

# **Bridging the Digital Divide is Now Priority Concern for Digital Bangladesh**

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## **Abstract**

Digital Bangladesh implies the broad use of computers, and embodies the modern philosophy of effective and useful use of technology in terms of implementing the promises in education, health, job placement and poverty reduction. Digital Bangladesh facilitates on Vision 2021 of Bangladesh. This process includes all classes of people and does not discriminate people in terms of technology. This research has figured out that the digital divide is impeding the reality of Digital Bangladesh. The major causes of the digital divide is lack of access, technological literacy, high cost and awareness. The government has taken several efforts on bridging the digital divide and achieving the goal of Digital Bangladesh by 2021- the year which marks the 50th anniversary of Bangladesh's independence. It is now proper time to prioritize some issues on making the reality of Digital Bangladesh. For instances; equitable access of ICT and ITES enable services for all, more accessible apps development and orients to people, interesting and interactive learning environment, innovation and ITES enable agriculture and farming, digitalization of case and court management, more help line with online option in case of emergency support, early warning and satellite based network, e-Dialogue and Participation, Community e-Centers, e-payment and m-payment services and so on. Every services and facilities will be ubiquitous irrespective of location, gender, ethnicity and economical context of users.

**Key words:** ICT, ITES, Digital Divide, Digital Inclusion, Vision 2021

## **Introduction**

The Government of Bangladesh has committed to build 'Digital Bangladesh'. The 'Digital Bangladesh' implies the broad use of computers, internet and embodies the modern philosophy of effective and useful use of

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technology in terms of implementing the promises in education, health, job placement and poverty reduction. "Vision 2021" and "Digital Bangladesh" action plans to transform Bangladesh into a fast developing Middle Income Country by 2021. The ultimate objective is to make more and more services available at the doorsteps of the people with increased digitalization. Several projects for digitization have been completed and a big number of projects are under progress. According to the National ICT Policy-2009, short-term, mid-term and long-term plans consisting of 306 action plans have been identified for the realization of Vision 2021. The government has been benefiting on that process. For instance the number of mobile phone users are to over 154 million whereas the internet users is around 90.5 million (BTRC, 2018). More than 84.6 million access the internet on mobile phone. In addition to, according to World Bank the number of personal computer user 2.5 per 100 people, in research found that in 2019 it is percentage is 19%. Still there are many challenging issues for ensuring digital Bangladesh and digital inclusion. It suffers from structural handicaps in providing equitable and universal access to ICTs for its population. The majority of the content of the World Wide Web and application/services is produced in the English language, which is creating a barrier for many potential users in Bangladesh. In addition to large number of users are visual impaired so these application and web services is not accessible to that users. Alike, the features and operation of ICT gadget is hard to marginalized and excluded people causes the instruction moods is in English or not accessible. These processed has created a digital disparity as called digital divided. According to research it was found that there are several reasons that contribute to this digital divide which include marginalized areas, disadvantaged individuals, getting access to rural areas, high cost, not informed the benefits of using IT and ITES an lack of interest. The disadvantaged includes the disabled, the unemployed, and the uneducated. This paper it is tried to identify the level of digital divide, impact and what action should be taken and amendments regarding act/laws/regulation need to deploy for bridging the digital gap in the country within 2021.

### **Aim and Objectives**

The aim of the study is to explore the level of digital divide and way forwarding. This research has three strategic objectives as;

1. To identify the level of digital divide
2. To identify the possible impact of digital divide
3. To define some priority issues on bridging digital divide and facilitating digital inclusion

### **Methodology**

Qualitative and quantitative approaches were adopted to conducting this research. The secondary sources of information: the books and journals; reports published by ITU; Journals published by educational institutions, Reports of BTRC, Online published news and articles were reviewed thoroughly. A semi structured question naire were developed to assess the level of digital divide. A questionnaire survey is conducted to the ICT users in across the rural and urban areas. Another major tool of the study is qualitative survey which comprised of Focus Group Discussion (FGD) and Key Informant Interviews (KII). In that research two FGD and four KII was conducted.

### **Literature Review**

The *digital divide* is the gap that has been created between those who have access to technology, those who do not have access and those with limited access. The major cause of the digital divide is access. The digital divide may exist for several reasons. Obtaining access to ICTs and using them actively has been linked to a number of demographic and socio-economic characteristics such as income, education, race, gender, geographic location, age, skills, awareness, political, cultural and psychological attitudes (Zahiruddin, 2017). In addition to within a country the income levels and educational attainment of individual can creates digital divide. Alike, geographic location, people living in urban centers have more access and show more usage of computer services than those in rural areas. Gender was previously thought to provide an explanation for the digital divide. Lack of Information (Information poverty) is the consequence of other forms of poverty, social inequalities, and inadequacy of resources, illiteracy, corruption, injustice, poor health, and lack of basic public services.

In 2008 general elections in Bangladesh, Bangladesh Awami League announced its manifesto, its "Vision 2021" and "*Digital Bangladesh*" action plans to transform Bangladesh into a fast developing Middle Income Country by 2021. After the landslide victory in 2008 national parliamentary election, Awami League formed the government and focused on attaining

the seemingly lofty goals and targets outlined in the manifesto. In this process 'Digital Bangladesh' has emerged not only as a vision but also as a unique development approach to leverage ICT in delivering the social goods for the underserved. The philosophy of "Digital Bangladesh" comprises ensuring people's democracy and human rights, transparency, accountability, establishing justice and ensuring delivery of government services to the citizens of Bangladesh through maximum use of technology, with the ultimate goal being the overall improvement of the daily lifestyle of general people.

***ICT Application:*** ICT is a powerful force that can and must be harnessed to the need of socio-economic development of the country. Although ICT practices alone cannot guarantee economic progress, they are a powerful catalyst for economic growth, poverty reduction and social equity. Among a lot of ICTs applications some of them are briefly illustrated bellows which are defined role in digital Bangladesh as;

***E-governance:*** This is to ensure that the Govt. administration becomes a swifter and more transparent process. E-governance to enhance transparency, accountability, and efficiency in the delivery of public services to citizens.

***E-learning:*** Learning conducted via electronic media, typically on the Internet. E-learning is about development of skills to access knowledge which addresses numerous issue such as local contents, multi-lingual and cultural diversity, and intellectual property rights.

***E-Business:*** E-business or online business is conduct of business on the internet. Use of digital technologies can enhance the role of enterprise in promoting entrepreneurship, the accumulation of knowledge, the upgrading of skills, fostering innovation, reducing transaction cost, and there by increasing productivity.

***E-Commerce:*** Ecommerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions.

***Telemedicine or E-health:*** The service of e-health can provide immense opportunity to the patients and the medical practitioners. Using the service of telemedicine, the patient of rural areas or in large cities, can consult with the doctors of different places of the country and beyond.

***E-Post:*** It may be recommended that using a V-sat network based on solar power E-Post services in the coastal, mountainous, and other remote Upazilas, scanned letters and documents can be sent to those areas which could otherwise take more than a week to reach.

***Emergency Telephone Service:*** In all the developed and in most developing countries it is always advised to carry the mobile phone along with whenever someone travels to mountain, jungles, and such other risky places. It is a regulatory obligation to facilitate Emergency Calls irrespective of the subscriber's locations. For instance national emergency call number 999.

***Decision Support System:*** A decision support system (DSS) is a computer program application that analyzes business data and presents it so that users can make business decisions more easily. By using the decision support system a manager/decisions takers can easily take decision on his/her business.

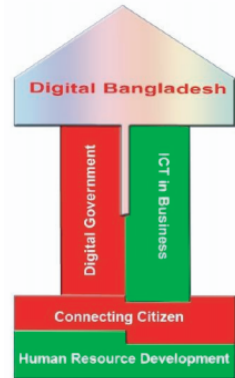
***National ICT Policy;*** For the development of ICT sector within the framework of overall national development, the government has approved the National ICT Policy in October 2002. Considering ICT as the thrust sector the vision of this policy aimed at building an ICT-driven nation comprising of knowledge-based society by the year 2006. A national ICT task force had been formed headed by the Ex. Honorable Prime Minister.

Key objective of National ICT Policy was "Building an ICT-driven nation comprising knowledge-based society by the year 2006". After the transformation of government, the ICT stakeholders felt the need to revise the current ICT Policy in line with the national goals, objectives and capabilities. Accordingly, the 'National ICT Policy Review Committee' was formed by the Ministry of Science and ICT. And the proposed 'National ICT Policy 2009' which is the outcome of the work of this committee. Elimination of the digital divide between rural and urban areas and between Bangladesh and other nations is essential to be at par with middle-income nation. The vision of National ICT Policy 2009 is "Expand and diversify the use of ICTs to establish a transparent, responsive and accountable government; develop skilled human resources; enhance social equity; ensure cost-effective delivery of citizen-services through public-private partnerships; and support the national goal of becoming a middle-income country within 2021 and join the ranks of the developed countries of the world within thirty years".

**Research Findings:**

***Status of Digital Services and digital divide in Bangladesh:***

The Digital Bangladesh vision is comprises of four key elements as; *Human Resource Development, Connecting Citizen, Digital Government and ICT in Business.* The digital divide are discussed with the base of digital service of Bangladesh.

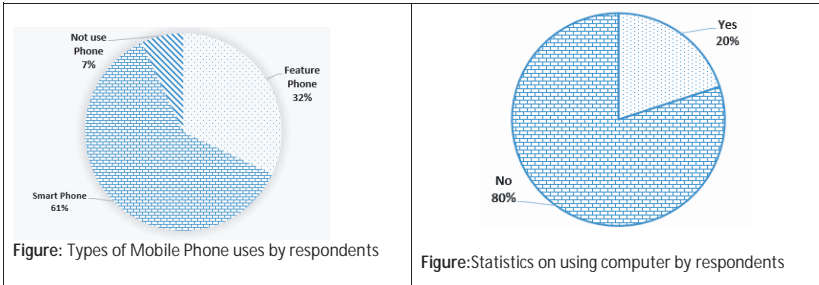


Human Resource Development; this component is about the future of "Digital Bangladesh" and is a precondition to propel the agenda to its final destination. The key objective here is to make the best use of new technologies to build world-class skills in all areas of study especially mathematics, science, and English language. ICT for education or e-Education will also deal with providing vocational and 'lifelong education' opportunities to the youth and adults in order to retool them and build newer skills to improve their productivity.

The Ministries of Education, and Primary and Mass Education have realized the potential of ICTs in elevating the educational quality and have deployed initiatives to develop digital materials for school education. Multimedia based classroom has established in several instances. Use of videotaped TV programme as learning tools is becoming popular among the farmers. Initiative to use digital media and e-learning platforms are being undertaken to provide on-demand and on-the-job training and skills building for the public servants. To consider the reality in many instances the digital platform is absence mainly the hard to reach areas schools, alike the capacity of teachers who are going to build the soldiers for Digital Bangladesh are not skilled on ICT knowledge. On the other hand on higher education platform, to increasing the course of computer literacy and its application, hardware and software engineering courses are being offered in different College and Universities, Bangladesh Computer Council, and Engineers Institutions of Bangladesh (IEB). But in many instance, we cannot make it access to all because most of the facilities are centered to cities not to marginalized. The research has figured out that a very few people were received training on IT and ITES. And the ITES services are

not ubiquitously in rural areas than urban.

**Connecting the Citizen:** Ensuring access to the Digital Bangladesh for all citizens, poor or rich, literate or illiterate, urban or rural is another foundation stone of Digital Bangladesh. More specifically, this component will deal with i) building awareness and capacity of the communities to access public services leveraging ICTs, ii) issues associated with local language content and locally relevant content, iii) innovative access channels and platforms for common men/women, etc. In this force to action, BTCL has installed digital exchanges in all the districts and Upazila's in Bangladesh. Transmission links are being expanded up to all Upazilla levels and optical fiber cable is installed to distribute the facilities of ICTs all over the country. Bangladesh has already been connected to the global information superhighway through submarine cable. Mobile phones have created a sustainable channel of communication in Bangladesh. This device is most popular and reached to the poorest of the poor. Mobile phone based different programmes mainly on agricultural issues, health issues, legal, and human rights issues already attracts a large audience and reached to marginalized people. Community FM Radio has emerged as another channel of communication for the poor and the marginalized. Research has figured out that about 90% respondents are using phone, 61% people using smart phone and only 20% respondent using computer. Among the smart phone users only 55% uses internet. The main purpose of using internet at smartphone is using social media mainly the Facebook and imo. The Research also revealed that reasons behind the not using smart phone and internet, in that context most of the respondents said that due to high price, do not understand the content and difficult to use.



**Source:** Field Study, 2019

As truly enter the Digital Bangladesh several efforts should be undertaken

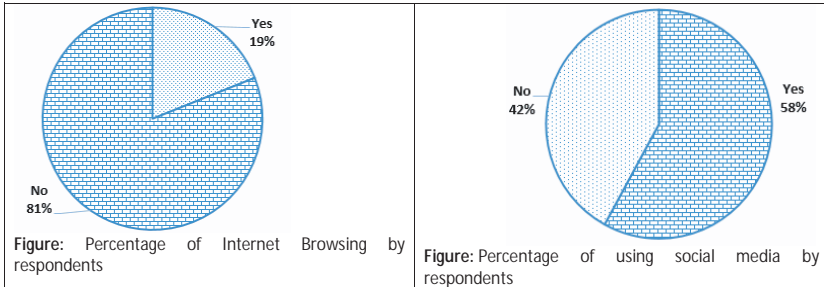
as to develop sustainable and accessible delivery channel as subsidy in community radio, low call rate, low cost broadband access, low cost smart devices, free helpline and should be operated by native language. As well as different have to organize different knowledge session on benefits of using internet, IT and ITES.

### ***Digital Government for Pro-poor services***

The key objective of 'Digital Government' would be to leverage technology in all spares of government with a sharp focus to ensure delivery of such services to those who are the least served. In Bangladesh, government is the key provider of citizen services and public information. Communities rely on public services like agriculture, health, education from the government. Hence, one of the key subcomponents of the Digital Bangladesh would be provision of ICT enabled services (e-Citizen services) by public agencies. The two key sub-components of this component are e-Citizen Service and e-Administration to delivery e-Citizen Services. The key objective of the e-Citizen service sub-component is to ensure anytime (24X7), anywhere services to anyone especially poor and marginalized in need of such services at a cost that he/she can afford and in a way that is transparent to all. This vision comes in action that government has taken several efforts as providing E-Services from all Districts since 2013. Government has also started using Union Parishads Complexes to coordinate all development activities. Besides using this complex as the office of the Union Parishads, provision have been made to accommodate Union level offices of Health and Family Welfare, Agriculture, Education, Livestock, Ansar and VDP, BRDB and LGED. Villagers will now come one single place and ventilate their various difficulties and problems to the concerned officials. At the same time, the elected representatives would be able to supervise the activities of various offices at the Union level and enable them to perform coordination effectively. Such a nice building may have a room allocated for providing E-services. Gradually all 4554 Unions will also be provided with such connectivity. Payment of utility bills through mobile phones, SMS-based railway ticketing information, etc. are some of the pioneering initiatives of the government which can be cited as examples of ICT-based service delivery. These ICT based service delivery is relaxing users from standing in long queues to pay their dues, and instead, afforded them alternative ways to settle their bills any time and from anywhere suiting their lifestyles. What is concerned today there are similar dozen ICT based services but poor and marginalized are not used to uses this services.



Research has figured out that only 19% of people are uses internet browsing rather Facebook is 58%. It is very interesting that respondent are using more facebook than internet browsing. Research figured out that the respondents are internet browsing for collecting



**Source:** Field Study 2019

necessary information and acquisition of different available services of government and private agencies. Research also tries to figure out why they do not uses internet. Most of the respondents said that the do not understand the contents at website, difficult to use and no need. So, it is important to make aware the people about the benefits of ethical using internet and it should be user friendly and accessible.

***ICT in Business;***

This component will deal with three broad issues of Digital Bangladesh namely i) access to market, ii) promotion of ICT business to support Digital Bangladesh and iii) ICT as an export oriented sector. Access to market through ICT can open up markets for small entrepreneurs and large business alike. Introduction of ICT platforms to participate in public procurements (e-Tender) is yet another example of how ICTs are leveraged in various parts of the world to open new opportunities for the businesses. Alike, promotion of ICT business is deals with assistance to the private sector to attain the international standards by bootstrapping some of the training institutions/mechanism and by promulgating the necessary standards and benchmarks required to maintain and encourage quality. Finally, the third sub-component involves promoting the ICT business sector to boost its potential for ICT export and earn foreign currency. This may also involve providing the right springboard required for the local companies to access the global market.

Government has been establishing High Tech Park with all modern infrastructural facilities. But access to the information is exclusively dependent on the combination of telecommunication infrastructure, the availability of user-end equipment and tariff of the service. Though in access to global market Bangladeshi freelancers are doing well. There are about 650,000 registered freelancers and in global its position is 2nd. These freelancers are earns \$100 million in annual. So, the IT freelancers earning is emerging in Bangladesh economy. So, what is concerned today on ICT business, though the ICT business approach is open, competitive and international standard. So the marginalized and less competitive applicant cannot win this battle. In that context, we should give priority to this emerging sector (outsourcing), should provide basic communication knowledge to our applicant and provides depth subjective knowledge on the market demand issue. It was observed from the research that the purpose of using internet is accessing Facebook and a low percentage of respondents are using internet for information acquisition (13%) and e-commerce (6%).

**Measuring Digital Divide**

Research has figured out that the digital divide exists in Gender, Location and Economical Context of Participants. For instance, female are using less smart phone, computer, internet, social media than male. This variance is also acute in urban to rural areas. The following table is justify the testimony.

Digital Divide Indicators	Female	Male	Digital Divide Indicators	Rural	Urban
Smart Phone User	35%	61%	Feature Phone User	32%	22%
Computer User	16%	23%	Computer User	14%	33%
Social Media User	55%	62%	Social Media User	55%	67%
Internet Browsing	16%	23%	Internet Browsing	14%	33%

**Source:** Field Study, 2019

To measure the progress and outcome of the ICT-related initiatives, ITU has devised an index to rank the countries in respect of ICT capacity. The index, known as Digital Access Index<sup>1</sup> (DAI), is prepared based on the infrastructure, affordability of access knowledge, quality of ICT services and internet user penetration of a country.

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The digital Access Index is a vital reference for governments, international development agencies, non-governmental organizations, and the privet sectors to assess national conditions in Information and Communication Technology and overcome the digital divide particularly in developing countries.

In the ICT Development Index released by the International Telecommunication Union (ITU), Bangladesh is ranked is still not encouraging yet. Out of 154 countries, rank of Bangladesh is 138. Bangladesh is gradually moving towards its desired goal in e-government development ranking securing its place 115 (ITU, 2018). So there is huge work should be done on being digital Bangladesh.

### **Possible impact of digital divide**

The Digital Divide has a tremendous impact upon the culture and the people of every region. Research has identified the effects of the digital divide are immensely felt in the following areas: Education, job opportunities, communication, politics, consumer satisfaction, health Information, community Involvement, government, and emergency information.

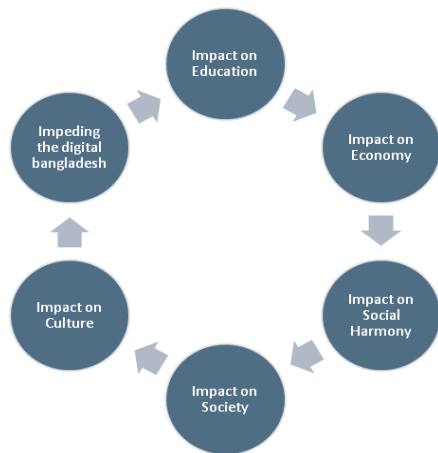
### **Impact on education**

The access and availability of ICT have been associated with academic success and robust research activities since users can quickly make references. Education is a very dynamic sector and keeping up to date is crucial to success, the presence of internet access will ensure you get the latest trends and revolutionize research skills. The inadequacy of ICT equipment has made the already weak education system. In Bangladesh, this is practical scenario is the urban based institutions are generally doing well rather marginalized educational institutions. So, there have fear of quality level of education due to digital divide. Though, Governments are now striving to avail ICT services to all schools in an effort to improve the education standards.

### **Impact on the economy**

Availability of telecommunication services is crucial for economic growth, and there exists a strong linear correlation between the two.

Interestingly, socio-economic status is one of the major causes of the digital divide and it also a consequence of the digital divide. Penetration of internet enables people to engage in economically productive activities such



as trade without much hassle. They can shop online and compare prices to get the best bargains, safely and securely transact online this translates to economic empowerment. So, due to digital divide the economy of developing nations is being impeding.

### **Impact on social harmony and cohesion**

The inclusion of ICT services has been crucial in enhancing social interactions among people. Social media such as Facebook has been useful in facilitating communication and maintaining touch with friend and relatives of close ties. Research has finding that social media plays in important role on retaining social harmony and cohesion. The misuse of social media creates social unrest and breaks the cohesion. For instances, Ramu tragedy 2012, Nasirnagar cases 2016 etc. Such segregation creates a potential for social conflicts in the communities where the wealthy can have computers and access the internet while the poor are barred.

### **Impact on the society**

The digital divide has contributed significantly to stratification in the community whereby there arises a class of persons with access to the internet and another class unable to use the ICT services either due to affordability issues or literacy levels. Some other factors that contribute to the digital divide in the society include age, race, and ethnicity. The digital divide has led to a rise of new alignments in the community whereby people are classified depending on ability to access internet services this is coupled with associated benefits, and therefore those with limited access to technology continue to lag behind in development matters.

### **Impact on culture**

Technology affects different cultures in varied ways either on the positive or the negative. The integral components culture like relationships, communications, and art have been dramatically evolved by technology. However, it seems like some specific customs and cultural traditions have remained intact. The developed countries experience tremendous changes in their culture as they incorporate new cultures acquired from the internet while the developing countries with people having limited access to the internet have their culture unchanged. Because they do not have access to technology, people in technology-poor nations are left behind. However, in order to narrow the digital divide, people need access to technology.

### **Impeding the digital Bangladesh**

Due to impact of digital divide the digital Bangladesh vision within 2021 is now impeding. Till now internet access is not reach everyone, uses of computed and ICT is not ubiquitous, website and social media is not access to all due to exotic operational mood and the services of government is far beyond of doorsteps.

Alike, lack of knowledge and access of ICT creates awful to the users, in many cases service providers are reluctant to create or provide services for marginalized areas. So these factors are impeding the digital Bangladesh.

### **Priority issues on bridging digital divide**

The government is moving closer to achieving its goal of a Digital Bangladesh by 2021, with stakeholders saying two thirds of the work is being done with one years to go. The number of mobile users, internet users and information availability at online has been increased. While emerging technologies such as artificial intelligence (AI) and internet of things (IoT) is poised to shape our future, the government of Bangladesh, in alignment with governments all around the world, is focusing on technology to ensure poverty alleviation, quality education, gender equality, industry innovation and infrastructure, peace and justice and partnerships. All these are aspects revolving around the Sustainable Development Goals (SDGs).The key essence of achieving these goals through technology will be to bridge the digital divide. This research has identified the priority issues on bridging digital divide. The priority issues are;

#### ***Equitable Access of ICT and ITES enable services for all***

In the ICT Development Index released by the International Telecommunication Union (ITU), Bangladesh is ranked is still not encouraging yet. The following priorities should be concerned as Domestic and International Connectivity, Telecommunication Services (e.g., 3G, 4G, and LTE), Access to Broadband, Last Mile Connectivity, Content Development and Services etc. By considering these issues, the Citizens of the country irrespective of economic condition, education, race, ethnicity, profession, gender are connected through network of mobile communications, broadband Internet, audio-visual media for exchanging information and accessing services.

#### ***More Apps development and Orient to People***

There are about 500 Bangladeshi apps in Google play store. In where about

53 apps are developed by Bangladesh government for her citizen<sup>2</sup>. Whereas there about 44 Ministry in Bangladesh ads here is under more than three hundred department and directorate<sup>3</sup>. So, government should develop more mobile apps of their services and information. All apps should be native, self-explanatory and accessible. Alike, government should promote non-government organizations for developing apps for disclosing their information and services. Afterwards, it will be effective if to orient the name and benefits of using apps to mass people.

### ***Vibrant ICT Industry***

A vibrant ICT industry forms a critical component of the backbone for the vision of Digital Bangladesh, the government has put special emphasis on this sector. Specially, institutional financing to IT and ITES Industries, adequate tertiary ICT-related educational institutions, Private corporate business in IT enterprise, low cost bandwidth, IT Park/Software Technology Park, available power and IT friendly policies.

### ***Modernized Education System***

Modernized education system is indispensable for digital Bangladesh. For bridging digital divide the following issue should be prioritized as; Teacher-led content development, Interesting and interactive learning environment through multimedia classrooms in every school, Incentives for teachers based on performance and innovation, ICT literacy for students in the tertiary education, The Bangladesh Research and Education Network to connect all universities and research institutions with high-speed connectivity, All education services to be made available online or through mobile platforms, Education TV or web TV, Modernizing Bangladesh Open University, Public-private partnership.

### ***Universal Quality Healthcare***

Being digital Bangladesh, ensuring adequate healthcare services to the marginalized section of the population. The following issues should be prioritized for bridging digital divide as, E-Healthcare Management, E-Healthcare Services, National Health and Demographic Information Should be Updated Regularly.

2. [play.google.com/store/Apps/Developers](https://play.google.com/store/Apps/Developers)

3. <https://cabinet.gov.bd/>

***Productive Agriculture***

Agriculture in Bangladesh accounts for 18.73% of GDP and employs 43.53% of the labour force directly. For bridging digital divide should innovation in Agriculture as ICT based surveillance system will be developed to assist farmers with timely and accurate detection, diagnosis, prevention, and control of diseases, receives new technologies, access to new information and services, access to market and rural finance.

***Just Judiciary and Responsive Law Enforcement***

Judiciary is considered as a pillar of democracy. Access to justice is constitutional rights of citizens. By ensuring easy and affordable access to judicial services, eliminating pending cases through digitalization of case and court management process, improving legal enforcement system through integration of ICTs in all stages of legal process.

Law enforcement is an integral component of the justice delivery mechanism. Law enforcing agencies are entrusted with providing services to all citizens and making their lives safe and secure. For bridging the digital Bangladesh the following issues should be prioritized as; secured environment of rule of law, digitized crime data, established strong connectivity in Police areas WIMAX, Provide IT literacy to Police in all levels, strong Passport verification process, Crime data management system (CDMS) will be installed in all levels, help lines with online option in case of emergency, Cyber-crime prevention and prosecution.

***Reduced Environmental Vulnerability***

Bangladesh is one of the most vulnerable countries to climate change. The following issues should be prioritized for bridging digital Bangladesh as; using remote sensing techniques on weather forecasting model, develop an early warning and disaster recovery, developed satellite based network, using GIS-Based Modeling in development planning and web based cyclone shelter information.

***Effective and Efficient Social Security***

Bangladesh economy has made significant progress in last decades. Bangladesh has also transformed into Developing country. Still 20% of the population are hardcore poor in the country. However, there is a need for special support to most vulnerable group in the society. Social safety nets can play an important role in alleviating poverty and in promoting long-

term growth by providing impoverished households with the social protection that markets and informal networks are unable supply. Thus, priority of the government is to ensure integration of ICTs in the areas, where it can maximize benefit to the poor and all marginalized segments of the population.

### ***Hassle-Free Land Management***

Land, as a resource, is the foundation of any country's economic development, and it is directly linked to national income. But in reality, One-fourth of all land records are disputed. Good governance and effective public administration recognize land as the principal source of wealth and indeed wealth generation in a society. A set of new policies related to land administration and land use highlighting appropriate integration of ICTs for ensuring better access to land records and bring about transparency and accountability in land transactions as well as better access to khas land by poor, climate displaced people and vulnerable community groups.

### ***Parliament and Vox Populi***

ICT can play a crucial role by improving the performance of parliamentarians so that they can better represent their constituents, scrutinize the actions of the Executive and make sound laws. ICT use can bring about conditions which can facilitate greater equity and increased access to essential services such as education and health services to all, especially to those segments support for whom is inadequate. Alike, in using various means of e-Dialogue, e-Participation, e-Deliberation and e-Consultation can strengthen democracy and bring back muchneeded trust of the people in democratic processes.

### ***Self-Governed and Responsive Local Government***

Local government institutions are the cornerstones of democracy. The central government reaches its remotest citizens through local government institutions and vice versa. The ICT Policy 2009 has given guidelines about incorporation of Information and Communication Technologies (ICTs) in local government by the agencies of Local Government Division (LGD). The following issues should be prioritized on bridging the digital Bangladesh as; Seamless Networked Information Management System at LGIs, Integrating ICT's in the Operations of Local Government Bodies and Agencies, Strengthen the Information and Service Delivery.



### ***Active-Citizen Civil Service***

The Bangladesh Civil Service (BCS), is an elite civil service that provides administrative and policy support to the Government of Bangladesh. The following issues should be prioritized for bridging digital divide as; Change Management to Inspire Civil Service For Improved Service Delivery, Creating One-Stop Shops<sup>4</sup>, Citizens Charter<sup>5</sup> as A Point Of Departure for Ensuring Accountability, Paperless Office<sup>6</sup> Or 'Less-Paper' Office Connecting The Civil Service (providing reliable and high-speed connectivity to the civil servants in all tiers within the central and field administration within a defined timeframe needs to be a high priority of the government), Capacity Building And E-Leadership Development<sup>7</sup> of Government Official and Ensuring Proper Budget Allocation.

### ***Inclusive Banking and Access to Finance***

An efficient and robust banking system is a critical enabler for growth of business sector in any country. It is mentionable that only the access to formal financial services is 37 percent (BB, 2019). To bridging the Digital Divide the following issues should be prioritized as; set up electronic interbank transfers and gateway to ensure seamless transaction with unassailable security, Domestic and international money transfer and payments will be made through e-payment and m-payment services, using ICT and KYC using NID towards a tiered approach for reduced cost of banking for rural customers, bring down transaction costs, customers data preservation, banking and payment through Internet and mobile phone, all banks will work towards developing a standardized and core banking platform led by the government, interoperability will ensure seamless interbank transfers.

### ***Indomitable Youth***

The future growth of Bangladesh will continue to be closely linked to the development and empowerment of its youth.

4. one-stop shop' is to develop service delivery centers that can serve multiple needs of citizens by aggregating many services that originate from different departments of the government

5. Citizen's Charter is a document which represents a systematic effort to focus on the commitment of the Organisation towards its Citizens in respects of Standard of Services, Information, Choice and Consultation, Non-discrimination and Accessibility, Grievance Redress, Courtesy and Value for Money

6. Paperless office (or paper-free office) is a work environment in which the use of paper is eliminated or greatly reduced. This is done by converting documents and other papers into digital form, a process known as digitization.

7. E-leadership is a social influence process, mediated by technology, to produce a change in attitudes, feelings, thinking, behavior, and performance with individuals, groups, or organizations to direct them toward achieving a specific goal

The fact that investing in youth is of the utmost importance to any developing nation is a foregone conclusion. Bangladesh Government, private, donor and UN adopted a number of declarations and programmes of action which make specific references to youth and their rights. There are certain priority areas for action e.g. ICT, education, employment, participation in decision making, etc. Financing Agencies to provide access to funds to support young people's ideas and encourage ICT entrepreneurship. Outreaching the Government web based services and Information to people Government should outreach the existing web based services, information to mass people by different interventions as knowledge sharing session, courtyard meeting etc. As well as to ensure how people will benefits on using online based services.

### ***Enablers of Digital Bangladesh***

A comprehensive ICT-enabled policy and legal framework is absent for all vertical and horizontal aspects of economy and society. Outdated laws and new laws do not talk to each other and create scope of manipulation. Standard practices are missing in policy formulation and law enactment. Inadequate knowledge and awareness in issues like privacy, IT security and cyber security. Inadequate knowledge for interoperability, standard practices, open standards and architectures etc. For bridging the digital divide the following issues should be addressed and contextualized.

### **Conclusion:**

Making Digital Bangladesh within 2021, it is essential to bridge the digital divide. Bangladesh government is working to achieve Digital Bangladesh Vision 2021 by establishing the Seven Five-Year Plan (2016-2020), the National ICT Policy 2015 and large ICT interventions. Bangladesh has seen a massive rise in the number of internet users. The government's long-term goal of bringing the whole country under broadband coverage. The country is successfully leveraging this rising penetration and has earned \$800 million in 2017 by exporting ICT products and services. The government says it hopes to export software and ICT services worth \$10 billion from twelve high tech parks by 2030 and aims to earn \$5 billion from them by 2021. Established Community e-Centres at all local government. ICT based service delivery is relaxing users from standing in long queues. The government also pledged to introduce compulsory computer and technical education at secondary and primary levels by 2013 and 2021 respectively. By this process Bangladesh becoming middle-income country within 2021

and join the ranks of the developed countries by 2041. But the reality is now far, the majority of the population still living in the rural areas, the ICT content, services and platform is still not accessible to marginalized people, maximum services are city based. Research revealed that digital accessibility is not ubiquitous, it varies to location, gender, race and economical context of users. This context is creating digital divide which is impeding the digital Bangladesh vision. So, for making reality the Digital Bangladesh, Government should make affordability of IT and ITES as computer, smart phone and internet access to users. Many apps should be developed and have to orient the apps and different internet services (government and non government) to people mainly the marginalized people. Then we can bridge the digital divide and assure digital Bangladesh.

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