Information Society: A Blue Print for Bangladesh

The Government of Bangladesh needs to formulate a policy on the issues of the information society. Such a policy formulation should ensure all citizens full and equal access to the innovations and options that will be available.

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Introduction

Bangladesh is now sailing before a strong, favourable wind into the century of the information society. Governments and politicians need to realize that it is timely to formulate a vision of the future of this journey.

This article has two key words: **guidance** and **vigilance**. Guidance refers to the Government's (policy makers) role in guiding information technology along a path and facilitating its headway into as many fields as possible for the benefit of Bangladesh. Vigilance refers to the further necessity of the Government's standing guard over cultural and ethical values, such as Bangladesh's people's identity and the protection of sensitive, personal information, which some fear will be swept away in the flood of change.

Although at first glance it may seem that these two key words would be antithetical, they in fact turn around the same axis. This axis concerns the chief objective of the vision of the future that Bangladesh be in the forefront of the nations of the world in utilising information technology in the service of improved living conditions and prosperity.

<u>Main objectives</u>

The chief objective of our vision of the future is: *Bangladesh shall be in the forefront of the world's nations in the utilization of information technology in the service of improved human existence and increased prosperity.*

In following up this chief objective, five main objectives can be identified as a foundation for a vision of the future:

1. **Bangladeshi shall have easy access to the information society.** Its advantages will be utilised to strengthen democracy and increase the quality of life for the benefit of the public and the Bangladesh economy. Information technology will be employed in all fields, whether for innovation, public health, science, the arts or other fields of daily life.

2. **Complete equality shall be ensured between the public and private sectors in the field of information technology and the information industry**. The Government, with the help of information technology, will facilitate access to governmental information and services to level the status of individuals and companies without regard to residence and economic resources.

3. **Information and telecommunications technologies shall be mobilized to improve the competitiveness of the Bangladesh economy, increase productivity and proliferate the possibilities of exporting Bangladeshi inventiveness.**

4. **The educational system shall adapt to change social dynamics and focus general education and continuing education upon the advantages of the information society while, at the same time, keeping watch over our language and culture.**

5. Legislation, rules and working methods shall be re-examined with respect to information technology to stimulate technological progress and to protect the rights of individuals and companies.

Many Duties to Fulfill

The Government has many duties to fulfil in the information age, domestically as well as internationally. Furthermore, it is the biggest user of information services in this country and has a great, direct influence on the market. In the international arena, the Government plays the role, among other things, of promoting the land and its people and guarding their interests regarding the making of international agreements and standards. The Government can therefore have a direct influence, in various ways, on the progress toward the objectives stated above and bear responsibility for their implementation.

It is no less important that the Government, through various indirect means, such as precedent, encouragement and counsel, pave the way so that the diverse parts of society head in the same direction. Here, as never before, a synchronous campaign is needed for our journey toward the information society to be smooth and successful in the long term.

Making the Objectives Doable

The lore of policy formulation tells us that it is easier to talk about twelve mountains than to climb one. It is, therefore, very important that the general objectives are, on the one hand, distinguished from each other and, on the other, made doable. Let us then consider the implementation of the main objectives in several fields of national life, that is, with sub-objectives, further explanation and examples of ways to implement them.

The Public, Democracy and Equality

The equal rights of citizens shall be fortified with the help of information technology. The latitude of the people to influence legislation and the organization of society, within the framework of democracy, will be increased as much as possible.

Saying that the information society should fortify democracy, mostly entails making it easier for the public than it now is to follow the operations of governmental parties and to obtain the information that is inherently available to citizens who can thus take an independent stand on policy matters, legislation and rules of society. This, however, does not mean that "all" can automatically utilize the possibilities available despite the formal availability to them of education and training. It is, therefore, important that those who are in some way disadvantaged shall be given a helping hand so that they can, according to ability, stand equally with others.

The advantages of information technology may not be restricted to a small group, but must trickle equally throughout the society.

Some Ways of Implementing

- Information should be made accessible to people, without respect to economic circumstances or residence and possibilities assured to them for life-long education and training for new jobs as needed.
- Ways to utilize information technology should be specially considered in the communication of governmental information.
- With people's increased access to net-connected computers, new possibilities open to improve services, without regard to residence or the opening hours of particular institutions. All information systems in governmental organizations must be designed to make it possible to retrieve information about laws, rules, rights, obligations, etc., via the computer network.
- It should also be possible to do one's errands, monitor the progress of important matters and obtain all the services possible to provide via computer network.
- Peoples' access to information about the Government's and municipalities' social services and the relations between them should be improved. User equipment connected to the information highway should be accessible in governmental institutions.
- Information technology should be wielded for the benefit of the handicapped so that they can become the most active participants possible in society, in work and play.
- Information technology should be utilized in the fight against unemployment and to reduce the undesirable effects of residence on job possibilities, for example, by establishing an employment agency for the whole country where available jobs and information about individuals in search of work are registered in a relational database.
- Libraries should be developed into comprehensive information centers that ensure all their customers easy access to information in electronic form, among other means, through links to domestic and international educational centers and data banks. The customers should also receive guidance concerning the newest technology for searching and utilizing information. Emphasis should be placed on making all the book and magazine files in the country's libraries accessible to everyone in electronic form.
- The advantages and disadvantages of utilising information technology to conduct attitude surveys, elections and counts, in the spirit of what has been called "direct democracy", should be investigated.
- The focus should be on the sanctity of privacy and the protection of information about individuals.

Economy

Information technology should be used to improve the competitiveness of Bangladeshi industries, proliferate jobs and increase productivity; the variety of jobs and innovation. The Bangladeshi economy should then move to the forefront in the exploitation of information technology and become competitive in the international environment.

Information technology revolutionizes modes of production in many fields. In addition to sundry influences on the domestic market, new opportunities can be created for export of information systems and services. Examples include projects in agriculture, livestock, fisheries, energy, health services, training and entertainment. The economy will be able to utilize the ripe opportunities in the field of information technology for agreements concerning the SAARC and other international agreements. The knowledge accompanying foreign connections is a key to Bangladesh's prosperity in the next decade.

Some Ways of Implementing

- The build-up of a powerful information industry must be promoted, among other means by having the objective of making the export of Bangladeshi inventiveness a profitable industry. The pioneering projects rooted in Bangladeshi inventiveness must be reinforced.
- Normal and reasonable competition should be allowed to reign in the field of information services. Such competition will lead to lower prices and better service.
- Information technology should be employed in all the governmental jobs to improve services, increase efficiency and lower costs.
- The Government, by supporting increased research and development in the field of information technology, should pave the way for companies and institutions to adapt to the field.
- Government councils, institutions and companies shall always utilise market solutions wherever available and pertinent.
- The compliance of computer communications with international standards will be ensured as well as that new systems fulfil requirements for communicability. The focus will be on tender offers for work and projects related to information technology. Such tender offers will be purposefully utilised to create jobs and generate innovation.
- Co-operation should be taken up between parties on the labor market and those researching the labor market or maintaining statistics on it as well as wage research committees, employment offices of the Ministry for Social Affairs and the Statistical Bureau of Bangladesh, so that the gathering of information and processing of data will be easier, and it will be possible to communicate them more purposefully to parties on the labor market and to the Government.
- Companies and the Government should implement electronic data interchange in accordance with international standards and adopt innovations as soon as they are standardized and harmonized.
- Both employees and companies should be prepared for the changes that occur when jobs disappear and new ones are created. Organized continuous education and re-education will make it easier for people to cope with new jobs and projects when jobs change or vanish. The focus should be on the training and re-education of those who have lost their jobs so that they can prepare for new ones.
- Employees' easy access to information about the status and policy of the companies employing them shall be assured.

Education, Research, Culture

The educational system should adapt to the changed dynamics of society and prepare students for jobs that will continuously demand the gathering of new knowledge. Also the advantages of information technology should be utilized to reinforce and maintain language and culture. Research and development in the field of information technology and the information industry should be supported at the same time as the technology itself is used to stimulate research and development in other fields.

Educational institutions have the important mission of preparing students for life and work in the society of the future. Education is, in fact, the foundation upon which development and progress rest. In the information society education will not be contingent upon residence and time as before. By utilizing the advantages of technology, access can be assured for all countrymen to information and knowledge. One of the roles of educational and cultural institutions is working toward making this a reality.

Changing Mode of Education
Education will change greatly in the next years, with many aspects of it changing simultaneously. Specialized education will become obsolete sooner and educational requirements will increase. The current emphasis on schooling being tied to a certain time of life will decrease. Continual education will acquire the same value as a traditional academic curriculum. "Reading" pictures, or the knowledge of the "grammar of graphics", which is the backbone of communicating information with pictures, must therefore become a part of education.

In addition, information technology creates new dimensions in Bangladeshi cultural life and multiplies the ways that the arts are communicated. It can be utilised to bolster the presentation of cultural activities and the creation of art greatly and to facilitate coming into contact with the values provided us by our cultural life.

Some Ways of Implementing

- All Bangladeshis should have access to primary and secondary education as well as continual education and training in applying information technology for their own benefit in life and work.

- In re-examining curricula at all levels of schooling, emphasis should be placed on the development of all subjects in accordance with the possibilities offered by information technology. An important aspect in this process is good knowledge of the mother tongue and other languages. In the international arena, a thorough knowledge of English is especially important.

- The importance of the country's schools' having adequate computer equipment should be stressed, as well as support services, so that students and employees can utilize the potential of information technology in studies, teaching, research, management and domestic and

international communications. Means for handicapped people to utilize information technology for participation in regular schooling should be specially considered.

- The operations of the Educational Network must be robust. Among other things, there should be information about Bangladesh educational institutions, data banks and educational projects, distance learning, continual education and other offerings linked to education in this country. Access to the Internet and other comparable networks for schooling should be available in all the country's educational institutions.

- Stress should be placed on continual education and self-instruction, which make it possible and normal for all to renew and adapt their knowledge to new circumstances, move between jobs or create new ones. Facilities, information and educational materials must be obtained for those involved in continual education and self-instruction; and data banks should be set up to service distance learning and electronic communications.

- Educational institutions for teachers on all levels of the school system should organize and conduct multifaceted and carefully crafted basic and continuing education courses on the utilization of information technology in various subjects for teachers, school managers and other employees.

- It should be possible to take diverse, special courses in the field of information technology at the secondary and university levels. University-level institutions should be encouraged to continue to prepare and offer such special courses.

- It is important to support and strengthen research on the use of information technology in schooling and its impact on education. Purposeful attempts should be made to use information technology at all levels of schooling.
- Research and development in the field of information technology and information affairs should be intensified.

- The community of science, that is, the community of those doing scientific work, should utilize information technology in the most efficient manner to strengthen their work.

- Information technology should be utilized to preserve cultural values as well as to teach and present Bangladeshi culture, artists' activities and works in this country and abroad.

Public Health

The quality and effectiveness of the public health service should be increased through purposeful utilization of information technology. The public should have easy access to services and information concerning health matters with assistance of such technology so that individuals can take more responsibility for their own health, choose between alternatives and increase their ability to help themselves.

There has been a movement toward reducing the costs of the health service with a focus on its restructuring and better utilization of employees and equipment. If the health service is to be

improved at the same time as costs are held down, new ways must be found, including ways to promote increased and faster communication of information within the healthcare system. A sensible use of information technology can equalize citizens' access to the health service, increase patients' possibilities for self-help and reduce the need for various time-consuming tasks.

Some Ways of Implementing

- A data bank about health matters should be set up where materials and their treatment are gauged by the public's needs.

- Individuals could obtain trustworthy information about healthy habits, preventive measures, possibilities of self-help and other health matters. In the same way, there should be easy access to information about health services, health institutions and patient associations.

- Information systems should be established to facilitate the public's ability to pursue various errands and seek services from the health system, regardless of residence.

- A campaign should be conducted to computerize the health system by building up compatible and co-ordinate information systems for health institutions so that they can work together as a whole. The information systems should be flexible and adept to the health service's miscellaneous organizations.
- Modern computer and telecommunications technology should be used to provide specialist consultation for distant locations and promote increased co-operation between health institutions.

Telecommunications

Adequate domestic and foreign telecommunications must be assured at a competitive price, which can lead to a surge of progress and services in the forefront internationally.

In an information society, the telecommunications system is the highway system of information. A precondition for being able to utilise information technology for the benefit of the economy and the public in this country is easy access to powerful information transport systems within the country and abroad. The transport system must cope with ever-growing traffic in the form of text, speech, pictures and animated pictures that require voluminous transport capacity. The load on the transport system increases with the increased supply of services for these routes and the technical innovations that facilitate usage.

Some Ways of Implementing

- Freedom in telecommunications should be implemented; access to governmental distribution systems opened and conditions created for increased competition. The service obligations that ought to accompany such services should also be considered.

- The policy should be to reinforce Bangladesh's competitive status by ensuring the access of companies and the public to the most modern telecommunications system in the world at a competitive price. The transport capacity and security internally and to other countries should always be sufficient, and rapidly growing use should be assumed.

- The build-up of a wide-band network should be speeded up with organized efforts being directed at implementing a wide-band transport system throughout the country.

Mass Media

The Bangladeshi mass media will be the advance guard of the Bangladeshi culture and language.

Mass communications have increased enormously in recent years, especially the broadcast media, radio and television. There is an urgent need to abolish the monopoly of the BTV (State Broadcasting Service).

The mass media will play an ever-larger role in ensuring the public access to multifaceted information and facilitate its flow in many ways. The boundaries between the mass media, telephone systems and computer technology that seem to be blurring, and opportunities for interactive communication are multiplying. In this area, the public will be given a chance to have an impact on what services are provided and what information is communicated. Individuals can therefore tailor usage to their own needs.

To a certain extent, mass communications will thus develop toward individual communication. Also, individuals, associations or companies with an Internet connection can become participants in a new kind of mass communications that are not contingent on the traditional mass media. This will completely change individuals and companies' ability to make their ideas known, establish cultural links and offer goods and services.

The mass media of Bangladesh do not only compete amongst themselves but face ever-increasing competition from foreign mass media, especially television. The Bangladesh broadcast media must follow this example to ensure quality and variety. Furthermore, the Government must urgently search for ways to mobilize and support the broadcast media and independent programming to produce materials of top quality.

Some Ways of Implementing

- A working environment should be created for Bangladeshi mass media to enable them to participate actively in international competition.

- Free competition should be ensured in the field of mass communications.

- The role of the BTV/ State Broadcasting Service should be re-evaluated because of the arrival of other broadcast media.

- The collaboration of Bangladeshi media should be promoted by encouraging them, along with independent producers, to produce Bangladeshi programming.

- The mass media should be urged to provide all Bangladeshi access to their information, programming material and news material through computers for a reasonable fee.

Communications and Travel Affairs

Safety in communications for Bangladeshi and tourists should be ensured as much as possible through the utilization of information technology. Further, the technology should be used to communicate and distribute information to tourists, domestic and foreign. The advantages of information technology should be used generally to make relations between the country and nature safer.

The organized collection and dissemination of information to travelers, seafarers and pilots of aircraft will have a considerable impact on the security and viability of communications in Bangladesh. It will become possible, using a personal computer anywhere in the country and, in fact, anywhere in the world, to access information about communications via land and sea. Such dissemination of information will save time and bother and prevent trips under dubious conditions. Thus, one of the biggest benefits of using information technology for travel is safety. Another example is a plan for an automatic notification system for seafarers, utilizing telecommunications and computer technology together.

Boost to Tourism

Telecommunications and information technologies will promote still better ties between Bangladeshi companies and the rest of the world and facilitate the transport of goods and services. In this way, technology will move Bangladeshi closer to the rest of the world and foreign markets and improve the nation's competitiveness. With increased use of information and telecommunications technologies, the communications between parties in the travel industry and with tourists will become easier, and new possibilities for tourism will open up in the Bangladesh market. Tourists will be able to gather diverse and trustworthy information conveniently and inexpensively. This means that millions of people with access to the Internet can obtain tourist information about Bangladesh and the services it offers from a computer at home or at work. It is therefore very important to do this well so that the reception is the best possible because first impressions last. Information technology therefore gives the Bangladeshi travel industry new, ripe opportunities to reach a larger group of prospective customers in a more diverse and less expensive way than before. The expectation is that tourists will be able to access complete booking and sales systems from their own home computers and be able to organize and book their own trips for a small fee.

Some Ways of Implementing

- An information bank for travel services should be set up where companies offering travel services and the public can easily find diverse, useful information about Bangladesh, its laws and regulations.

- The information bank must include easily accessed information about the weather, road conditions, sailing routes, etc., along with various other beneficial informations. The emphasis should be on providing carefully prepared information that promotes tourists' safety as well as on facilitating commerce.

Implementation

One should view the formulation of policy on the issues of the information society as a permanent developmental project, not a campaign project with a defined beginning and end. Because of the rapid changes that will occur in society and in the field of information and communications technology, any policy in this issue-area must be continuously re-examined.

The Government must have a comprehensive overview of developments in the issue-area to promote implementation of the policy, ensure the general participation of the public sector in utilizing information technology and encourage harmonization and feasibility in the utilisation of the vast assets already committed to information affairs.

Public Participation
Information technology changes the manner of communications between the public and the public sectors and shortens lines of communication. Vitally important to implementation of the policy and a great boon to society as a whole is the public's ability to participate directly in policy formulation, making its wishes for improved governmental services and the utilization of information technology known. Information technology offers this direct link.

Implementation of the policy rests on several important premises that must be regarded as priority projects among the many goals set forth here.

Need to be Alert
As we look towards the information society with daring and drive, the foreseeable developments have made others afraid that the number of jobs will decrease and living conditions worsen. Even though this fear is unfounded, and experience actually shows the opposite, there is no reason to ignore this concern. Thus, a certain menace can be seen in the new pattern of society as well as opportunities for advancement. The issues of the information society are complex and do not revolve only around economic value. It is no less important for us to have the fortune to utilize technology to strengthen democracy, increase social equality and strengthen our unique culture and language. This will not happen by itself.

The information highway will be overflowing with foreign materials of many types and of varying quality. There we can lose out if we do not stay alert. In light of this, it is important to think well about the cultural and social aspects of changes accompanying the information society. The participation of everyone in this new society must be assured so that two groups do not form, those adopting the new knowledge and those left behind.

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