence the digital centres stay open after regular office hours as well. And unlike regular public service delivery offices, they do not keep public holidays either. The digital centres employ about 10,000 local entrepreneurs among it's 5,400 digital centres across Bangladesh. These centres are tasked with delivering a total of 5.1 million services every month.

Joy

Victims of domestic and prejudicial violence have always had minimal justice served to them. They had to seek help from far away from police stations or the local chairman; both parties could prove to be biased. Hence to ensure safe and proper assistance is given, the government launched the mobile app "Joy" on July 29. This app will attempt to provide immediate assistance to women and children who have fallen victim to torture or violence. The app has been developed by the Multi-Sectoral Program on Violence Against Women (MSPVAW) of the Ministry of Women and Children Affairs with funding and technical support from the a2i Program. During the incident or after it, the app user can immediately send an SOS call or SMS to the superintendent of police and deputy commissioner of the metropolitan police, three selected FNF (friend and family) numbers and the National Helpline Centre (109).

Chapter 3: Role of Telecommunication Companies

3.1 Background

Cell phones and telecommunication networks have disrupted our way of lives in a mere decade. It has integrated into the lives of every human to the point it is unimaginable to function without cell phones. It has brought rural areas to the map of the world, connecting them and changing their lives in ways no other charity could. The people have been exposed to instant communication, and access millions of bytes of information.

According to a report by the GSMA, the number of mobile phone users in the world will reach 5.7 billion – or three-quarters of the world's population – in 2020. To accommodate the scale and market of the users now, every global telecommunication companies – and by extension, the whole industry – has been developing themselves by it. Many big players seek to expand the boundaries of single product specification and dabble in the development of the societies in ways only they can. They are striving to create more long-term relations between market participants and customers all around the world.

Telecommunication companies are educating themselves on the vast scope of LTE technologies and how they can be leveraged. Some products include virtualisation of services, cybersecurity, cloud, and big data analytics; these will incorporate the concepts of IoT. The industry is shaping itself to capture any possible areas of development.

3.2 How Telecommunication Contributes to Digitization

Many customer-service transactions are now including and integrating digital pathways. Nowadays, customers prefer digital service because of their ease of access and fast process. For telecom and mobile operators, switching to a digitized procedure could cut costs for them; most have claimed a reduction of call volume and operating prices by as much as 30 percent.

Network and telecom operators have in their hands a mammoth of information that they can use. Starting from analytics to reduce customer churn to making better marketing decisions and improve collections and optimize network design, telecom companies can do that all. With the use of advanced analytics tools, telecom operators can optimize and downsize their marketing spending. Only telecom operators have enough data to do this kind of analytics, such as forecast simulators and econometric models. Worldwide, some operators have managed to fine-tune their geographical networks in terms of network design. They have done this by tracking customers and grouping them according to their daily travel patterns. This has enabled them to optimize customer service and investment.

Making smart use of digital technologies has become imperative for telecom operators. They have to seize opportunities that make them stronger in the face of declining growth and intense competition. Operators also seek to combat their shrinking margins and look for ways to make them more profitable than before.

4.1 Company Background

Grameenphone (GP) started its journey from March 1977, having grown from pioneering mobile phone services in Bangladesh to being the leading telecommunications operator in the country as well, with more than half of the market share.

Over 5 decades later, Grameenphone has by now introduced many products and services to the local market, under the tutelage of global telecommunication company Telenor. A few of many achievements of Grameenphone include,

- GP was the first to introduce GSM technology in Bangladesh, following in the footsteps of Telenor, who were the pioneers in developing the GSM service in Europe. Grameenphone had inherited the technological blueprint to execute the service and adopted managerial expertise of Telenor. Hence since the very beginning, Grameenphone has been executing international level mobile phone services in Bangladesh.
- GP were the pioneers of starting pre-paid service in Bangladesh, starting from 1999. At the same time, they began the services of the first 24-hour Call Center in the country. Moving forward, they added value-added services such as VMS, SMS, fax and data transmission services to their services portfolio. After a while, international roaming service, WAP, SMS-based push-pull services, EDGE, caller tunes and many other services were added as well.
- GP so far has the largest cellular network in Bangladesh. Nearly 13000 base stations have been built by GP and it encompasses almost 99 percent of the country's population with its coverage area.

Since 2013, GP has launched 3G/EDGE/GPRS services and the entire cellular network is 3G/EDGE/GPRS enabled. As a result, users could access high-speed Internet and any data services from anywhere within the coverage area.

As of January 2019, GP has more than 73 million subscribers (subscriber is the biometric verified subscribers/subscriptions who have any activity - voice, data, SMS etc. - at least once in the preceding 90 days) and 37.1 million mobile data users. More than 1600 GP Service Desks exists across the country, covering nearly all Upazilas in all districts and 94 Grameenphone Centres in all the divisional cities.

Grameenphone houses about 3000 full-time and temporary employees. GP is also responsible for the livelihood of about 700,000 people; these mainly comprise of Grameenphone dealers and their employees, small and big retailers, Flexi-load and recharge card outlets, suppliers, vendors, contractors, and many more.

GP offers pre-paid subscription under Nishchinto, Bondhu, djuice, Smile, Village Phone, BPO, GP Public Phone, Business Solution, Shofol, Ekota, Emergency Balance, Flexi-plan and packages based on usage. Grameenphone also provides several other packages which can be selected based on the type of tariff or features like pulse, SMS, and internet.

4.2 Vision and Alignment with Digital Bangladesh

Vision of Grameenphone

Grameenphone attempts to investing in technologies that bring minds and ideas together. While continuing to grow responsibly, Grameenphone also strives to empower Bangladesh. They contribute to the economic, environmental and social development of Bangladesh, acting with accountability and transparency and reducing inequalities through their services. Furthermore, they act in compliance with the United Nations Sustainable Development Goal (SDG) of reducing inequality within Bangladesh by working with large numbers of children and parents.

With the vision of empowering societies, Grameenphone aims to improve lives, empower people and digitalize businesses through IoT, by collaborating and co-creating with local partners, start-ups and government organizations.

Early in the 90s, the cell phones were used by select few, who had the luxury to buy such an expensive contraption. It meant to be a symbol of wealth for the few that owned it. While it was a useful thing and could certainly help many people, the masses had to stick to cable operated telephones. The Village Phone project envisioned by Professor Mohammad Yunus proved to be a pioneering initiative in this regard. Through this project, Grameenphone was born and they aimed to mainly empower the rural women of Bangladesh. That is how Grameenphone had derived its name, as it directly translates to "rural phone". Ever since its inception, GP has been involved in leveraging telecommunication for economic development. Over the years, regardless of changes in the board and top management, GP has stayed to true to their commitment and have been constantly developing services bring the growth of the economy of Bangladesh.

Digital Reach

As a part of its core services and social responsibility, Grameenphone always attempts to curate services according to the needs of their rural and urban customers across all of Bangladesh. Mobile telephones have been dubbed as drivers of socio-economic development, not only across Bangladesh but all over the world as well. Grameenphone has built services such that it helps and contributes to the capabilities of development initiatives, whether it's their own or others. GP leverages the power of digital communication, enabling everyone to improve their lives so that they may build societies and a better future themselves.

GP boasts of a nation-wide network with over 5,000 4G Sites and 4G devices on the network at the end of 2018. As of December 2017, more than 99% of Bangladesh's population was covered by GP with 2G services and more than 92% of the population were equipped with high-speed 3G network. GP acquired the license to run 4G/LTE services on 19 February 2018. About 313 billion BDT has been spent by GP in order to build its network infrastructure.

Digital Services

Grameenphone has launched the following digital services under the Grameenphone brand: GPMusic (251k MAU), WowBox (3.38 million MAU), Bioscope (2.44 million MAU), GP Online Shop (1.49 million MAU), TONIC (5.55 million Sub Base), FlexiPlan (1.85 million MAU), and MyGP (4.54 million MAU).

Furthermore, Grameenphone is in the works to build a wide range of IoT related products and services. These digital products and services will lend help to B2C, B2B and B2G customers/vendors. First of these that GP has announced is the "Smart Home" solution in collaboration with Datasoft Bangladesh Limited. "Smart Home" will allow users to control home appliances in order to ensure complete autonomy even outside of their home and also prevent any accidents from happening. This application will install motion, smoke, gas and water sensors. Secondly, GP has also launched the "SEEMO Smart Security" solution with Bangla-Trac Communications Limited. "SEEMO Smart Security" will monitor and listen in on their

homes through the smart indoor cameras or a smart doorbell. Users can hear and talk back through their smartphone. The service will allow up to seven days of recording of data and store them in the cloud.

Additionally, Grameenphone announced a number of business products, such as "Smart Attendance" for schools and offices, Industrial IoT solutions for factories and Smart Metering solutions for electricity, water and gas utilities. These services have mainly been integrated for large-scale, government projects in collaboration with a2i.

Grameenphone has recently launched a local platform for Bangladeshi developers and IT amateurs and professionals, named the 'Digital Ninja'. This is where our developers can perform digital services and earn money. This platform will also give a homelier platform for those who have been working on foreign platforms.

To provide the developers with freedom in choosing their desired skill set, "Digital Ninja" has devised to offer numerous functions. The popular ones include PHP, Java, .Net, UX and UI designing. To further hone them to suit the business industry, "Digital Ninja" will also offer front end developing, android app design, iOS app developing and DevOps. Experts and amateurs alike can build their products and share their profiles and portfolios on the "Digital Ninja" platform to get peer-reviewed and bag in some assignments. Furthermore, developers can take on multiple projects with several organisations, and work on them simultaneously from their homes.

To track improvements and achievement, "Digital Ninja" has devised three-level for this platform. The first stage is the Green Belt which is the preliminary stage and where most developers begin their journey. Secondly, the Yellow Belt is the intermediate stage and lastly Black Belt as the specialist stage.

So far, more than 350 developers have applied and created portfolios to start their journey. Some have even joined Grameenphone in their 5 on-going projects with them. To apply, interested developers have to apply through the WhiteBoard website and submit their portfolio so they can be appropriately matched based on their skill sets. There is no educational requirement in this platform, hence once a developer is matched with an organization, they are hired within a short time.

The main purpose of "Digital Ninja" is to build a network like never before. The exchanging of experience between the amateurs and experts create a healthy space to help the developers in nurturing their skills and gaining necessary knowledge. "Digital Ninja" hence pushes them towards a fast track development. The end game of "Digital Ninja" is to pool all the developers together and establish a large resource, available to organizations whenever they need them, skipping the whole hiring process.

Distribution Strength

GP's distribution channel is one widest in the country, putting up a competitive fight in relation to its competitors. The goal is to be widely available and accessible in all areas of the country for new and existing subscribers. GP also takes a more active role in partnering with the distribution partners than its competition. All newspaper advertising is done in conjunction with the channel to help build channel business. In order to build a tighter relationship with its outlets, GP is developing training programs to help them target and retain customers more effectively, as well as building a remote automated service activation system.

4.3 Projects undertaken with the government

Teacher's Portal

According to surveys conducted by the a2i, Bangladesh currently has more than 30 million students and nearly 1 million teachers in over 120,000 catalogued primary and secondary schools. Traditional teacher training methods are cost-intensive and time-consuming. It takes roughly about 5 to 6 years to re-calibre the knowledge and skills of every teacher in the system. The procedure includes face-to-face traditional teacher training methods – similar to classroom teaching; this is coupled with limited infrastructure and resource which in the end lag the entire process. It has become imperative for Bangladesh to devise modern alternatives to traditional teacher's training in order to improve the nation's educational outcomes.

Even with the major role that a teacher plays to build the country's next leaders, there is a lack of sufficient charge to change these ways. The process does not take into account the ways that exist that could make training more expandable and time-efficient. Communications have also been lax which could have made use of peer-to-peer learning and collaboration. To bridge this gap, online platforms can be a major driver to connect teachers from all disciplines and localities. If properly utilised, they would also have widely available information and they can exchange their expertise through online platforms.

Access to information (a2i) in Bangladesh is the flagship program of the Digital Bangladesh agenda. They strive to use the true potential of the government to create remarkable innovations that can ease and improve the lives of citizens.

With the objective of devising a modern, far-reaching supplementary tool to traditional teacher training methods that is more time-efficient and able to make greater use of peer-to-peer learning opportunities, a2i designed and developed this online social platform for school and college

teachers (www.teachers.gov.bd). The Teacher's Portal is an online platform for Bangladeshi teachers designed to store and retrieve digital educational contents of different subjects. It also works as a professional network among teachers across the country.

The platform currently has 4 lakh registered teachers, out of which there are 2 lakh active users. However, as per the Prime Minister's directive, a2i holds the ambition to increase the number of active users to 9 lakh teachers by 2021.

GP is aligning itself with a2i towards the same objective and goal to give a positive experience to its users and to bring teachers online. The biggest contribution of GP will be its zero charging facility for browsing. Experience zone has been set up by GP for different events. Several ambassador programs and teacher's conferences have been conducted as of the present.

GP brought special tariffs for teachers. Offers include free web browsing; 45p/min amongst themselves, 65p/min to any other number, and 10 FnFs at 45p/min. Attractive internet offers are also available. To avail, they have to dial *121*2940#.

Additional support for a2i includes sharing the database of the interested group to a2i, for which a2i will get consent for location-based spot campaign (through reaching the semi-urban and rural customers) and documentation

GP also provides dedicated call centre support for a2i, where calls with going to the number list of those who don't hit the port; and also make a welcome call to the migrated numbers. The dedicated call centre support will provide details of special offer; how to collect the GP connection, if interested; how to migrate to GP Network through MNP; and prepare location-wise lead for the interested group. Additionally, GP provides promotional/notification SMS including the confirmation message after migration to special a2i package and the communicate enterprise product and offers through BTL SMS.

Lastly, GP will share new sales numbers to a2i and a2i will update the portal accordingly.

After aligning objectives with the a2i program, Grameenphone started with conducting 4 Focus Group Discussions (FGDs) with teachers across Dhaka and Jashore. The objective of these FGDs was to gather data/knowledge regarding their needs and their capability to spend. A team was put

together two months prior to launching it as a project. This enables GP to pool resources and work towards revenue-generating a plan.

After the setup of the online portal, packages on behalf of GP were curated. During the product formation phase, there had been constant back and forth with teachers for requirements and any necessary tweaks to the online system.

The process for execution and implementation was approved by a2i to be a simple process. It was customer friendly and paperless, taking into account the current needs.

The portal was officially launched on 24th February. So far, this project has generated 7.6M BDT revenue. New GA driven campaigns were also conducted. Campaigns for migration and GTM plans have also been conducted. Talking with GP and non-GP users have also been a drive for the campaign.

Scope for this year would be targeted at 1 lakh, increasing from the initial 40k. Out of 9 lakhs, at least 60% will be targeted by 2021.

Tottho Apa

Tottho Apa is a project of Jatiyo Mohila Sangstha (JMS), under the Ministry of Women and Children Affairs (MoWCA) to empower women through information and communication technology. The purpose of Tottho Apa is to impart the necessary information and resources to the women and children. One of the main objectives of this project is to introduce half the population of Bangladesh to modern technology by using unemployed women as a tool to solve their various problems.

The information portal, IP TV 1, is associated with the web portal. There is a huge collection of information, which has been created with the necessary information for women in six departments of Agriculture, Health, Education, Gender, Legal Aid and Business. As a result, they can quickly get the information they need and with the help of information, they can become skilled at solving their problems. There are also IP TVs The TV shows a variety of inspirational news, video pictures, special events, etc. on women The image will be displayed here, both online and offline.

'ICT' is a very powerful medium for improving the social status of women with equal rights and opportunities in information technology knowledge. It will be possible to fully implement the great initiative to build 'Digital Bangladesh' if the empowerment of women can be taken to the doorstep of success in a qualitative and measurable way with the power and expertise of ICT.

The rural villages of Bangladesh will accelerate women's empowerment, without doubt, providing access to information and services to information technology to the helpless, poor or underprivileged women. To this end, 'Tottho Apa: Empowerment of Women through Information Communication Technology to Build Digital Bangladesh' was adopted.

In this continuation, a five-year period (from April 21 to March 2022) has been adopted to empower women in 6 Upazilas (Secondary Education) through Information Communication Technology (Second Stage) in order to reach the grassroots women in five upazilas.

In each of the 4 upazilas of Bangladesh, a data center has been established under the project. In each data centre, there are 1 information service officer and 12 information services assistant providing information technology services. These are known in the project area as "Data Apa". They use the internet through the internet, receive the opinions of various experts, ensuring access to primary healthcare, access to government services in the upazila, video conferencing, e-learning, e-commerce etc. Apart from this, they are using laptops and the internet to visit the villagers of the project area, providing information on education, health, law, business, gender and agriculture. The data center will have a constant internet connection. The beneficiaries of the project are providing free internet browsing, e-mail, video conferencing service via Skype. Besides, job news, various test results, information about various government services are being provided free of charge.

This is where Grameenphone comes in. By using their vast 3G reach, GP has begun piloting "GP Smart Connect" services in 4 upazillas and their data centres. This service will enable data centres to use high-speed mobile internet connectivity. Over 900 workers of GP are deployed over most upazillas in Bangladesh, wherein GP plans to use them to their fullest potential.

Information service officers and information service assistants deployed at each data center are assisting in solving various problems related to education, health, law, business, gender and agriculture through the use of laptops from house to house of the upazila, and through Skype, the

service correspondent with the concerned Upazila Executive Officer and the concerned office of the Upazila.

In these data centers, records of various women's issues, complaint opinions, local issues, etc. are sent to the concerned authorities. The book record of violence against women is stored in these data centers.

Under the project, 1 information service officer and 4 information service assistant have been appointed for the 4 data centers. Only female candidates have been appointed to this post. They are acting as "information apa". Appointed training officers and information service assistants have been regarded as one of the most important activities of the project, with proper training to enable them to provide information services on the field efficiently. For this purpose, training has been provided in ICT, project management, government regulations, accounting, budget control, office management and gender issues. Apart from this, training has been provided on transparency about various service activities of the Ministry of Women and Children and about the principles of women's rights.

Capacity Building of a2i and BASIS with GP resources

By combining the best practices of GP and a2i, the ICT Division has been mutually working with the GP and the government in implementing Digital Bangladesh in line with 'Vision 2021'. To develop capacity among all the skilled officers (Senior System Analyst/ System Analyst/ Programmer/ Assistant Programmer) on ICT from both public and private sector for introducing digitalized service in all the government offices within 2021, a2i and GP have partnered up to host various capacity building workshops. Topics include UX design, IOT services, Red-Coaching, and special training on IT roadmap design of a2i projects by GP.

Chapter 5: Internship Experience and Learnings

5.1 Job Description/Role Played

For my three-month tenure, I was placed in the Business Division, taking into account my capabilities and usefulness. The business division is mainly tasked with the responsibility of project management. It includes the process of initiating business and sales negotiations, prioritizing and monitoring the execution of all business transactions. Furthermore, the division is responsible for mobilizing GP's core services in order to deliver project-based services.

As an intern, I was involved in a wide variety of activities. Main activities included helping with day to day operations and projects; managing internal & external customer interactions; supporting event coordination for engagement and development events; writing blogs, website contents, and helping coordinate the monthly research; assisting with archiving, storage management, and in-house event planning; helping improve administration procedures; assisting with processing mail, bookkeeping, data entry and office management and many more.

Furthermore, I was tasked with accompanying Business Development Managers on their daily visits to potential customers (i.e. ministries and government organizations) and observing their activities. I was asked to come up with strategies and ideas as to how to integrate Grameenphone's core services with the targeted projects. Additionally, I have also created many databases of Grameenphone users for various projects and asked to identify potential customers to migrate from other operator users.

5.2 Business Development Process

One of my core learning was observing the business development process that takes place before any sales pitch. Government Business Development Department of Grameenphone is run by 4 business development managers, headed by one chief officer and under the tutelage of the Chief Business Officer. A Business Development Manager (BDM) is the first point of contact between a new potential client with whom they will have a business. The BDM also responds to RFP's (request for proposals), tenders, and develops sales in new sales territories.

A BDM is also responsible for driving a company's business and increasing its revenue, identifying and developing new business opportunities and building and expanding the presence of the company and its brands. They are also tasked with keeping liaison with the current customers, in order to secure many more future projects as well. They lead sales and client-relationship management, tracks new markets and emerging trends, recommend new products and services, propose and develop new strategic partnerships, writes proposals and plans, and guides long-term objectives to meet business needs and requirements.

To summarize, a Business Development Manager's duties are as follows,

1. Contacting potential clients to establish rapport and arrange meetings.
2. Planning and overseeing new marketing initiatives.
3. Researching organizations and individuals to find new opportunities.
4. Increasing the value of current customers while attracting new ones.
5. Finding and developing new markets and improving sales.
6. Attending conferences, meetings, and industry events.
7. Developing quotes and proposals for clients.
8. Developing goals for the development team and business growth
9. Ensuring goals are met.
10. Training personnel and helping team members develop their skills.

5.3 Recommendations and Observations

Grameenphone is undoubtedly the market leader for telecommunications in Bangladesh. My three-month-long exposure to the organization has solidified as to why they are. However, I felt that there could be more ways they can enhance their current. Being the mammoth operation they carry out day to day, it can be easy to forget a large number of customers they are serving. Consumers nowadays are much more conscious than before; retention can be as easily lost as gained.

Despite Grameenphone's leadership, there have been numerous complaints against its unstable network and slower than normal internet connectivity. These were concerns regularly brought up during my visits to ministries and offices. This Grameenphone has failed to address and let alone rectify.

Hence the following steps and suggestions could be taken into account,

- Increasing the capacity of the system infrastructure based on the present number of subscribers.

- Grameenphone has mainly concentrated on selling their products but little consideration has been given on the after-sales service. Most of the subscriber experience dissatisfaction after their product purchase. This leads to abandoning the service and refusing to use any other digital services GP may offer.

- Reducing their tariff. Recent complain suggests competitors have lower, hence they could think about subsidizing different bundles to rectify the loss of customers.

- Increasing efficiency of call centers, since most of the services they offer for digital Bangladesh rests on them. Next step could be to build them up accordingly so that the customers do not have to wait in order to receive any service.

- Grameenphone poses a lack of customer feedback info; most of it is secondary. Hence, they could use regular customer satisfaction surveys regarding different products. They can be later used for taking necessary measures like monitoring and controlling the total operation.

- Regardless of maximum market share, Grameenphone is still widely used by people from low-middle income and higher due to its above-average tariffs. Steps could be taken to solve that area too so that low-income citizen can use services as well.

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